Grant Associates

In collaboration with
Wilkinson Eyre Architects
Atelier 1
Atelier 10
Meinhardt Infrastructure Pte Ltd
Davis Langdon & Seah Singapore Pte Ltd

This is a project about Gardens…

'A garden is a landscape whose combined vastness and definitiveness and whose united beauty, magnificence and strangeness shall convey the idea of care or culture or superintendence.'

Ellison 18th C.

Key Strategic Design Moves

Concept and philosophy of Symbiosis and ecological balance to apply to each garden zone.

Each of the 3 Garden Zones to have a clearly defined and individual character;

- Marina South renamed - Lion Gardens
- Marina East renamed - Moon Gardens
- Marina Central renamed - Tiger Gardens

Organic forms and design language to predominate as a counterpoint to rectilinear urban grid;

Silhouette of each garden zone to be distinctive;

Policy of creating specific settings for individual gardens within a matrix of semi-natural planting rather than a total coverage of highly cultivated gardens;
lion gardens masterplan

Article courtesy of Singapore Architect, an SIA publication.
Lion Gardens Masterplan

A cosmopolitan sanctuary achieved through the construction of an intelligent new infrastructure and management system that allows the nurturing and cultivation of plants that would otherwise not grow there.

This infrastructure centers on a hub of buildings and facilities plugged into the landscape. The centerpiece of this hub is the cluster of Cooled Conservatories and associated facilities rising out of the ground and perched along the edge of the Marina. This artificially sustained world contrasts with a matrix of lush semi natural vegetation that is allowed to colonize and grow between the Gardens and new infrastructure.

An armature of infrastructure connects from the hub to the entrances to the gardens. These pathways distribute people through the gardens and provide a network of energy, cooling devices, irrigation, water treatment and waste recycling systems connecting back to the Hub buildings.

The architecture for the project is deliberately organic and the buildings follow a common language of form and structure and materials. Each building is distinctive in scale and profile.

The landscape design for the project also works off the contrast between the alien and inserted infrastructure of pathways, gardens and associated features as opposed to the backdrop of semi-natural regeneration and remnant parkland.

This structure of the Garden is analogous to the orchid in the way it grows and colonized from this host infrastructure. It is epiphytic and responsive to the very specific conditions created by the hub.
The Cooled Conservatories

Rather than combining both cool-moist and cool-dry environments in a single structure, we have created two distinct forms allowing the differences between plant life in these conditions to be contrasted and explored. The composition of the two forms, generated from the same geometry, creates a landscape in itself, with existing circulation and amenity spaces around and in between them.

The curving forms of the glasshouses enclose a dramatic inner court, where shared facilities will be located. Access to this air-conditioned space will be beneath the higher landscaped ramp, and additionally through life cores which pierce the space from above.

Set out on a linear axis from east to west, the glasshouses incorporate sunshades arranged north to south to respond to the sun’s path across the site. At any one time, the glasshouses will require 50% shading in order to control the temperatures within. The shading will also respond to the orientation of the structures, with the southern facades more heavily shaded while the northern facades will retain almost total transparency. This near-vertical glass façade on the cool-dry glasshouse will act as a prism, refracting light from the water’s surface up into the space within.
The cool-dry glasshouse is the larger of the two, its interior filled with towering 'stacks' of planting. Entering into the space, the visitor will be able to experience the planting from an extraordinary variety of perspectives. Planted walkways will radiate around the perimeter, leading visitors above, under and through the main tree canopy in a spiral progression. The planting will differ in scale, offering a changing intensity of experience and the opportunity to observe the plant life both from long range and up close. A vertical biowall will exhibit a range of different species, a ramp to one side climbing gradually along its elevation to allow close inspection of the planting.

Adjacent to the cool-dry house, the cool-moist glasshouse encloses a slightly smaller space, the centerpiece of which is an artificial mountain. Visitors will enter the glasshouse at ground level, moving through a slot cut into the centre of the mountain where a lift core will provide direct access to the summit, where there will be spectacular long range views across Marina Channel to the pinnacles of the Moon Gardens.

The principle circulation within the cool-moist house will be a spiraling ramp that leads visitors on a gentle 1km long promenade down through the space. Bridge links at several points will allow access to 'clearings' on the mountainside, offering an opportunity to look at the planting up close and follow surface routes to the next bridge link.
The image illustrates a diagram of a proposed architectural design, likely for a green or sustainable building. It shows a series of towers or structures that capture and utilize energy, water, and air in a closed system. The diagram includes labels such as 'electricity generated for the city', 'water tanks', 'air', and 'solar thermal collection'. The design aims to be self-sufficient, utilizing renewable energy sources and water management systems to create a sustainable environment. The towers are connected by pathways and greenery, emphasizing a blend of technology and nature. The text at the bottom reads: "Article courtesy of Singapore Architect, an SIA publication."
**Supertrees**

This is suprnature where the garden is defined by a cluster of Supertrees up to 50m high. Each trunk of the Supertrees is an amazing vertical garden. They are planted with ferns, orchids, climbers and other plants up to a height of around 30m to create an almost fantasy space topped by a series of beautiful canopies that provide shade and shelter from rain.

There is access to an aerial walkway using lifts up the trunks of 2 of the Supertrees. This takes people up to a walkway some 35-40m up in the air from where they can look down over the gardens. At this level, the walkway connects the canopies and forms a circuit around the grove.

As well as iconic structures at the heart of the gardens these are the Environmental Engines for the cooled Conservatories incorporating devices for water harvesting and storage, air intake and cooling, photovoltaic arrays, solar collectors, desiccant drying, etc.
Events and Activities

The masterplan is designed to facilitate a wide range of activities and attractions that can be programmed through a 24 hour period and through the year.
Moon Gardens

If the Lion Gardens are a fusion of digital technology, horticulture, modern materials, color, activities and culture, then the Moon Gardens are the counterpoint. They are a passive/analogue technologies, natural systems, biodiversity, reflection and lushous plantings and aquatic jewels. The plan is structured around a spine of water lined by new landscapes, buildings and gardens. This central spine of dramatic landscapes is likely to be a little scary in places. A sequence of dramatic ecological towers rises from this waterway’s edge like coastal pinnacles and creates an extraordinary 3 dimensional landscape along the corridor and establishes a unique profile to the Moon Gardens when seen from across the reservoir.

Concept images of model

View across the bay to the Moon Gardens

Aznometric through Moon Gardens showing river and stepped buildings

stepped floor plate beyond the glazing allows self shading and combined with solar control glass reduces cooling energy consumption

ventilation supplied and extracted by central system

solar thermal and photovoltaic panels integrated to external facade for hot water and electricity

extract air exhausted behind screen to provide conditioning to exterior space

heat recovery ventilation

air intake behind vegetation screen to reduce air intake temperature from solar effects

+ 120m

hotel and apartments

+ 30m

college

+ 70m

residential

moon gardens masterplan
tiger gardens masterplan
Tiger Gardens

This sliver of land separates the big city from the reservoir. It offers a respite from the dense, busy hard urban development that backs the waters edge and a corridor to connect along the water edge to other sectors. This is about bursting out from the grey city grid into a vibrant world of nature, life, color and variety. It is also about creating magnets of attraction and enjoyment for refreshment and delight.

One way of achieving this is to introduce a whole new language of distinctive structures and shelters to redefine the water front including jetties, landing points and fishing stands. The structures are planned as a family of related, but not identical forms using cables, mesh and inflatable technologies. The intention is to incorporate planting onto all these structures to enhance the garden concept. SA