

Urban Oasis

Ajman as an Event City

The Urban Oasis celebrates Ajman's history as well as encourages a greater future. Stitching into the existing urban fabric of Ajman and the surrounding cities, the master plan provides an entrance that encases a number of different events. From studying other successful event cities, it became apparent the need for a variety of events over a yearly basis.

Sustainability is another key feature of the master plan. From the way the urban network of streets are formed and orientated to how energy is produced and conserved. Another sustainable aspect that drove the master plan was the retention of the camel track. An important and incredible event in itself, the camel track provides an opportunity to celebrate Ajman's culture and retain an important part of its history.

The Urban Oasis is divided into four districts that radiate from the central cultural core. The four districts are; Maritime, Heritage, Innovation and Accommodation. Each district plays an important part into the overall master plan and Ajman as a city.

The master plan consists of multiple layers of infrastructure; each one running through the four outer districts into the central cultural core. The layers are woven together, undulating above and below one another, creating a diverse landscape and a unique user experience. Pedestrians, cyclists and cars are all separated with a clear hierarchy and space creating a more user-friendly experience.

A key connection throughout the districts is the high-speed eco-transport system. Overhead trams stop at a number of different stops within in each, as well as a main transport hub that acts as the node for that district. These trams are powered by solar panels above the tracks, which also produces electricity for the buildings within the district. The tramlines have been designed in such a way that they can be extended and attach to potential lines that link to the rest of the Emirates. Connectivity through an environmentally friendly transport will enhance the Green credentials of Ajman.

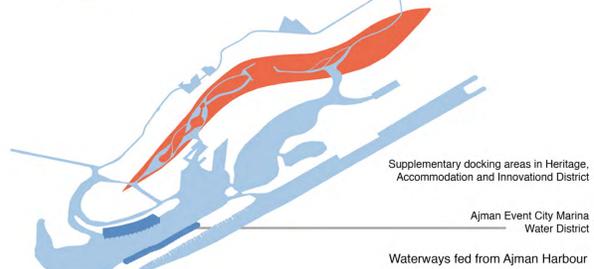
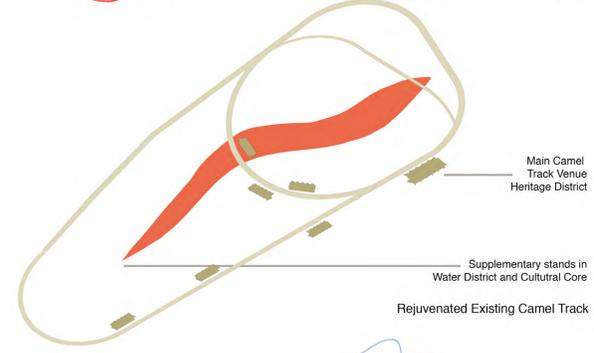
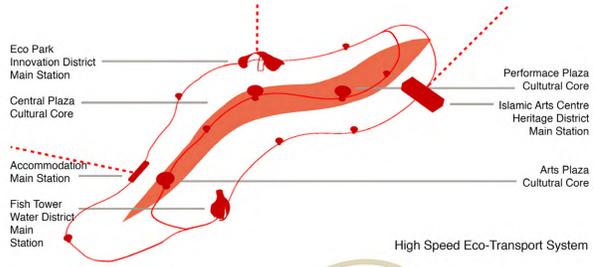
Urban Oasis

Ajman as an Event City

The concept of an oasis is also derived the idea of flooding parts of the master plan. The water is taken from Ajman's through and acts as an important connection to the rest of the city. Along the river, the waterfronts can be developed to encourage the movement and exploration of the city by the visitors as well as providing an essential industrial opportunity, for instance traditional shipbuilding.

Overall, the Urban Oasis interprets and celebrates local and national cultures of the Emirates in a socially sustainable manner that will provide a future as an Event City.

AJMAN CULTURE ZONE CULTURAL CORE



Layers of Masterplan Infrastructure

The Masterplan consists of multiple layers of infrastructure. Each one running through the four outer districts and into the cultural core.

The layers are woven together, undulating above and below one another, creating a diverse landscape, and a unique user experience.

High-Speed Eco-Transport System:

- Multiple stops located within higher density zones and at event venues.
- Potential to be extended to the rest of the Emirate.
- Enhances Green credentials of Ajman Event City.

Camel Track:

- Celebrates existing character of the site and of Ajman Culture
- Rejuvenated and modernised it brings a unique but traditional twist to the Event City.

Waterways:

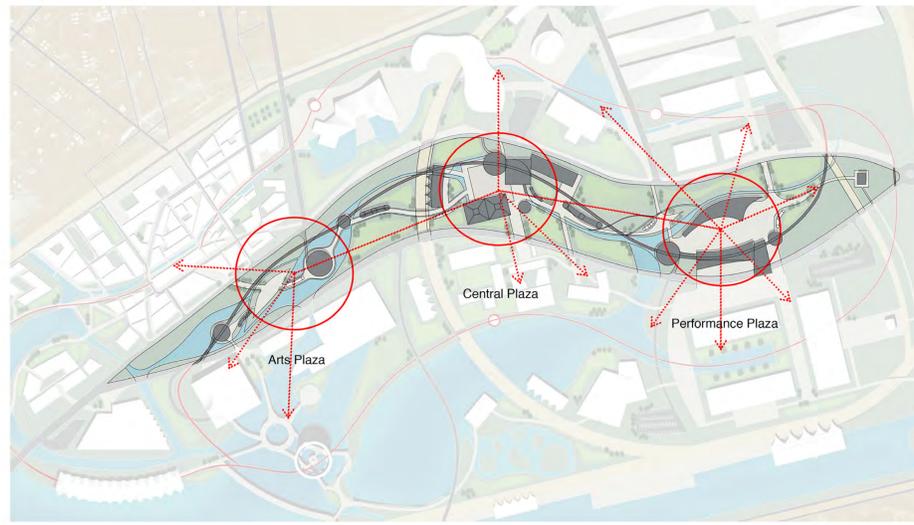
- Bringing the water in from Ajman's coast, creates an oasis in the middle of the Emirate, enhancing the landscape and cooling the environment.

Roadways:

- Routes in from all directions and existing main roads.
- Parking provided in all districts at all main event venues.

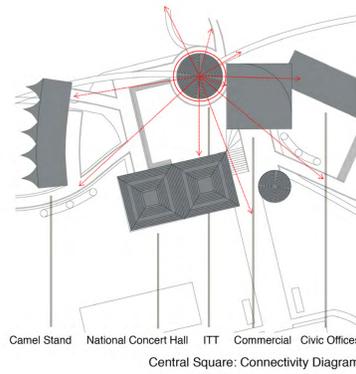


Interaction of Infrastructure Diagrams



Cultural Core

The Cultural Core is the heart of the Event City, providing connections to all the districts via water, pathways, and the eco-transport system. Three increased density plazas act as nodes of activity and decision points for the public. Passing through the three nodes the public will experience a variety of landscaped public squares, park land and event venues, including an outdoor amphitheatre for film and performance, the National Concert Hall and Ajman Modern Art Museum (AMAM).



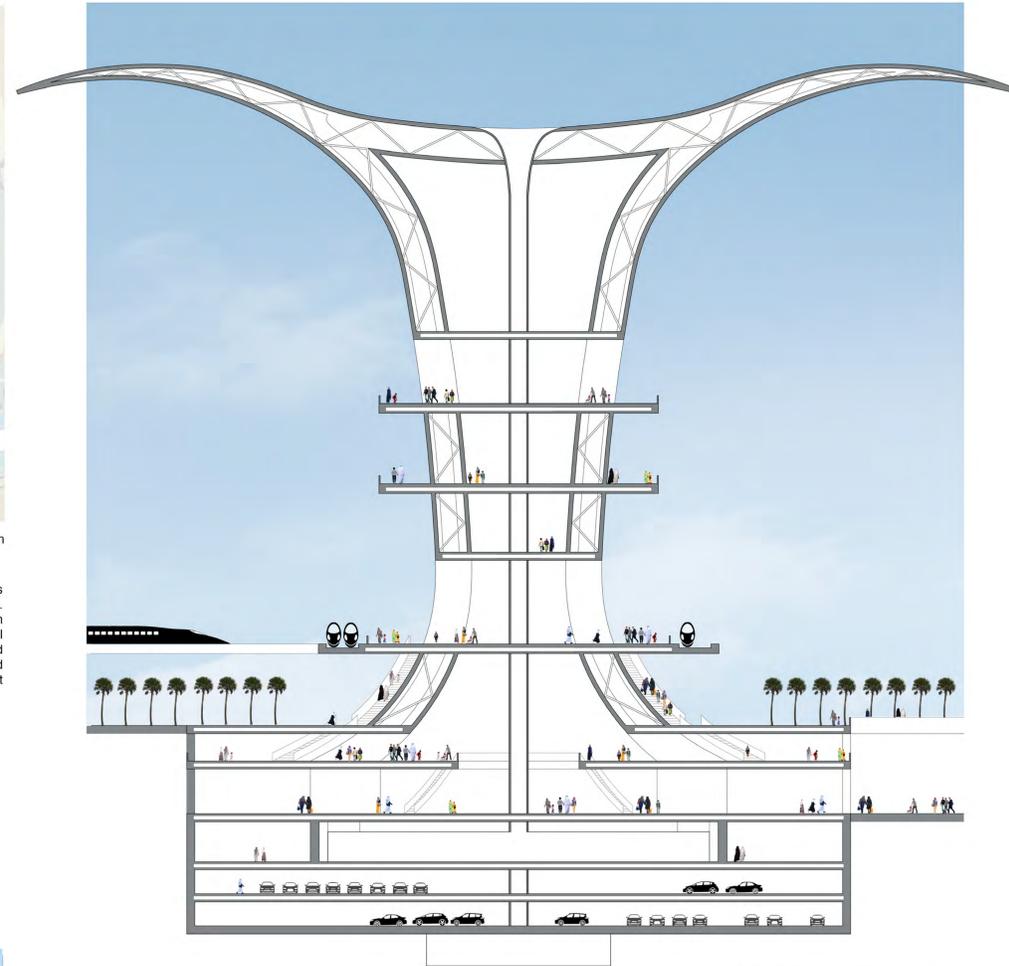
Intelligent Transport Trunk (ITT)

The connectivity concept is continued down in scale to each plaza, utilising an Intelligent Transport Trunk:

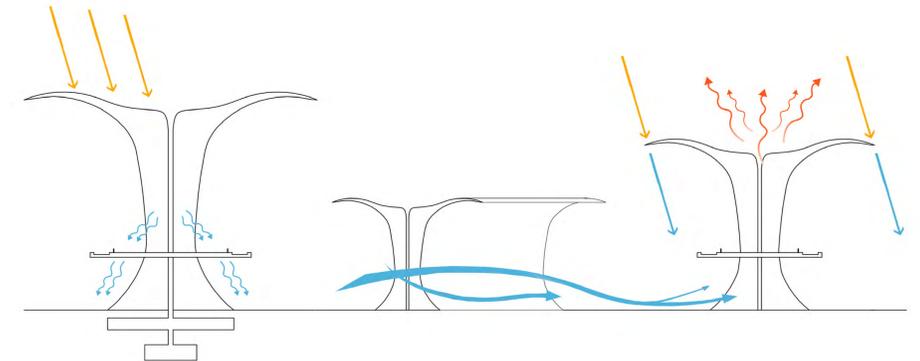
- Acting as a central node to orientate the public.
- Providing infrastructure for the surrounding venues.
- Inspiring and offering visual drama.
- Utilising passive strategies to enhance human comfort in higher density areas.
- Facilitating transport platforms and on-site parking.
- Facilitating commercial units, restaurants, etc.



Concert Hall Entrance from Main Square



Intelligent Transport Trunk: Main Square 1:500

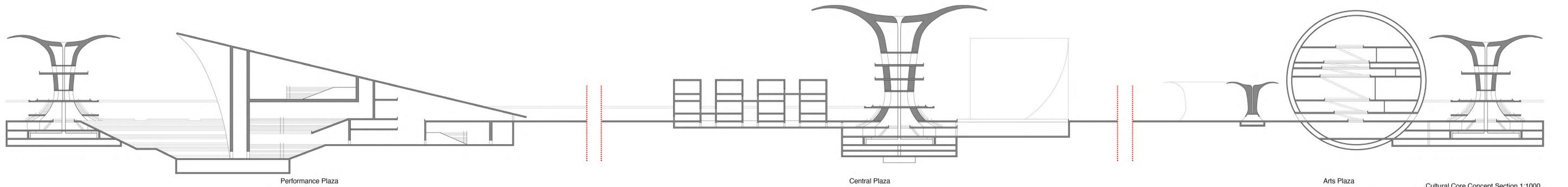


- PV Cells generate electricity for the eco-transport system and cooling systems.
- Intelligent facade provides cooling for internal and immediate external environments.
- Rising hot air in trunk pulls in external air creating airflow at ground level.

- Stack system provides internal passive cooling.
- Trunks provide shading and moderate the environments beneath.

- Provides sustainable infrastructure for long term stability, with the potential to be reproduced and implemented throughout Ajman. Creating a less car dependent culture, and greener awareness and credentials for the whole emirate.

Intelligent Transport Trunk: Environmental Strategy



Performance Plaza

Central Plaza

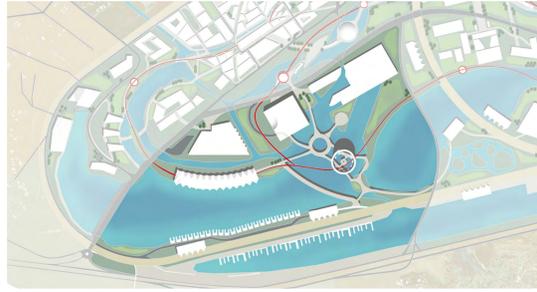
Arts Plaza

Cultural Core Concept Section 1:1000

AJMAN CULTURE ZONE MARITIME DISTRICT

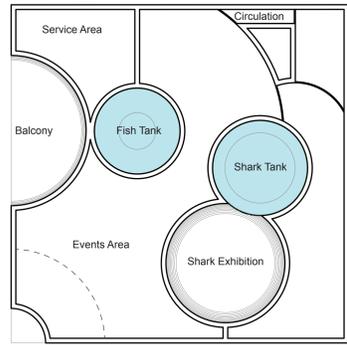
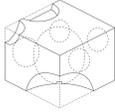


Maritime and water have been crucial in the history of Ajman and UAE. The maritime district celebrates this history. Also it provides a means of transport for the present and a sustainable future.
The water flows from Ajman's river and feeds the whole master plan. Each district interacts with the water in different ways creating different relationships. Within the maritime district the water is dispersed and contributes to events and the buildings within the district.

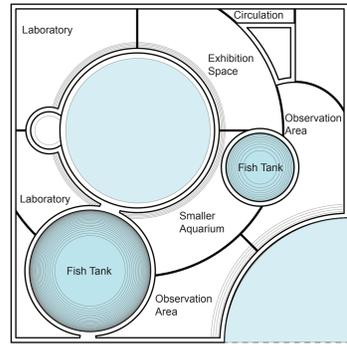


Aquarium

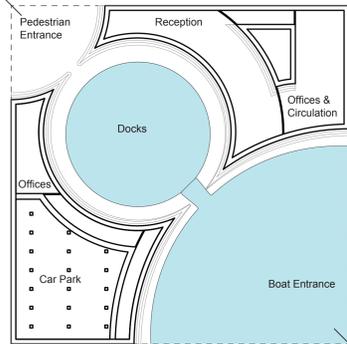
The cube form derives its construction from traditional UAE method of rammed earth and palm leaves. These layers contain sphere pockets providing a cavernous atmosphere housing a number of exotic, as well as native species.



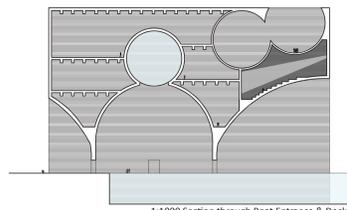
1:500 12th Floor Plan



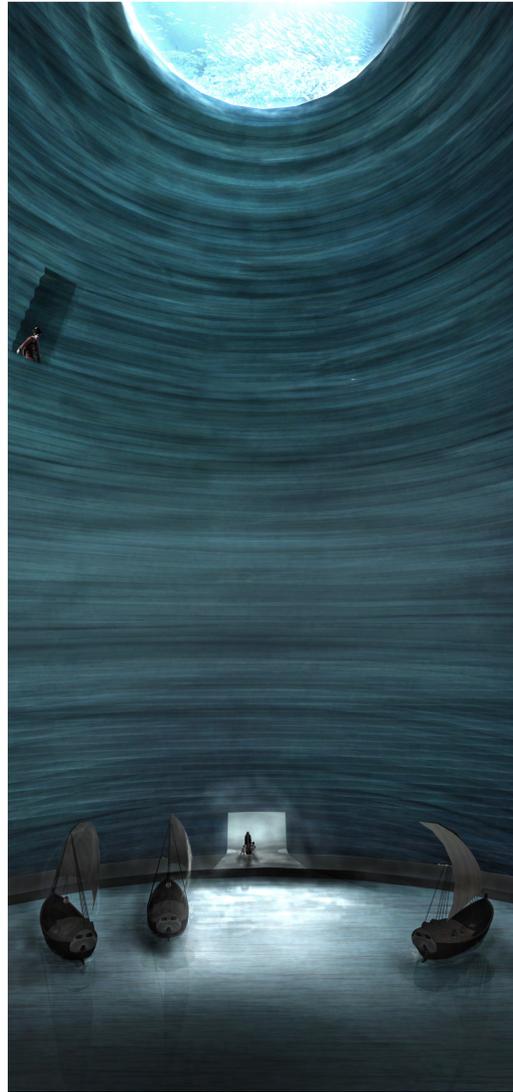
1:500 6th Floor Plan



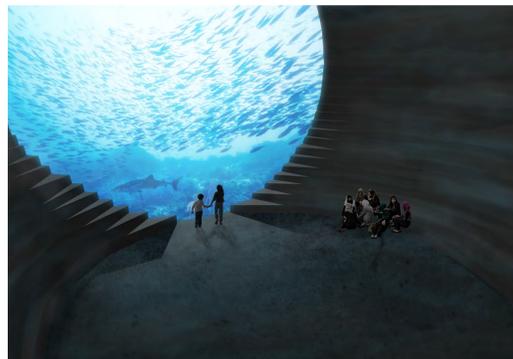
1:500 Ground Floor Plan



1:1000 Section through Boat Entrance & Docks



Interior Perspective of the Dock Area

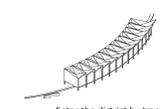


Interior Perspective of the Shark Tank

Concept & Master Plan

Sailing Stands:
Raised above the water for the public to watch sailing events.

Competitors Docks:



Enter the district by tram



Board on a boat at the fish tower

Public and Service Docks

Aquatic Centre

Sustainable Fishery Training Lake

Underground Maritime Museum:
Visitors pedal their boat into the museum and are guided around the different exhibitions celebrating the vast maritime history. The exhibitions are sized according to different vessels in Ajman's history

Urban Fish Farm Tower

The node to the maritime district is the urban fish farm tower. Stretching tall in the landscape, the tower provides a beacon for the future. Acting as the main transport port to the area, the tower also contributes to the city of Ajman by replenishing the sea's fish stock. In the past nine years UAE fish stock has reduced by two thirds.



Encased within the petals is a light steel structure with different sized spaces. Each space has different species types and the form mimics their habitats.



A separate laboratory monitors the nurseries.



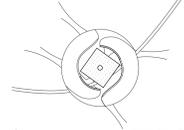
The fish mature in the lake beside the urban fish farm. This lake also teaches how to use sustainable fishing techniques to maintain the fish stocks in the sea.



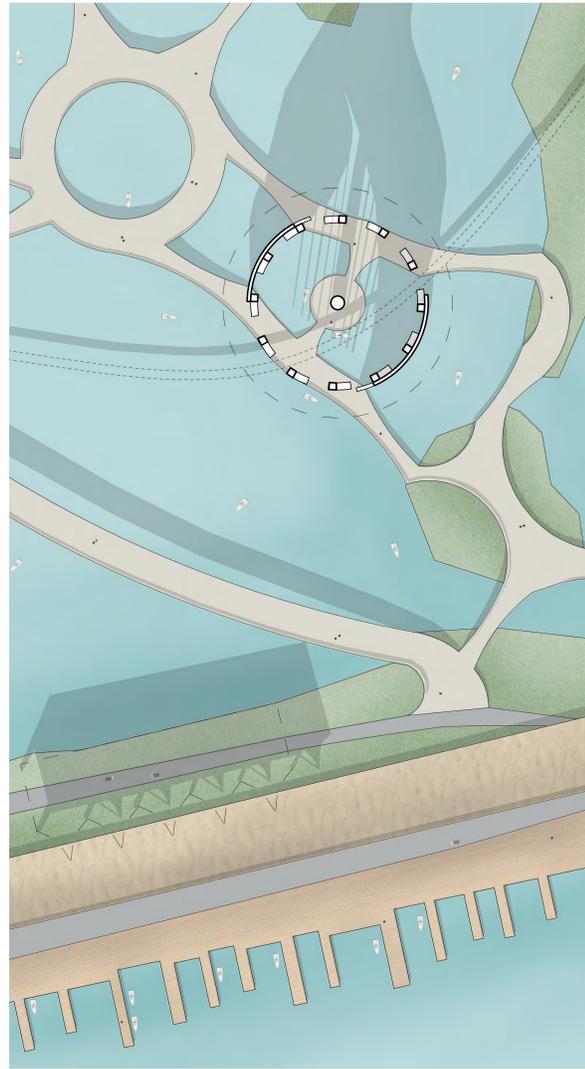
The fish stock in the sea is replenished by transporting the fish along the river by boat.



1:2000 1st Floor Plan
Tram and Reception Area



1:2000 28th Floor Plan
Sky Restaurant

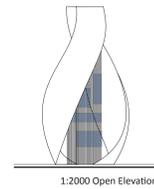


1:500 Ground Floor Plan in Context
Dock Entrance and Surrounding Area

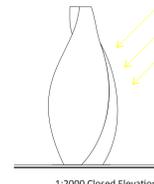
Sustainability

The White Sea Lily blossoms only at night time. This concept inspired the form of the urban fish farm tower. The petals of the tower wrap around the delicate and light structure containing the nurseries.

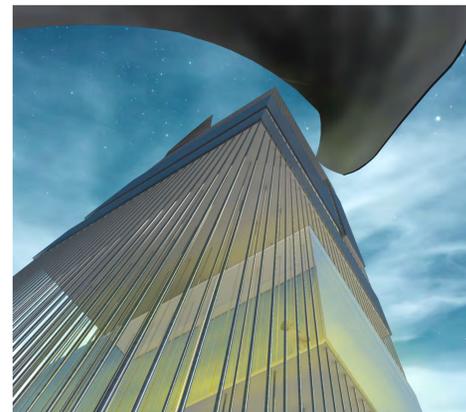
The petals have the ability to enclose the nurseries and protect them from harsh weather and overheating. This movement simulates Ajman's skyline by constantly being able to change form. Also, the petals are made of solar panels to generate electricity for the fish tanks and the city.



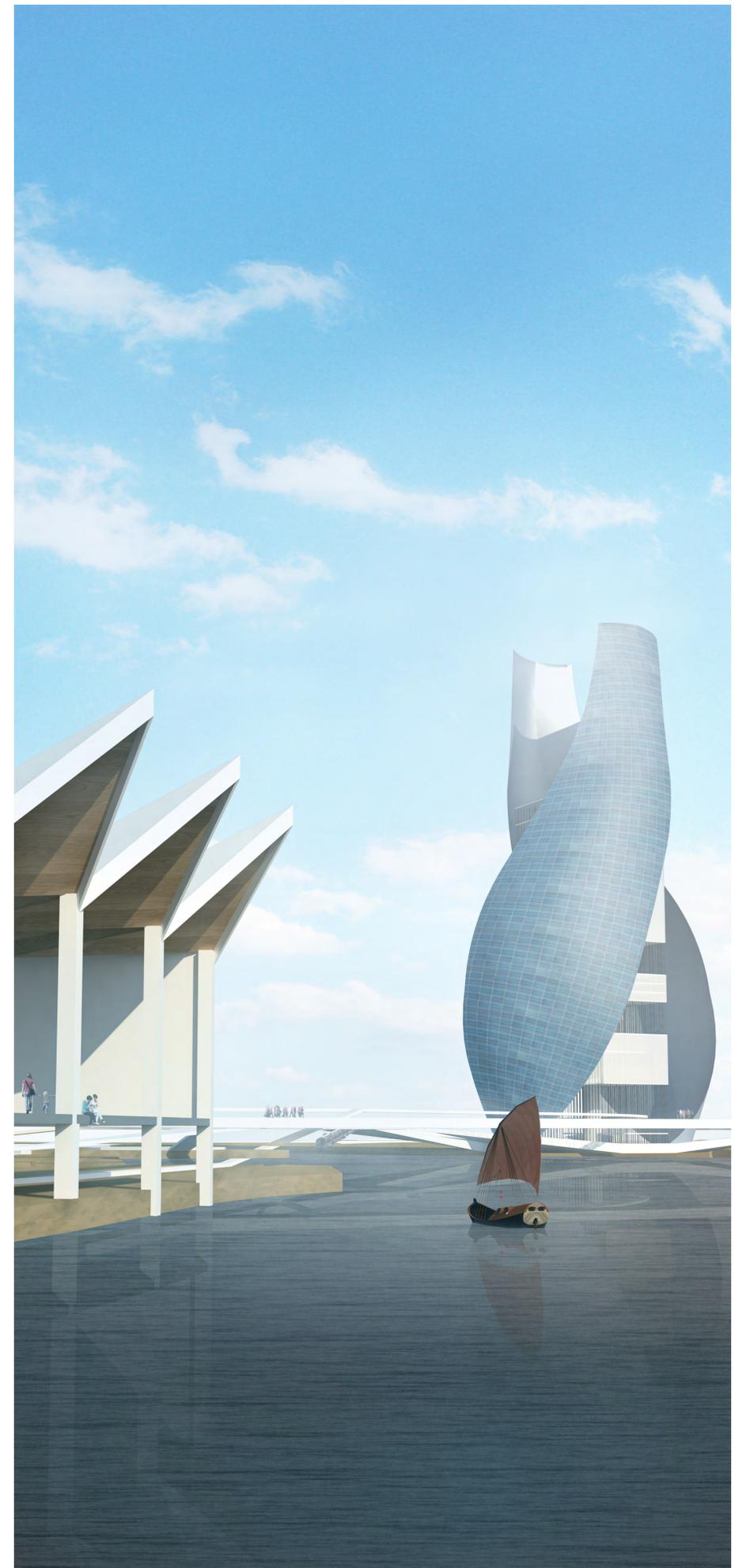
1:2000 Open Elevation



1:2000 Closed Elevation



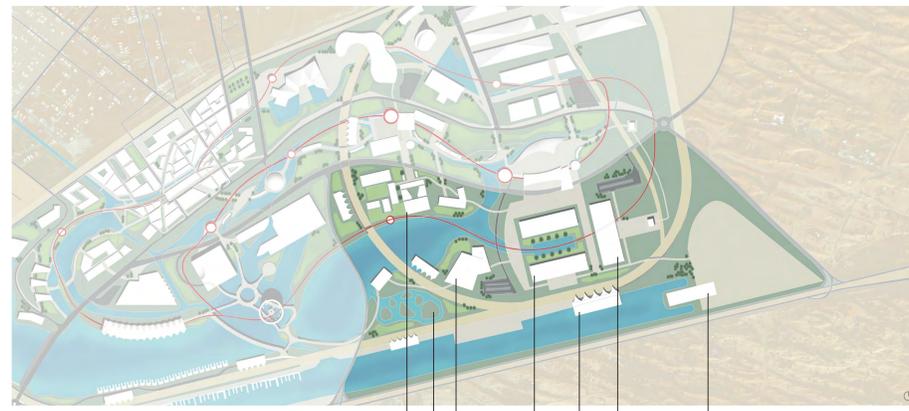
Exterior Perspective of the Nurseries at Night



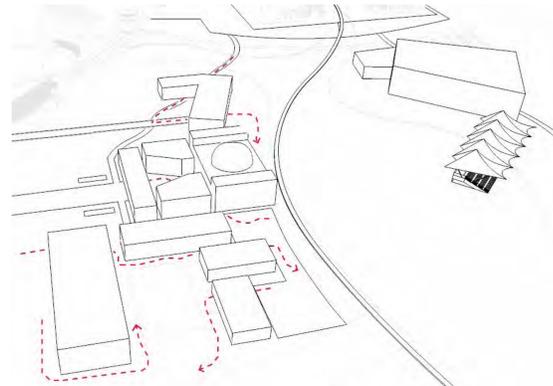
Exterior Perspective of the Main Lake, Urban Fish Farm Tower and Sailing Stands



Interior Perspective of the courtyard surrounded by the Islamic Art Museum



The Mosque
Ajman International Library
Islamic Arts Museum
National Heritage Museum
Camel Stables
Oasis Wildlife Centre Dispersed Across Islands
Main Camel Stand



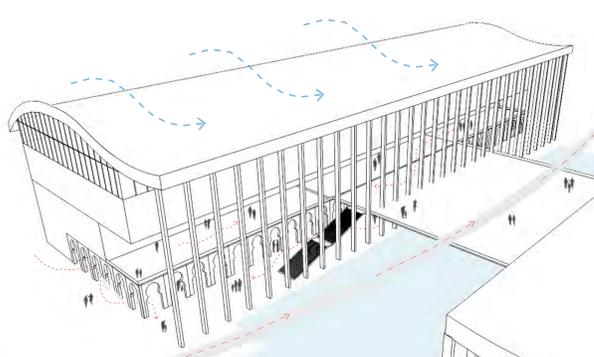
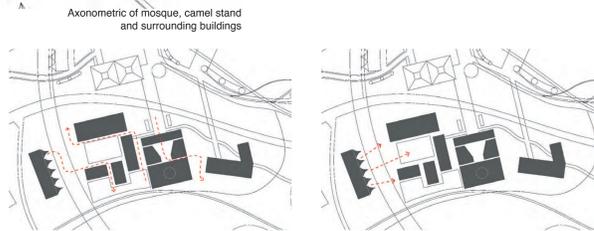
Mosque

The mosque tends to always be situated in the core of a city to allow it to be part of the urban fabric. Hence, the reason it is positioned to the north-west of the heritage district in order to allow it to connect with the cultural core of the overall masterplan. The axonometric clearly highlights to flow of movement between the densely populated buildings.

A) Physical connection to the main core of the masterplan, which is easily accessible for pedestrians. Outdoor space provided incase there tends to be an overflow of people praying in the mosque it flows into the courtyard.

B) Historically the mosque tends to be surrounded by numerous buildings to create enclosure. Thereby, increasing the urban density of the area with narrow streets and pockets of outdoor space.

C) The celebration of the camel racing is evident due to the location of the camel stand with a visual connection to the mosque.



Axonometric of Islamic Art Museum

Islamic Art Museum

The courtyard surrounded by the Islamic Art Museum and National Heritage Museum is a key public space creating a sense of arrival into the main public building. The structural elements including colonnades, overhangs and staircases will create boundaries between the various forms of activities.

Under the ornate arches will be a place for the local market to occur on a daily basis. The staircase leads up to the first floor where there is access to the tram and the main entrance of the Islamic Art Museum, which holds various exhibitions of pottery and textiles.

The three buildings surrounding the courtyard create a sheltered area for the public from the harsh desert winds. The section highlights the key connection of the Islamic Art Museum to the camel stand, as the outdoor public stairs located under the canopy of the roof face the camel track.

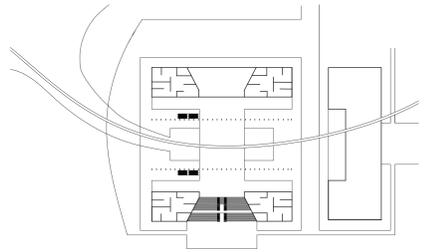


External Perspective of Islamic Art Museum and Camel Stand

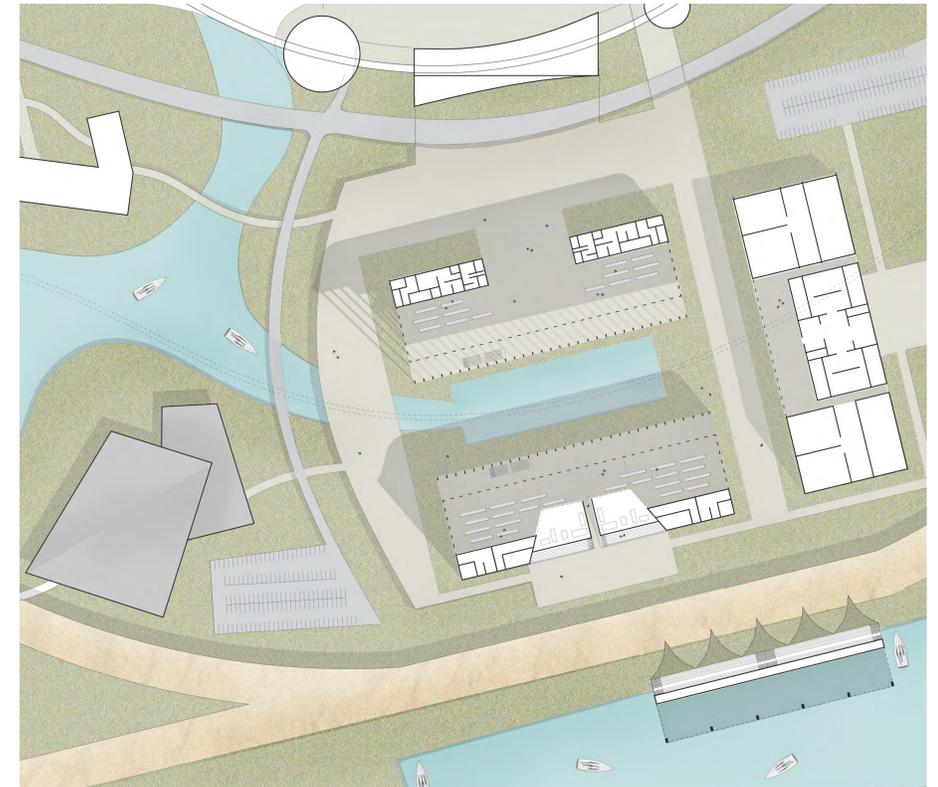
Heritage District

The heritage district provides a platform for cultural and traditional events to take place in Ajman. The design takes into consideration the polarization between tradition and modernity to create something innovative. It is about creating spaces that are combining both the interior with the exterior to allow activities to happen in different forms.

The buildings are all connected via bridges, which cross the river at various points, leading to an enclosed courtyard surrounded by the Islamic Arts Museum. A key consideration of the scheme is to celebrate the tradition of camel racing in Ajman. Thereby, there are numerous camel stands dotted across the overall masterplan, aiming to connect visually with the existing camel track that runs throughout the site.



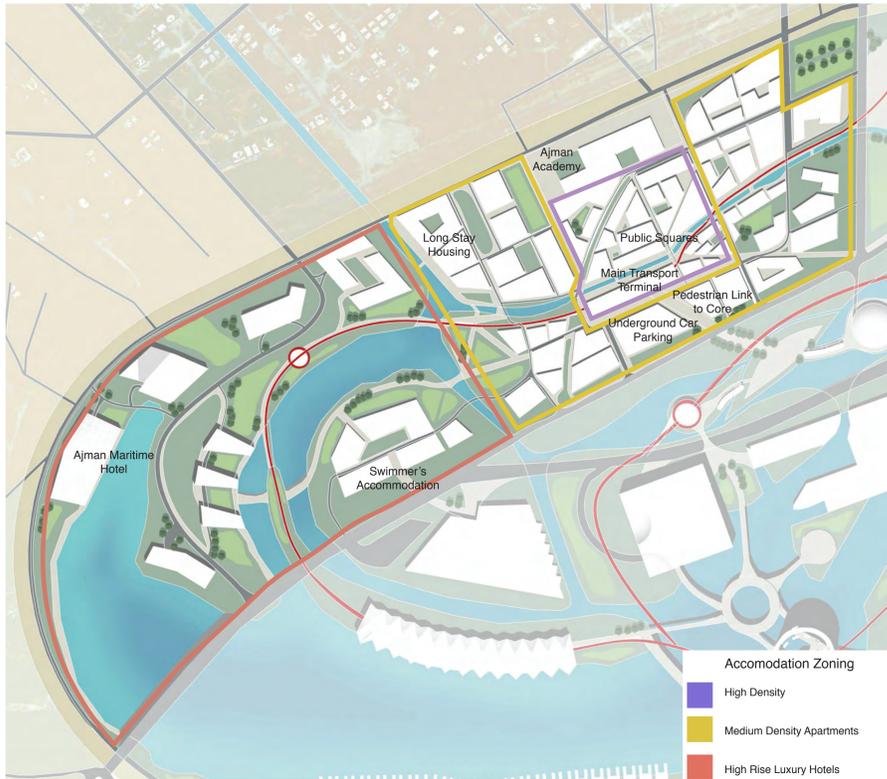
1:4000 First Floor Plan Islamic Art Museum



1:4000 Ground Floor Plan in Context Islamic Art Museum and Surrounding Area

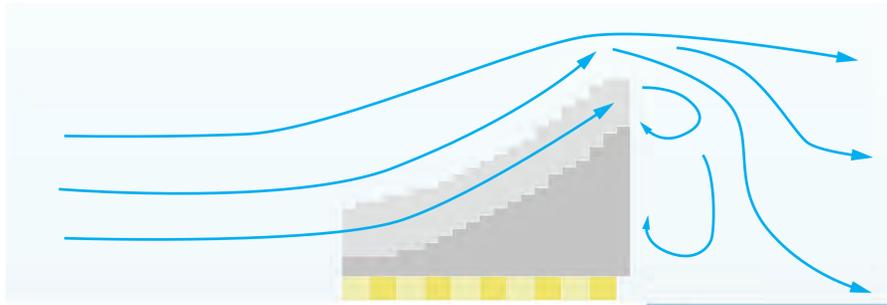


Islamic Art Museum and Camel Stand
1:1000 Sections



An accommodation district was integrated into the scheme not only to provide a place for tourists to stay for short visits at a time, but to cater to those who will benefit from the boost in employment in the area. The district is split roughly into three interlocking zones with varying densities. A high density area for more affordable accommodation consists of medium sized apartments, for longer stay workers and hostels for very short stay holiday makers. This is aimed to provide a sense of community and commerce in the area around Ajman Academy. The medium density area is marketed towards

those on trips lasting longer than one week to the area. This includes businessmen and family holiday makers, the area's good access to transport and number of events within walking distance makes this ideal. The third area is primarily made up of luxury hotels, including the Ajman Maritime Hotel. Easy access to parking and the spectacular views offered from this area make it very attractive for luxury weekends away as well as security for diplomats and the performers at the events.



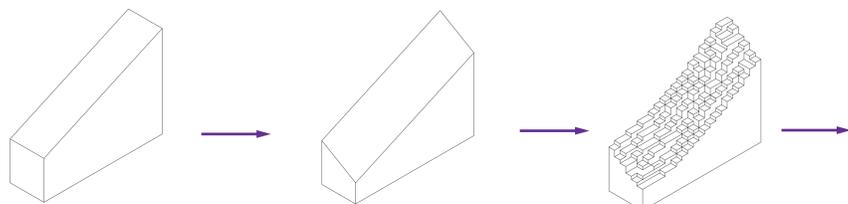
Prevailing wind directed to provide natural ventilation on south side

The Ajman Maritime Hotel

Set on the water, this hotel rises up towards The Maritime District, offering amazing views across all of the Event City. Along the vertical southern facades, balconies shade the rooms below from direct sunlight, absorbing it during the day and releasing it during the night, reducing both heating and cooling loads. The building slopes down from the south to the north, providing terraces that look off towards the sea and the city centre. Planting is placed around the edge of each terrace to ensure privacy. This form maximises the surface area exposed to the prevailing wind whilst drawing it upwards, creating negative pressure around the south facades. The negative pressure then induces air movement around these balconies, providing much needed natural ventilation to rooms which would normally be the hottest.



The balconies' sight lines are designed for privacy



North side pushed down to draw up prevailing wind.

Most northerly corner pushed down further to reduce area exposed to sun.

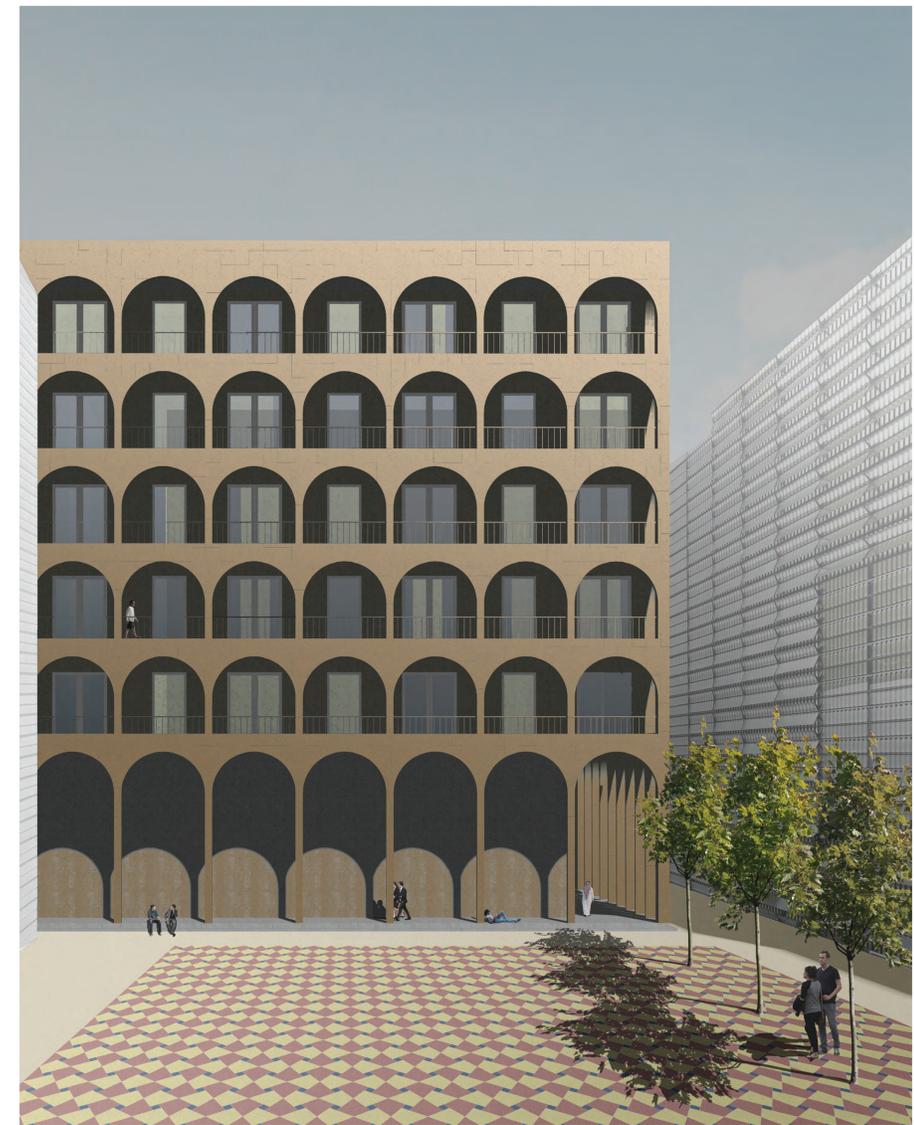
Slope tiered off to make large outdoor spaces for rooms.



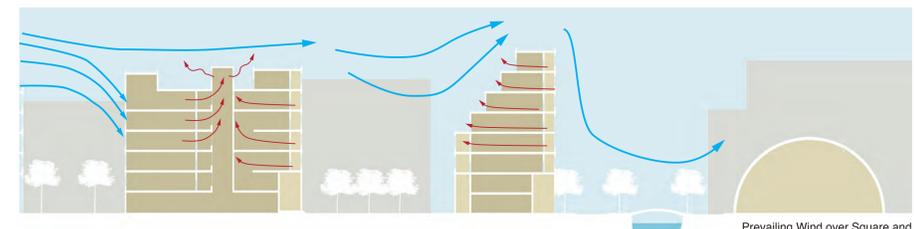
Ajman Maritime Hotel from the water



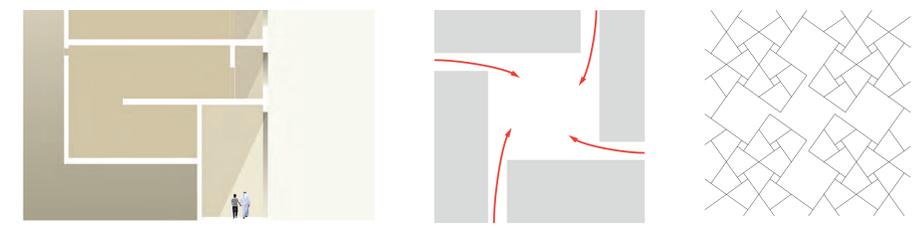
Terraces covered with pergolas provide privacy and shade from high summer sun whilst also allowing free air movement.



Public Square



Prevailing Wind over Square and Natural Ventilation



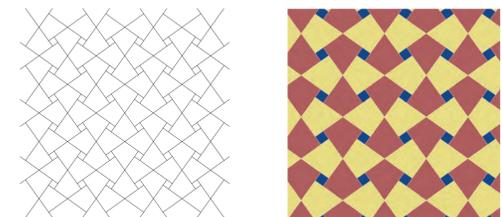
Exterior colonnade to shade interior places

Massing

Introduction of Pattern

Public Squares

In the higher density area, the apartments are designed with central atriums to allow air to circulate up and out beside the roof terraces. The rooms are recessed back with shaded outdoor areas to reduce direct sunlight. Public squares are placed around the area to provide a place for smaller events. They are configured so that access routes terminate at them, obliging users to stop and look around. A sense of place is created in these areas through the design of different tiling textures and compositions unique to each square. These designs are derived from the form of the square and inspired by traditional Islamic pattern.



Full Pattern

Coloured



District Aims

As Ajman seeks to envision its future, the Innovation District would provide world class facilities whilst integrating innovative and sustainable technology. The district has three main focuses; planting, learning and water.

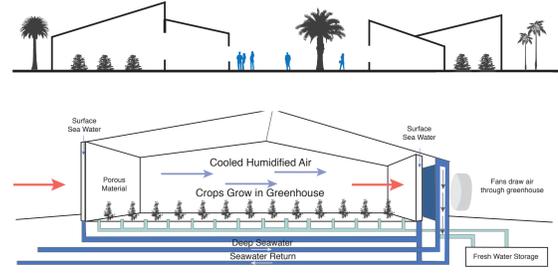
Planting in this district has been made possible by the integration of sustainable water collection and desalination technologies, to supply fresh water for the cultural zone and potentially the local area also.

As education is the means through which innovation occurs, the supply of new educational facilities, a science museum and a conference centre, would help to inspire and invigorate Ajman's innovators of tomorrow.

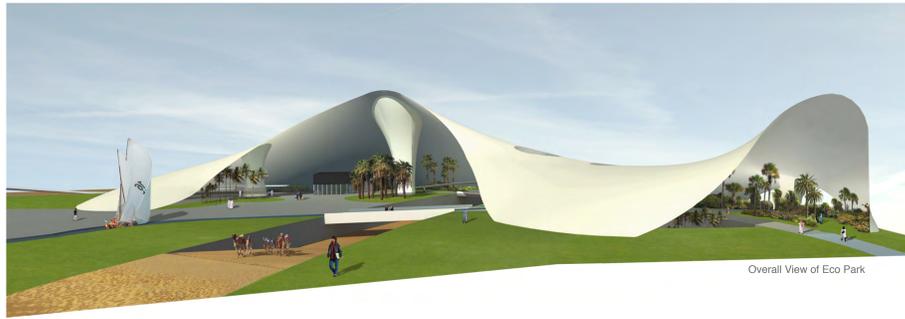
Seawater Greenhouses

Seawater evaporates at the front of the greenhouse creating cool humid conditions inside and is then condensed as fresh water for irrigation of crops.

Air entering the greenhouse is cooled and humidified by seawater, which trickles over the first evaporator. As air leaves the growing area, it passes through the second evaporator over which seawater is flowing. This water has been heated by the sun in a network of pipes above the growing area, making the air much hotter and more humid. It then meets a series of vertical pipes through which cool seawater passes. When the hot humid air meets the cool surfaces, fresh water will condense and run down to the base for collection.



Sectional Studies of Seawater Greenhouse



Overall View of Eco Park

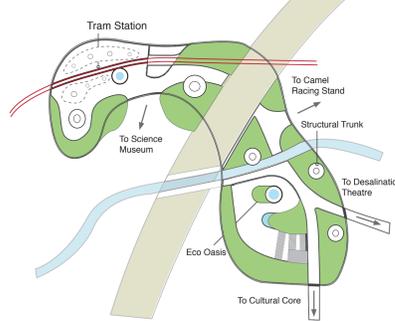
Eco Park

The Eco Park was conceived from the desire to create a grand civic space which would provide shelter for visitors to the Innovation District from the heat and direct sunlight. The swooping organic form was inspired from the gentle undulating desert sand dunes that currently exist on the site.

Water is a precious and rare commodity in this region so a sustainable method of irrigation is achieved by integrating a series of structural 'trunks' into the design to provide passive condensation throughout the Eco Park. Cool air is drawn up through the interior of the trunk to the warmer outdoor climate and there is an interface between the two contrasting temperatures.

Condensing strips on the internal surface of the trunks facilitate the collection of water droplets that form at this interface. Droplets descend into a pool below to be used as a source of irrigation for plants.

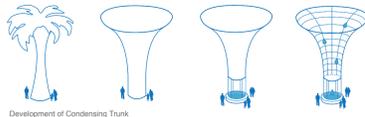
Ground Floor Plan 1:1000



Connection Hub

The Eco Park acts as a connection hub, linking the structure to other buildings within the Innovation District and also the wider cultural zone. The flowing form of the Eco Park opens up at four points to allow people to move through the landscaped oasis.

The waterway and tram line run through the structure, providing a choice of transport options. Visitors can also take full advantage of an exciting perspective from which they can view camel races as part of the camel track loop runs through the area at a lower level.



Development of Condensing Trunk

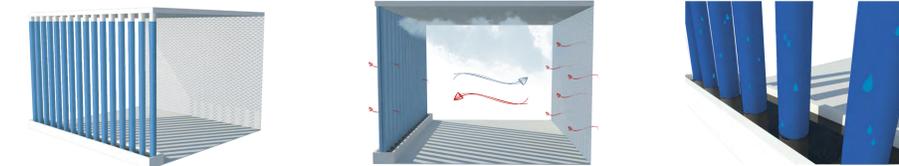


Perspective of Sunken Eco Oasis

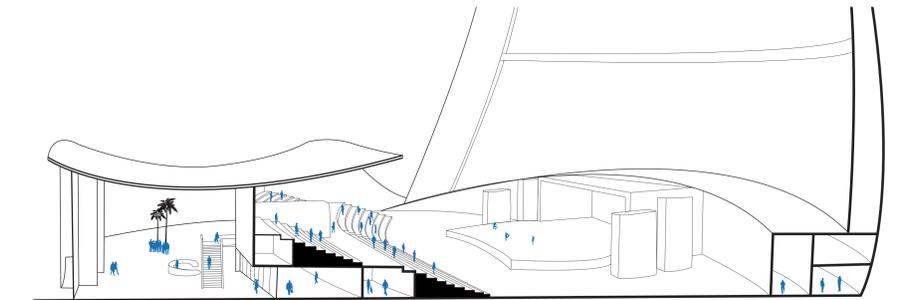


Musical Performance in the Desalination Theatre

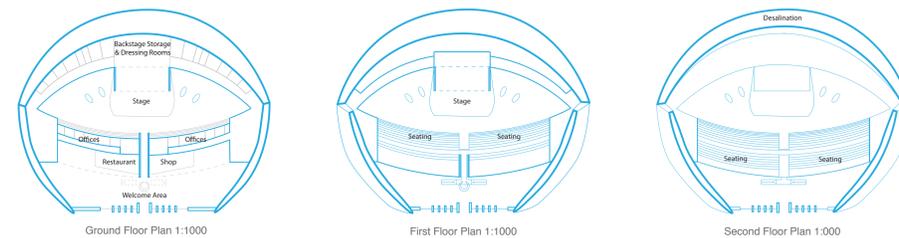
Desalination Process



1. Seawater is pumped through vertical pipes.
2. Cool seawater is then sprayed onto a screen at rear. Prevailing wind gusts through unit, evaporating water from the screen. Evaporated water causes local air humidity to increase.
3. Humid air condenses on cold surface of seawater pipes, trickles down the surface, and fresh water is collected.



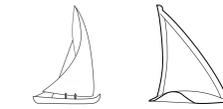
Cut-Through Section of Desalination Theatre



Desalination Theatre

This striking building rises up like a swooping sail from the sea. Its impressive form incorporates a theatre and provides a supply of fresh water.

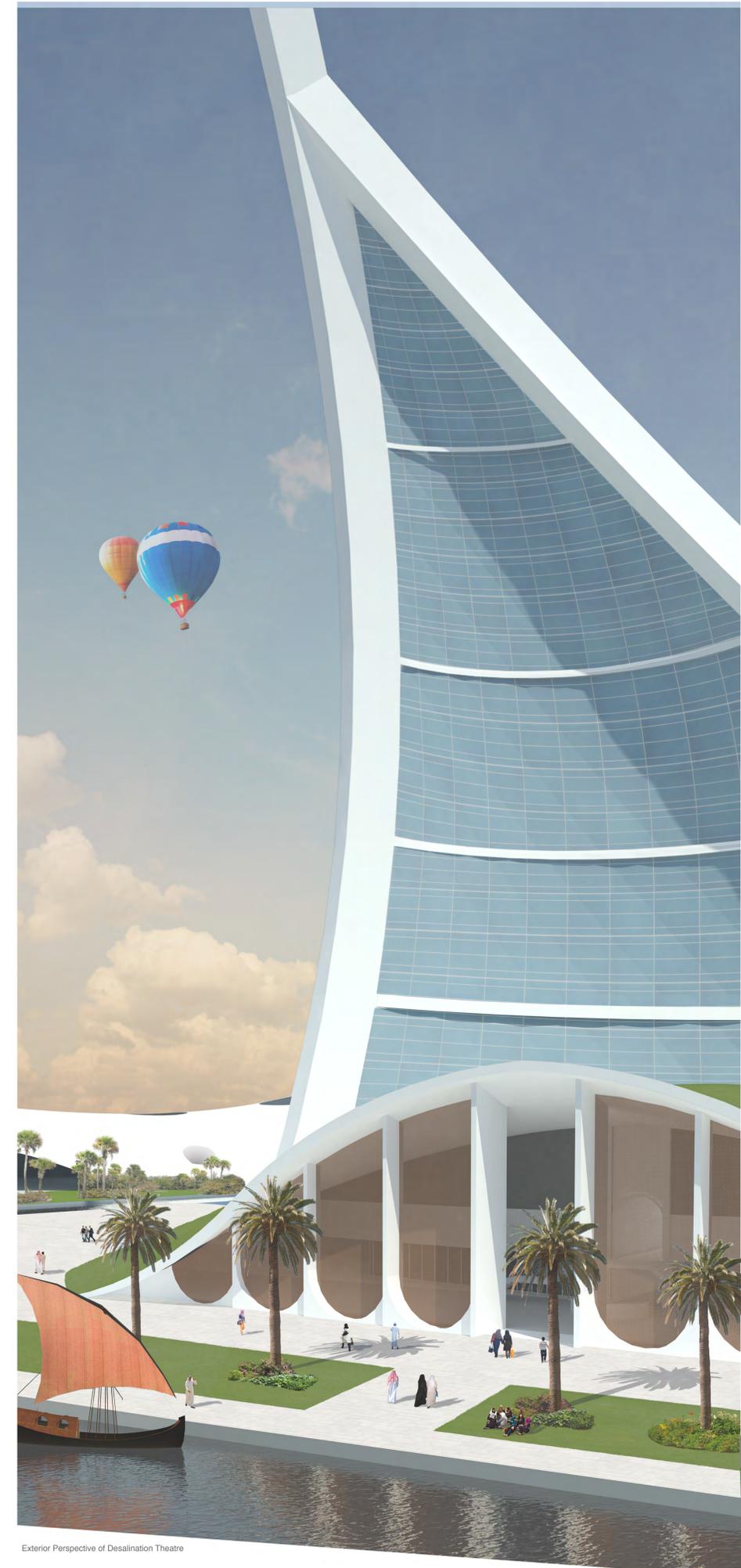
The sweeping curve of the building is inspired from the form of the traditional Arabic boat, the Dhow.



Inspiration of Form

This building seeks to provide for the future needs of the city, by converting the abundant salt water of the coastal regions to clean fresh water for the local population via a desalination process.

The Desalination 'sail' is orientated so that it can take advantage of prevailing wind to flow through the sail structure to aid with the desalination process.



Exterior Perspective of Desalination Theatre