

t i e r r a



Tierra is an award winning multidisciplinary design practice with nearly 20 years of exemplary experience in Asia. With projects across 12 countries we draw from an interdisciplinary pool of talent that includes landscape architects, architects, engineers, designers and environmental scientists. We offer services focused on holistic integration of the built environment through master planning, urban design, architecture and landscape architecture.

Our design process brings the rhythm and hues of the earth and the built environment to life by incorporating natural materials, colours and sounds into integrated spaces. We focus on thoughtful design that is holistic yet elegant, practical yet simple, where people and their communities are at the core of our design approach.

A graceful play between active and passive forces, materiality and light; spatial and tactile experiences inform all our work. Our design is driven through a contextual response as each project takes on a unique identity respectful of its surroundings while improving the quality of life.

Hospitality



002

**PARKROYAL
on Pickering**

Commercial



018

**Ocean Financial
Centre**

Residential



028

The Coast



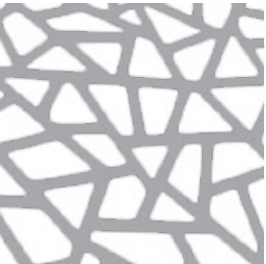
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Soleil



044

Scotts Square



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Tate Residence


Park + Hospitality



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Zhongshan Park

Civic Institution



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**Natural History
Museum**



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**GreenConnection
@Bedok**



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Sketchbook



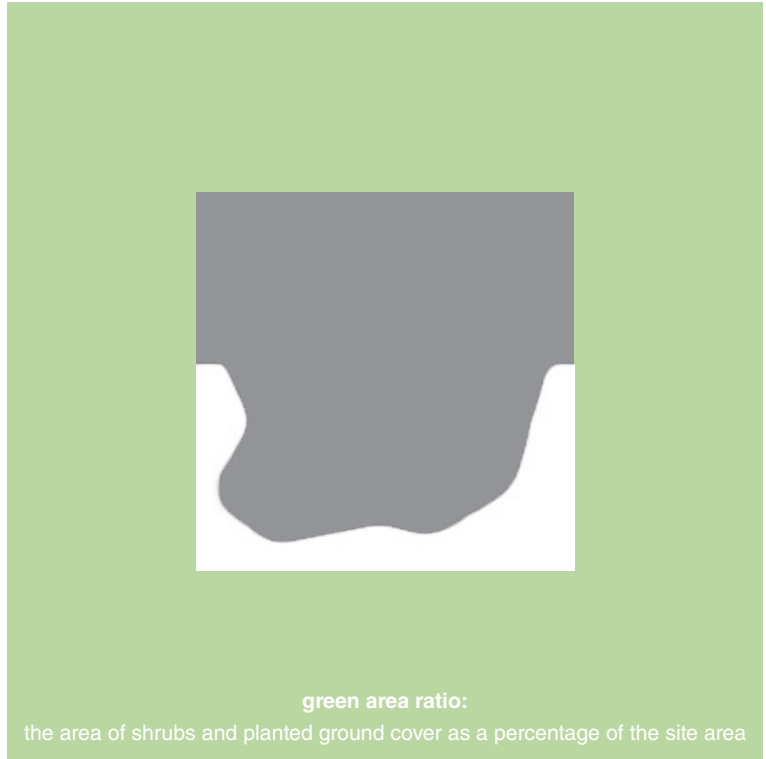
102

**Other Selected
Projects**



104

**Awards and
Honours**



PARKROYAL on Pickering

PARKROYAL on Pickering is a mixed use development with hotel and office buildings, located on a long, narrow site facing Hong Lim Park. An example of seamless integration between architecture, landscape architecture and interior design, the design responds to the greenery of the park and the urban surroundings of the Central Business District and Chinatown. PARKROYAL on Pickering is a successful demonstration of how greenery can be conserved in a dense urban fabric enhancing the experience of the users of the building as well as the entire neighbourhood.

year of
completion

2012

site area

6 959 m²

green
area ratio

200%

project
architect

WOHA

An extensive palette of 52 species of flora were used to create an exotic and lush tropical garden for the project. The strategy focused on engaging with its surroundings, unifying the greenery of adjacent Hong Lim Park through the verdant podium and sky gardens of the development. For the first time in Singapore, a project has incorporated double the building's footprint as greenscape, illustrating that buildings can actually enhance the built environment of cities. With the ever increasing pressure on land scarce Singapore, the need to integrate landscape and architecture to maximise space is an essential goal at Tierra.



Hong Lim park sits to the North of PARKROYAL on Pickering. The area of the park is approximately double that of the site.



The park is extended up and into PARKROYAL to create a hotel in a garden.



The total green area in PARKROYAL is approximately equal to the area of Hong Lim Park.



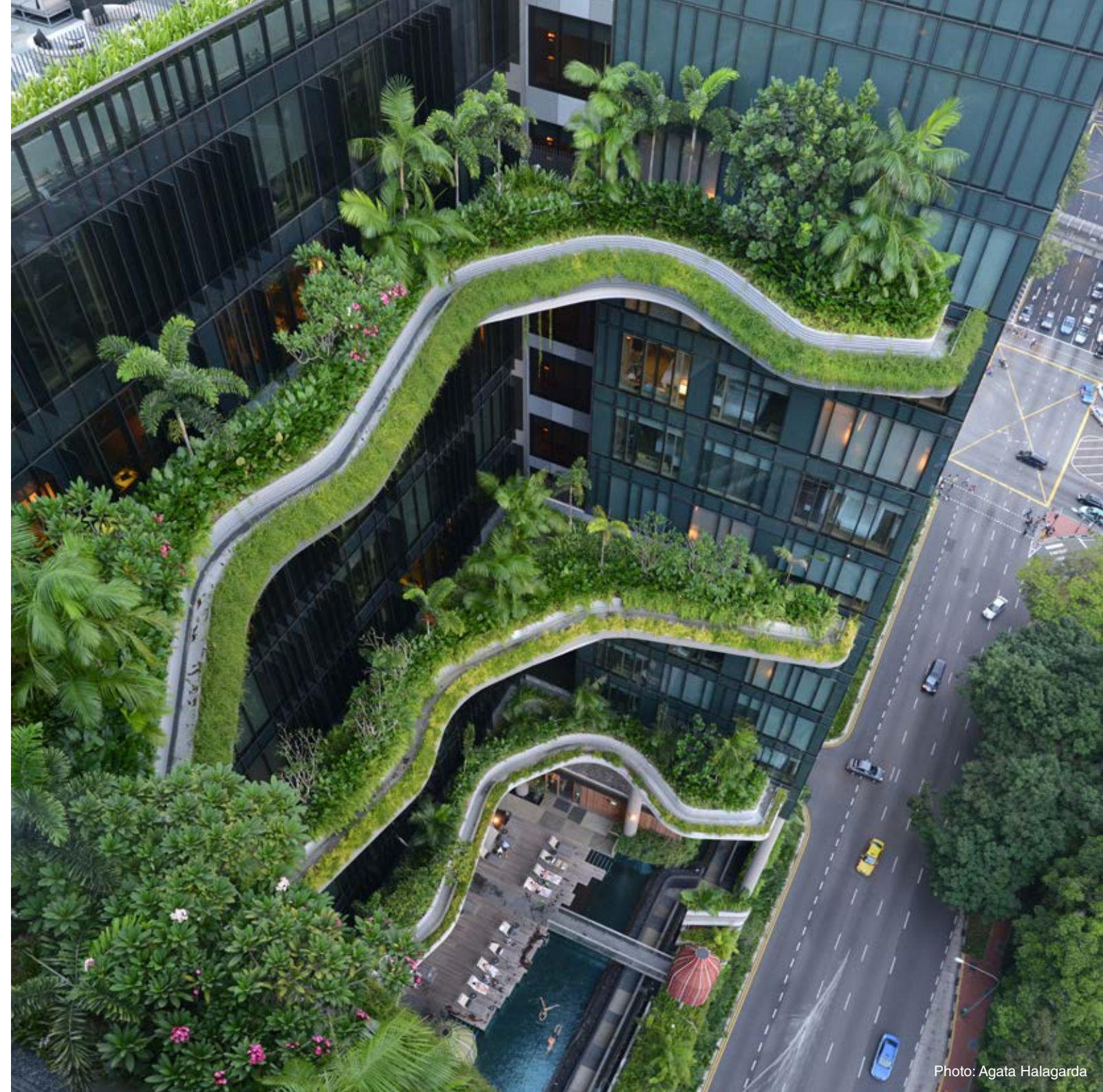
Integrative Design in Singapore

The value of integrating greenery into our built environment

// One of the key thrusts of the City in a Garden vision is to optimise urban spaces and infrastructure for greenery and recreation, which is attained through this form of **multi-dimensional greening**. Skyrise Greenery encompasses the greening of both horizontal (rooftop greenery) and vertical (green walls) dimensions. It strives to create a **harmonious balance** between urban development and our natural heritage, which is a challenge for Singapore, as it is faced with physical land constraints. Hence, rooftop greenery and green walls pose as an ideal alternative to deal with this dilemma. //

City Green

Issue #7, p73





0 5 10 15 20m

Roof Top Plan



0 5 10 15 20m

6th, 10th and 14th Storey Plans



0 5 10 15 20m

1st Storey Plan



5th Storey Podium, Section AA



5th Storey Podium Plan



A visually striking contoured podium is sculpted to create lofty outdoor plazas, walkways and gardens which flow seamlessly into dramatic interior spaces. The contours conceal raised car parking, melding into lushly planted openings, crevasses, gullies and waterfalls thus creating an attractive urban element.

Water features throughout the building also play a dual role. Besides the relaxing audiovisual aesthetic, the water cycles its way throughout the interior and exterior of the building to help maintain an ambient temperature, thereby lowering energy costs. Rainwater is harvested, stored and used for plant irrigation, and solar irrigation systems are employed throughout the building.





1 Upper Pickering Street Elevation



2 New Bridge Road Elevation







Ocean Financial Centre

Located in the heart of the Central Business District at Raffles Place, Ocean Financial Centre is a high-end office tower which had to deal with the difficult trade-off between GFA and green space. In gaining its Platinum Green Mark and LEED certification, the design had to address two key areas - the complete disconnection of the top floors from the ground and the treatment of a prominently positioned car park facade. With the aim of improving the quality of life for inhabitants, greenery was integrated into both areas.

Wellness

Connection with outdoors, community and nature

// Vectors of human satisfaction or acceptance suggest that the sustainable building is not just about physiological needs; it aims to connect with occupants at **psychological** and **emotional** levels as well. It could be argued, by extension, that the best defence against obsolescence of buildings - the unsustainable spectacle of build-and-tear-down that is seen all over Asia - is people emotionally invested in what they have. To be sustainable is to increase perceived value so that owners and occupants are less inclined to tear down existing buildings or retrofit them. Several attributes of a building relate to wellness.

Connectivity with outdoors

Visual access to weather and natural light affect how individuals feel and perform. In an oft-cited study on postoperative recovery period in hospital wards, patients with views to the outdoors were discharged sooner than those who did not have the same; evidence that a link with the outdoors can affect the mind and body. For this connectivity to have a positive outcome there must be a well-designed **interface between indoors and outdoors** in which the form and envelope of a building come together to moderate daylight, solar heat gain, airflow and view.

Access to nature

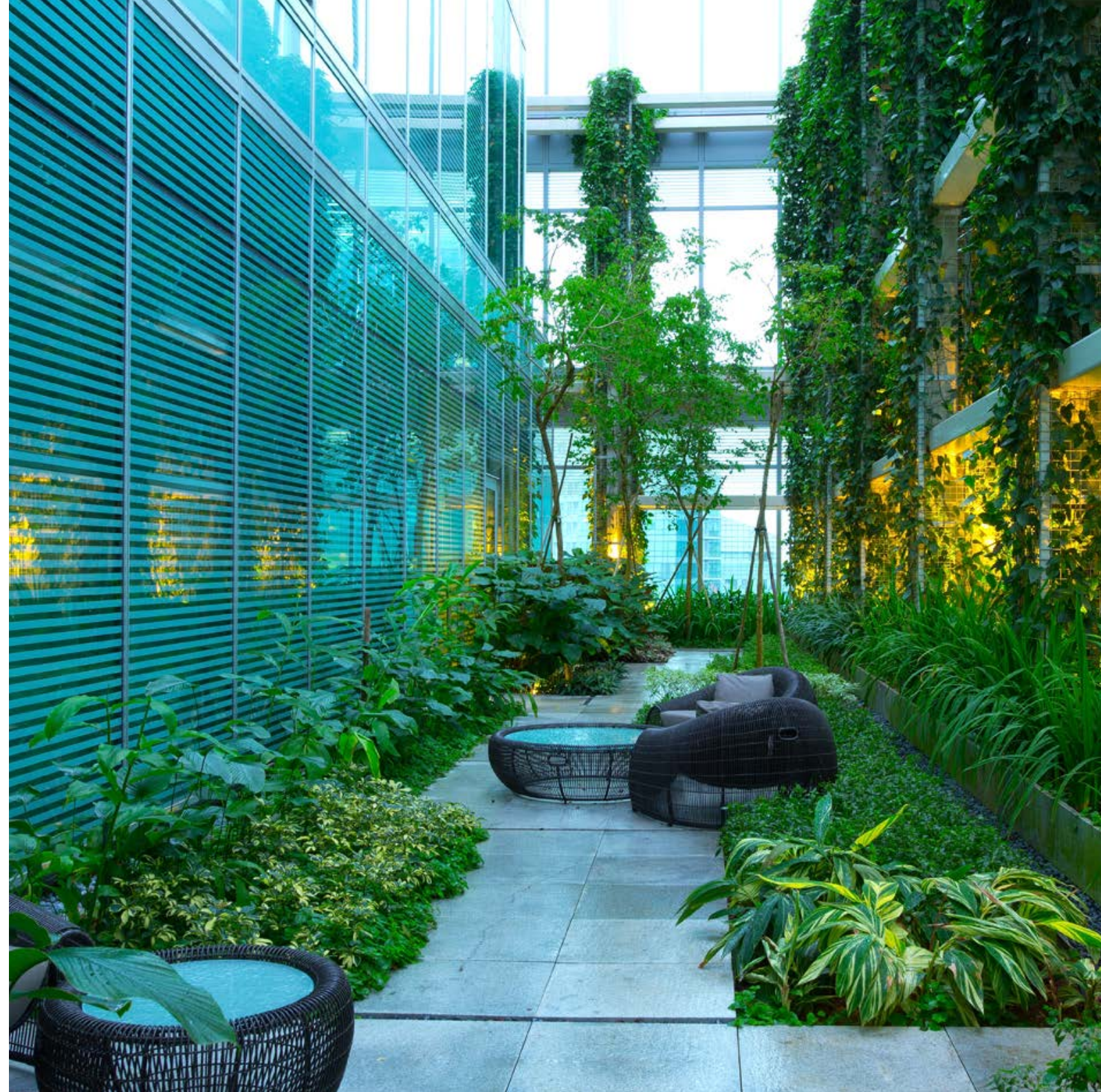
Biophilia is an intuitive need for contact with things natural. If a site has pre-existing natural elements - mature trees, water bodies - it has strong potential to address this need. Where there is little or none, gardens, green roofs and planted facades are a common proxy for nature. A study in Singapore found that the presence of these elements in buildings positively affects **wellness** even where they are man-made. //

Greening Asia

Nirmal Kishnani, p79-80



The tropical sky gardens at the Ocean Financial Centre are located between the building structure and facade framing, blurring the boundary between the built form and the verdant environment. A series of tropical gardens, outdoor walks and seating at different levels create a work environment that is refreshing and unique. These areas provide much needed relaxation and relief to users who spend most of their time in the artificially ventilated environment of an office building.



Going Vertically Green

A new trend in dressing facades

// All green walls, as vertical arrangements of plants and other organisms, naturally **remove toxins** and unhealthy contaminants from the air that we breathe. Green walls are **complete ecosystems**, or simpler configurations of plants, that thrive in and help to decontaminate urban environments. Many living walls are indoors, but they can also be outdoors, such as those installed on the exterior walls of buildings.

Another key feature that drives the popularity of green walls is the unique visual appeal that a green wall offers to onlookers and occupiers alike. The sensorial pleasure resonates with refreshing and rejuvenating vibes to your weary soul, particularly after a long day at work. And it **promotes awareness on the environment**, compelling you to rethink the way you live and work to minimise the impact on the environment. //

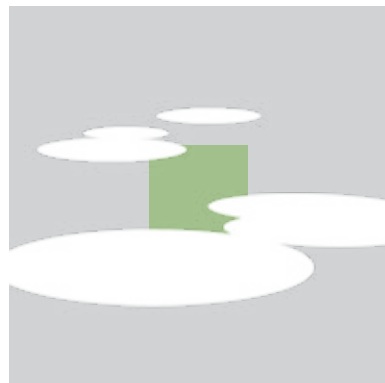
Landscape Forum
Issue #12, p14-15



The plaza at the ground level is flanked by the multi-storey car park of the Ocean Financial Centre. Working with the architecture, the car park facade is transformed into an award-winning attraction for Singapore. As the world's largest greenwall (the Guinness Book of World Records 2013), the facade not only brings a visually attractive feature to the entrance of OFC but also helps to reduce the carbon emissions from the car park itself - a first for greenwalls.

Highlighting Singapore's position on the international stage, the greenwall depicts maps of Singapore, South East Asia and the World in varying shades of luscious, green planting.





The Coast

With its tranquil location on the eastern coast of Sentosa Island, The Coast offers tropical resort living just minutes from the bustling city life on the mainland. The landscape at The Coast epitomizes the experience of water-front living through its series of transitions. Coming from the city and stepping into a sanctum of tranquillity, one experiences living by the ocean. The sound of trickling water merged with the meditative surroundings make the environment pure and breathtaking.

As a narrow peninsula, the site offered many design challenges in incorporating all the facilities of an integrated luxury condominium and marina. Extending the waterfront lifestyle, the landscape includes a large expanse of water which consists of a variety of pools. With spectacular views of the South China Sea, these pools give residents the feeling of swimming in the ocean. All first storey units enjoy direct access to shallow pools as an extension of their private spaces. These shallow pools serve as a buffer for the residents from the public areas beyond while decks dotted around the landscape provide more social spaces for pool side activities.

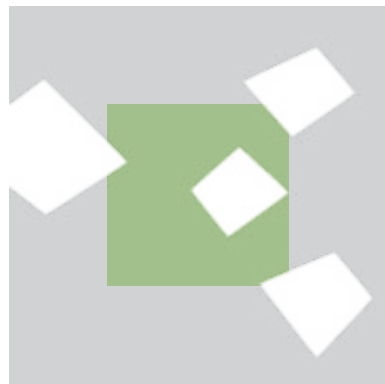




Sketch Plan

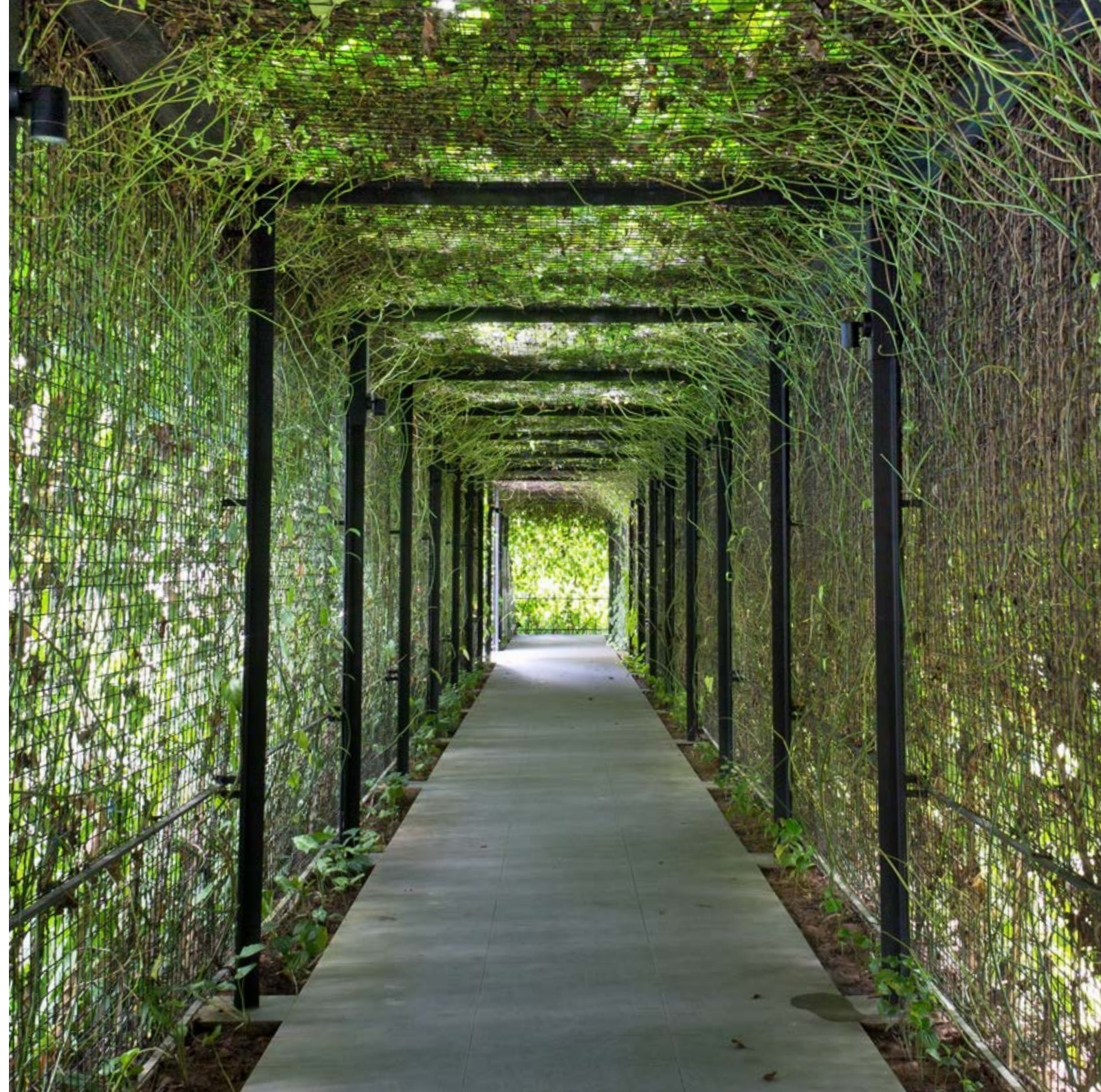






Soleil@Sinaran

A 36 storey condominium, Soleil@Sinaran is an urban oasis located within one of Singapore's busiest neighbourhoods. Using dense, tropical foliage and extensive pools, it transports its residents from the hustle and bustle of the city into a peaceful and serene environment.

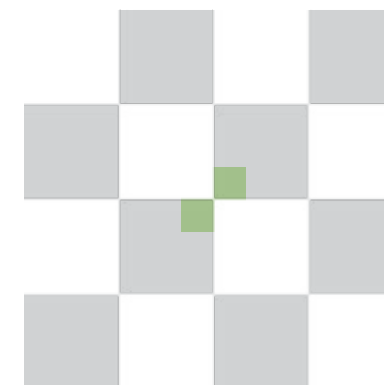


Walking through a green tree-lined walkway, the residents are greeted by a series of welcoming pavilions protruding from the dense greenery which surrounds the site. As these pavilions push into the main bodies of water, they create smaller, shallow private pools which allow kids to play in safety.

These pavilions also enhance the views of residents looking down onto the landscape. Covered in patterns of seasonal plants, the pavilion roofs add an evolving element of greenery in contrast to the shimmering blue of the pools.







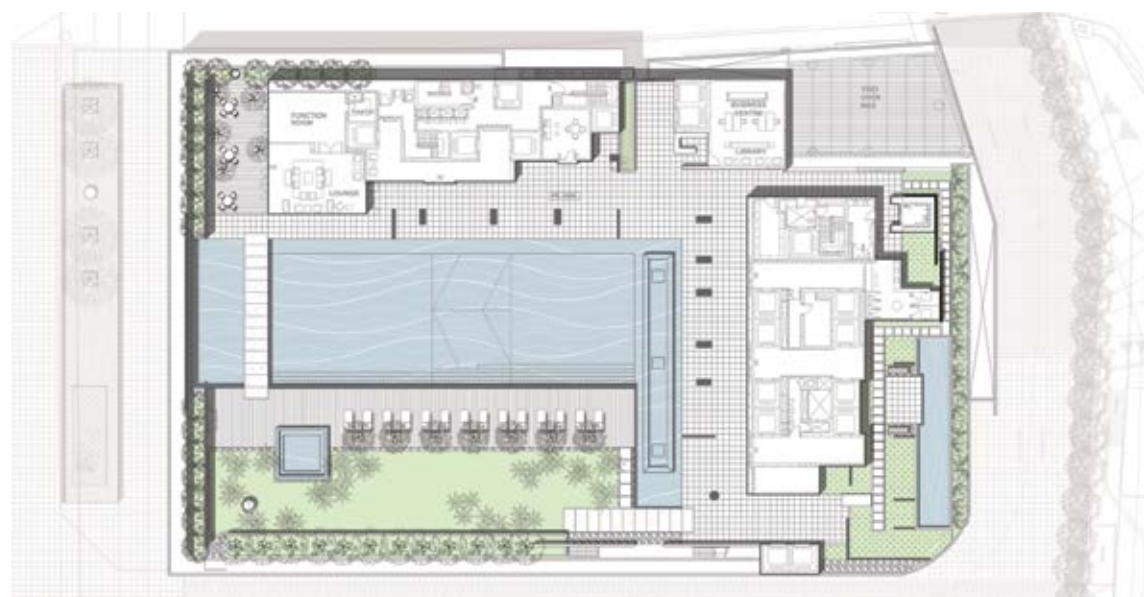
Scotts Square

Scotts Square is located at the heart of the Orchard Road shopping district. The landscape concept reflects the modern simplicity of the architecture while embracing the constraints of an urban environment. Using linear elements of timber, stone, water and vegetation, the design language continues from street level up to the roof-top terrace on the 35th storey.

At street level, the landscape strategy of the plaza along Scotts Road was to create a unified urban space, elegantly displaying renowned artworks on a simple plane of water. While on the 8th storey podium deck, the landscape design has been staged to provide a tranquil ground plane for the two residential towers. Here, the urban feel at the ground floor gives way to an elegant landscape composition of an expansive swimming pool, Jacuzzi, water feature, pool side terraces and a soft, beautiful lawn. Stone feature walls and trees at the periphery of the podium deck are employed to screen the users from neighbouring developments.

The roof-top terrace on the 35th storey is designed for those who enjoy the thrill of relaxing 'at-the-top-of-the-world'. The landscape design is consistently minimalist, so as not to distract from the sophisticated simplicity of each and every design element. The breath-taking views and uplifting experience of being perched high up in the sky make this roof-top deck a rare, premium space in the heart of town.



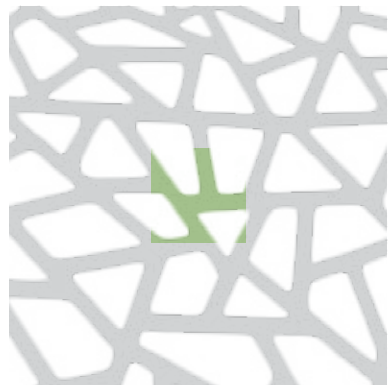


0 5 10m

8th Storey Plan







Tate Residences

The landscape design for Tate Residences expands on the organic-modern theme shown within the architecture, adopting a palette of geometric forms stemming from fractal patterns. Metallic mesh screens along the transition between the porte-cochere and entry court define the threshold to form a visual highlight in the landscape.



Claymore Road

0 5 10 15 20m

Upper 1st Storey Plan



The sculpted terrain of Tate Residences leads people through a textural composition of lawns, grassy mounds, flowering ground covers and shrubs which are complimented and contrasted by the geometry of the hardscape. From the port-cochere, steps lead up to the BBQ pavilion and children's play area before reaching the angular shaped pool.



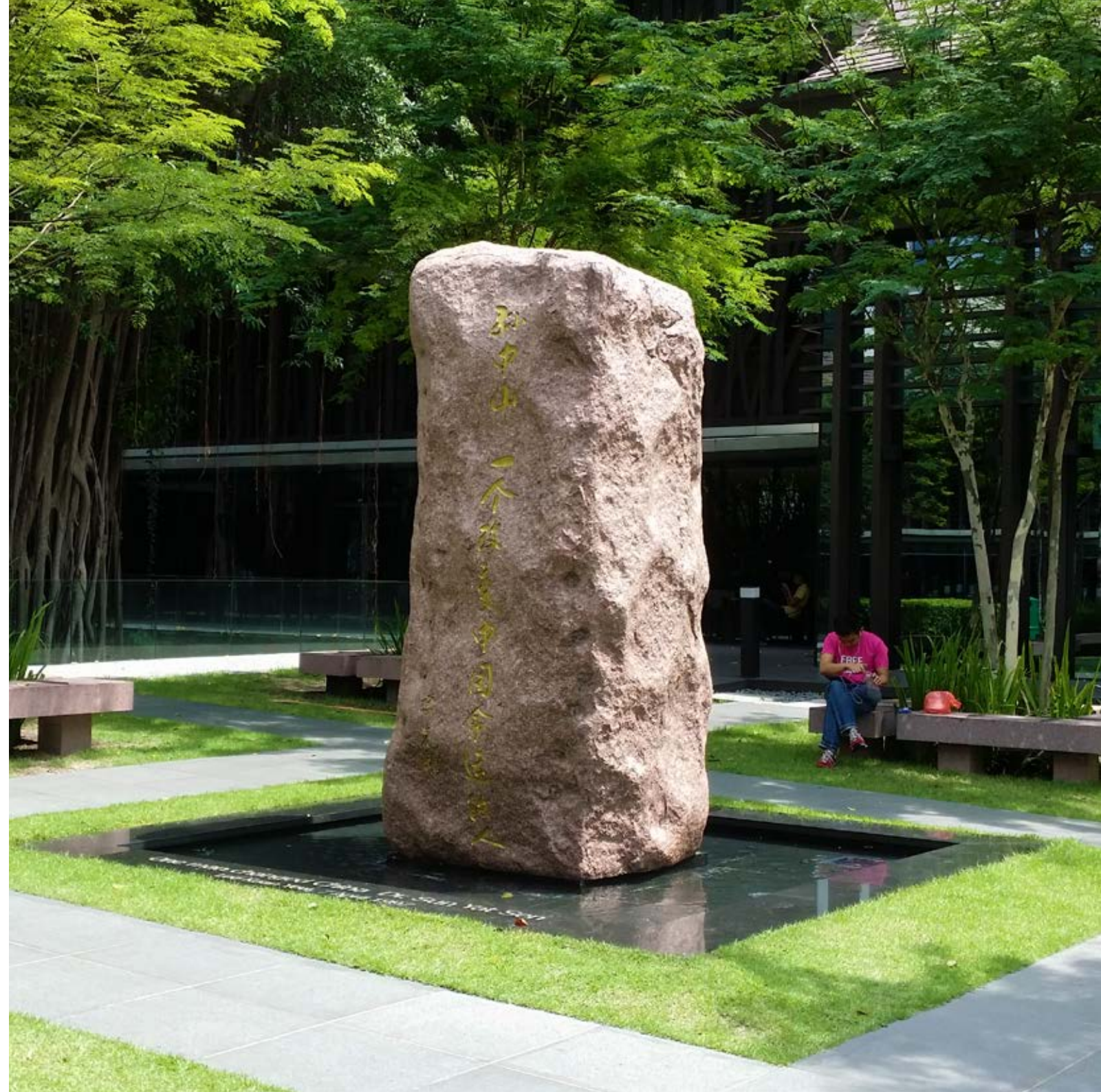




Zhongshan Park

Zhongshan Park was originally conceived of and dedicated to the Chinese Revolutionary, Founding President, and “Father” of Modern China, Sun Yat-Sen. At the top of the plot sits the Sun Yat-Sen Memorial; the park was supposed to only connect people from busy Balestier Road to the quiet alcove of the monument but has evolved to be much more encompassing.

On either side of the park are modern, state-of-the-art hotels; the key challenge was to find a way to connect these with the historical monument, balancing all the programmatic elements. The park successfully incorporates a more modern, international style while maintaining a Chinese flavour. Paths weave through a tapestry of shrubs, benches and lawn which incorporate three large existing heritage trees. Creating features within the park, these trees help to separate the park into smaller, intimate spaces.





0 5 10 15 20m

Park Plan







Natural History Museum

Envisioned to be the leader in Southeast Asian biodiversity research, education and outreach, the Natural History Museum will play host to research labs and a vast museum with rotating interactive exhibits that celebrates native species and biodiversity. The focal point of the prominent architecture is the main building with its cleft sides planted with native species.

With education as the main driving factor behind the project, the landscape design aims to inform people about the native habitats and plants of Singapore through four distinct areas. Three are native habitats, a six storey lush cliff, an extensive beach section and an interactive mangrove exhibit; which highlight the importance these habitats have played in Singapore's past. The fourth area displays the evolution of various native plant species.



0 5 10m

Diagrammatic Plan Showing Location of Landscape Areas

CLIFF
LANDSCAPE
↓
GREENWALL



Representing a typical cliff landscape, the “cleft” facade is filled with large, native species of trees, as well as smaller shrubs and ferns. The cascading effect is contrasted against the rough, dark and textured bulk of the building.

Native Species



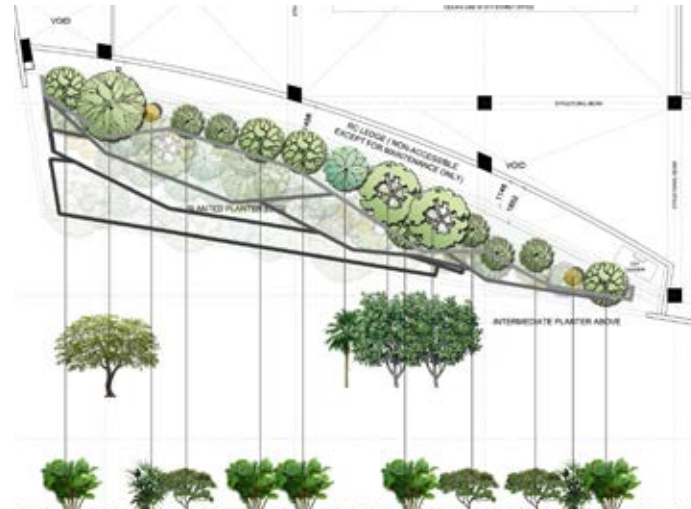
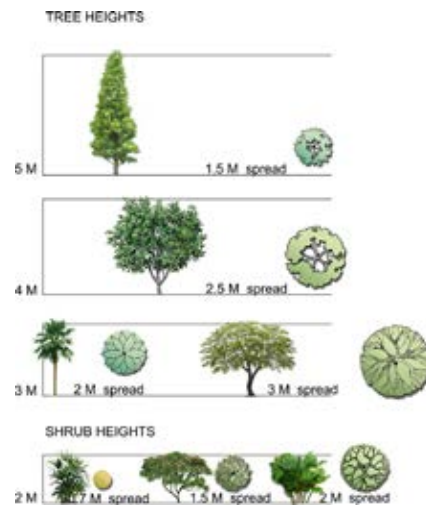
Cinnamomum
camphora



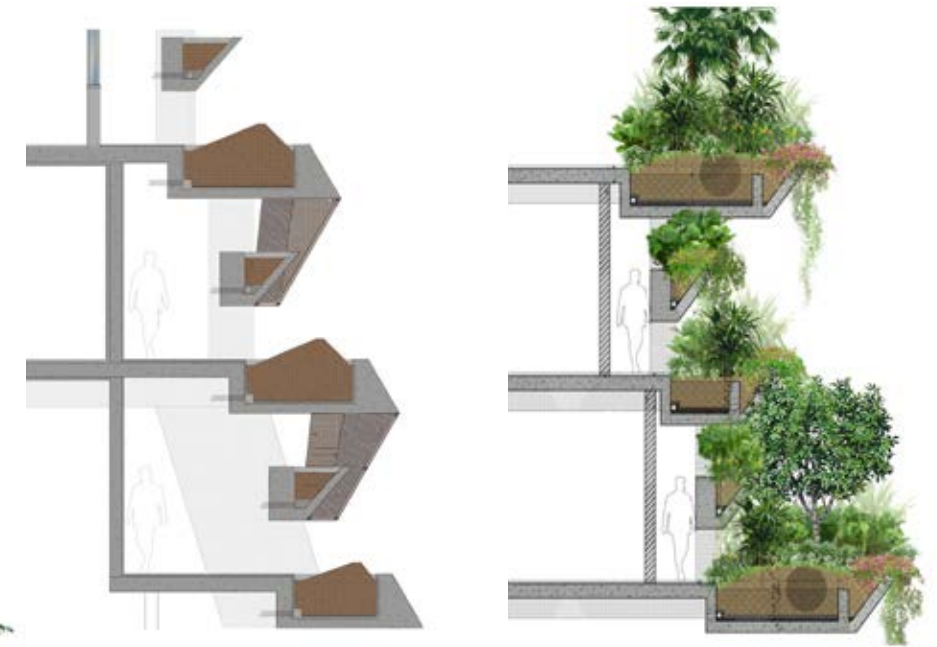
Garcinia
hombroniana



Gnetum
gnemon



6th Storey Sky Garden Plan



Sky Garden Sections



MANGROVE LANDSCAPE



COURTYARD



Between the geodic main building and the supporting lab space are a series of interactive native species exhibits, focusing on mangroves, aquatic plants, palms, and flowering species. A substantial part of Singapore's rich fauna is significantly tied symbiotically to the flowering plants and mangroves. To encourage hands-on learning, exhibits allow children of all ages to get close in order to interact with the micro-ecosystem.

Native Species



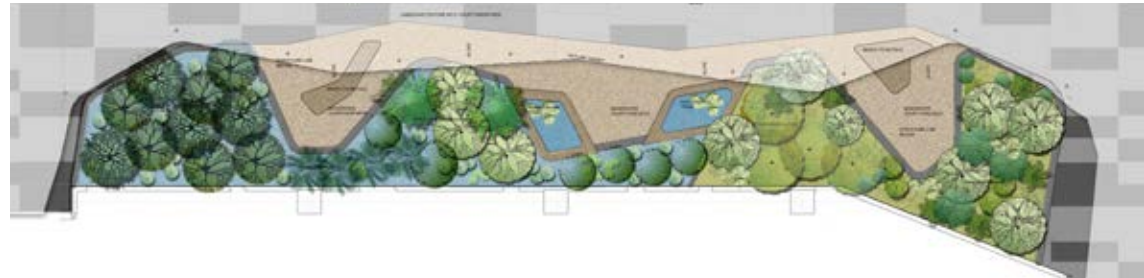
Lasia spinosa



Lumnitzera littorea



Ploiarium alternifolium



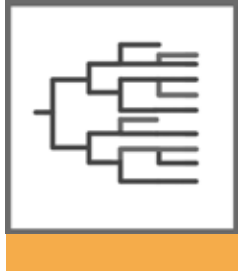
0 1 5m
Mangrove Exhibit Plan



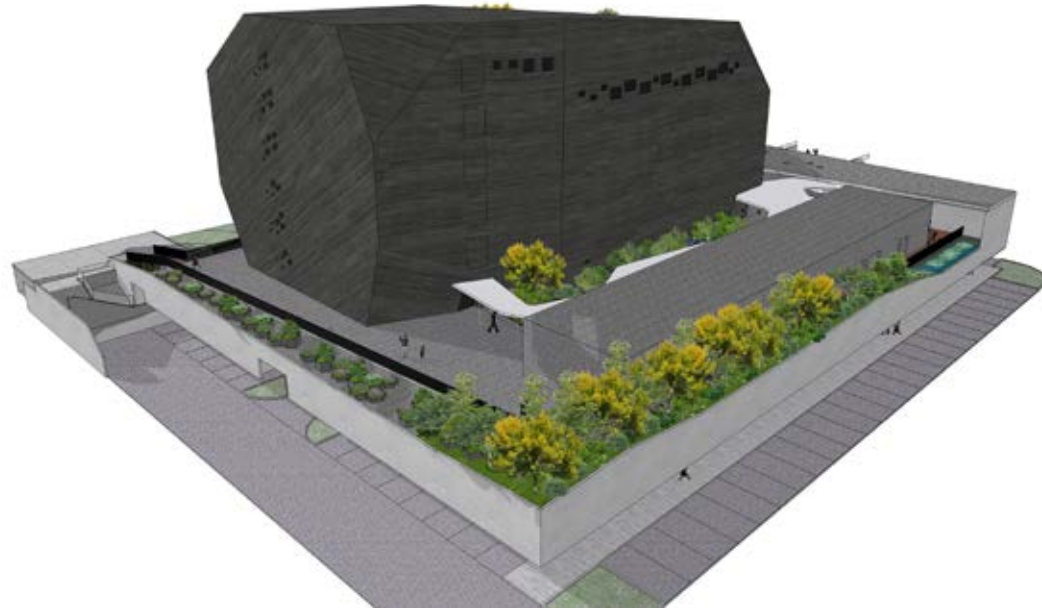
PHYLOGENETIC-
GARDEN



EAST GARDEN



On the East side, a phylogenetic garden showcases a number of distinct shrub species. Visitors can observe the development of important plant species as they have evolved over time.



BEACH
LANDSCAPE



NORTH GARDEN



On the North side, a beach environment demonstrates life and development on an equatorial rainforest island: the evolution of species receding from the shoreline begins with basic shrubs and mangroves to larger, more tropical trees and tropical flora.

Perspective View

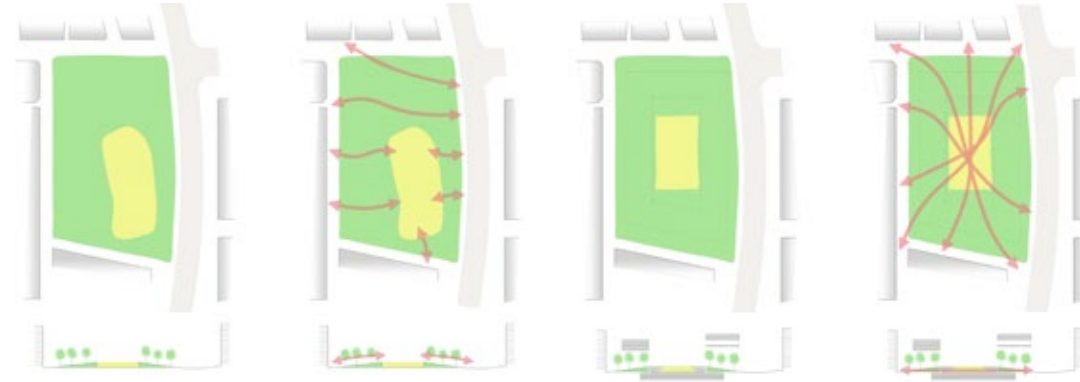






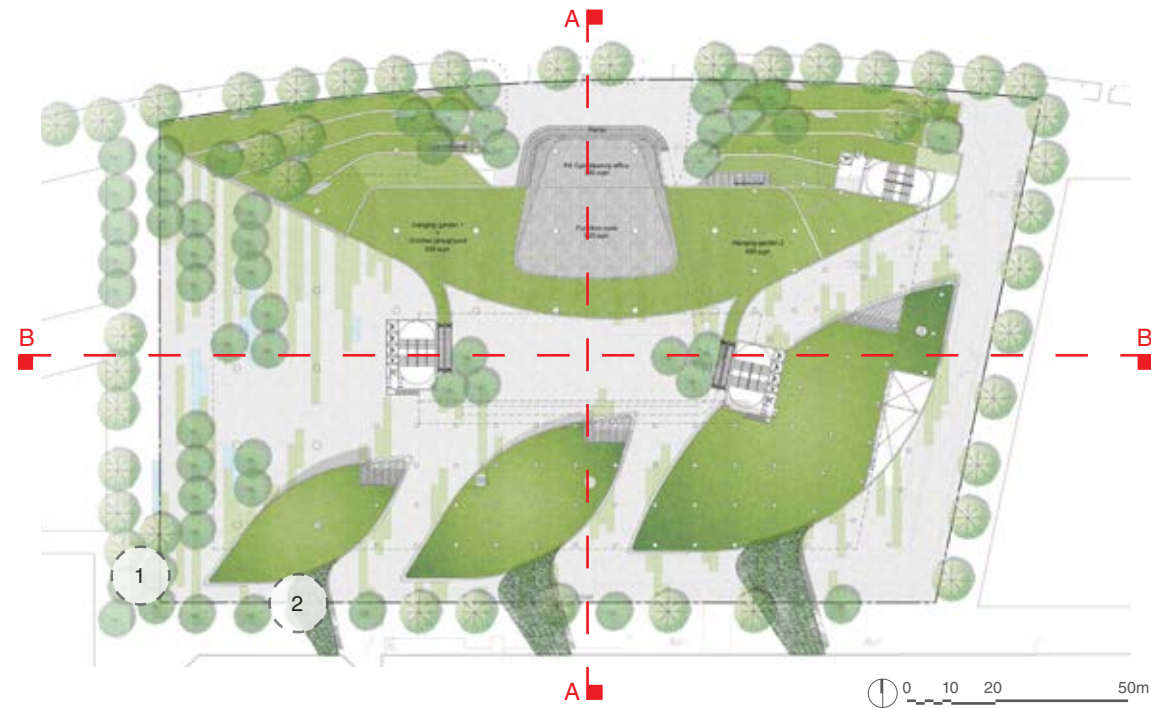
GreenConnection@Bedok

The site for Bedok Integrated Community and Sports Complex is an existing community park located centrally within Bedok Town. The design brief emphasised the need to incorporate a lush environment and infuse it seamlessly with porosity and connectivity. Integrating different programmes for people of different age groups and diverse races, the Green Connection at Bedok aims to create a new community park while continuing to respect the existing connections with its immediate surroundings.



The existing site context: Ample green, one level
 Present Green Connectivity: 50%
 Proposed Site: Ground level and first level
 Proposed Green Connectivity: 100%

Concept Diagrams



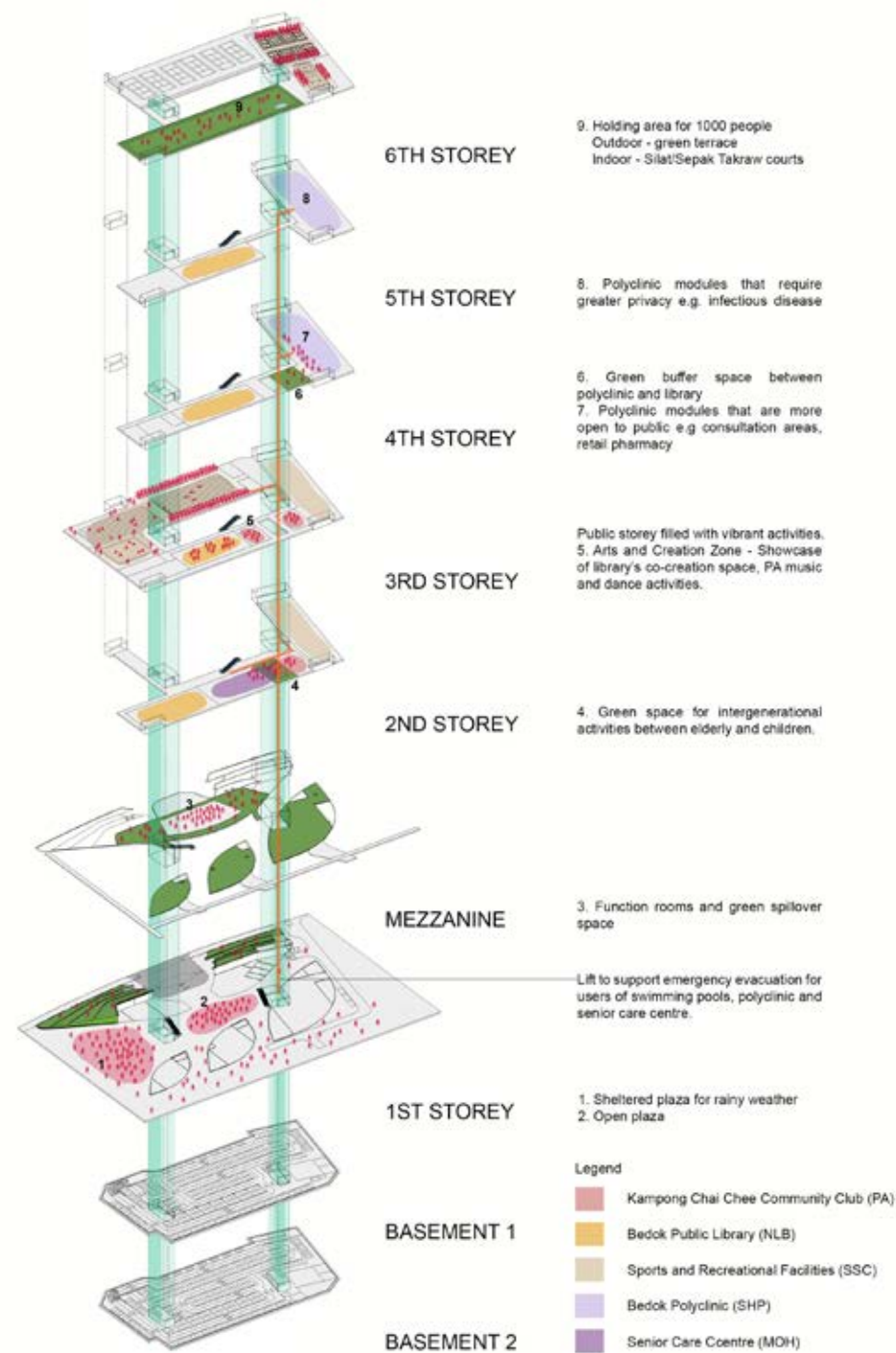
Park Plan



Section A-A



Section B-B



Exploded Isometric

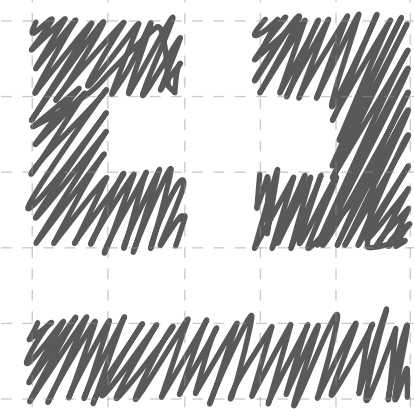


As a series of floating buildings above the park, the design maintains the natural topography of the site integrating it into the plaza for the new development.

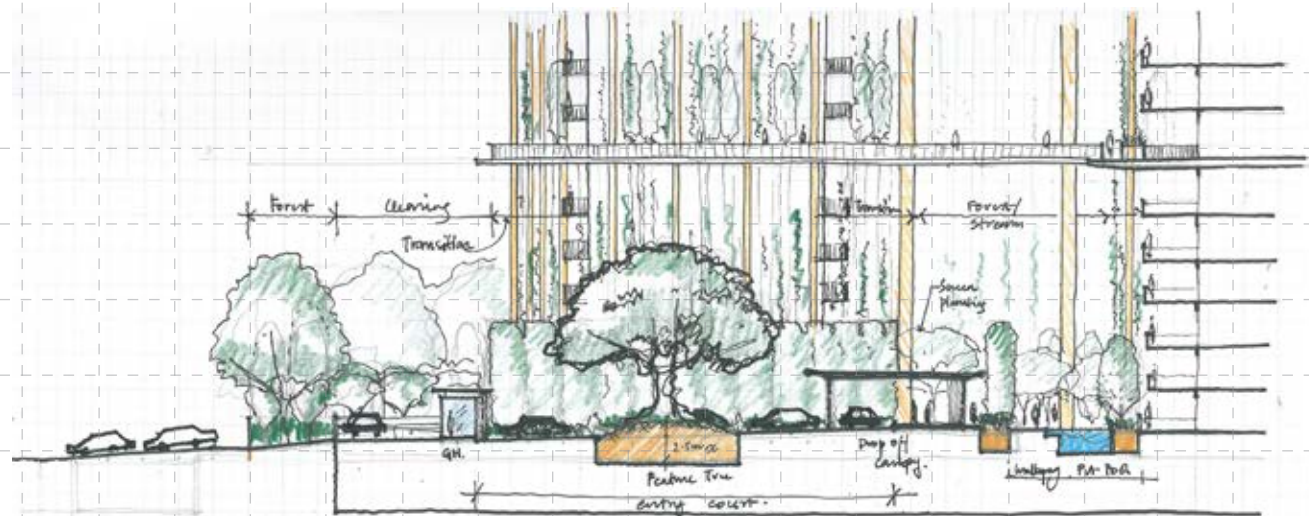
The Landscape Design emphasizes on community place-making to cater to all ages with a focus on physical accessibility and visual porosity. Using Universal Design principles, an inclusive environment is to be created where the young and old can interact. By seamlessly merging with existing routes and connections, a lively, integrated development, bringing social cohesion and harmony to Bedok Town is envisioned.

The use of natural lighting within the building's interior spaces allow for the integration of landscaping indoors. This technique helps to create contiguous, clean and green interior.



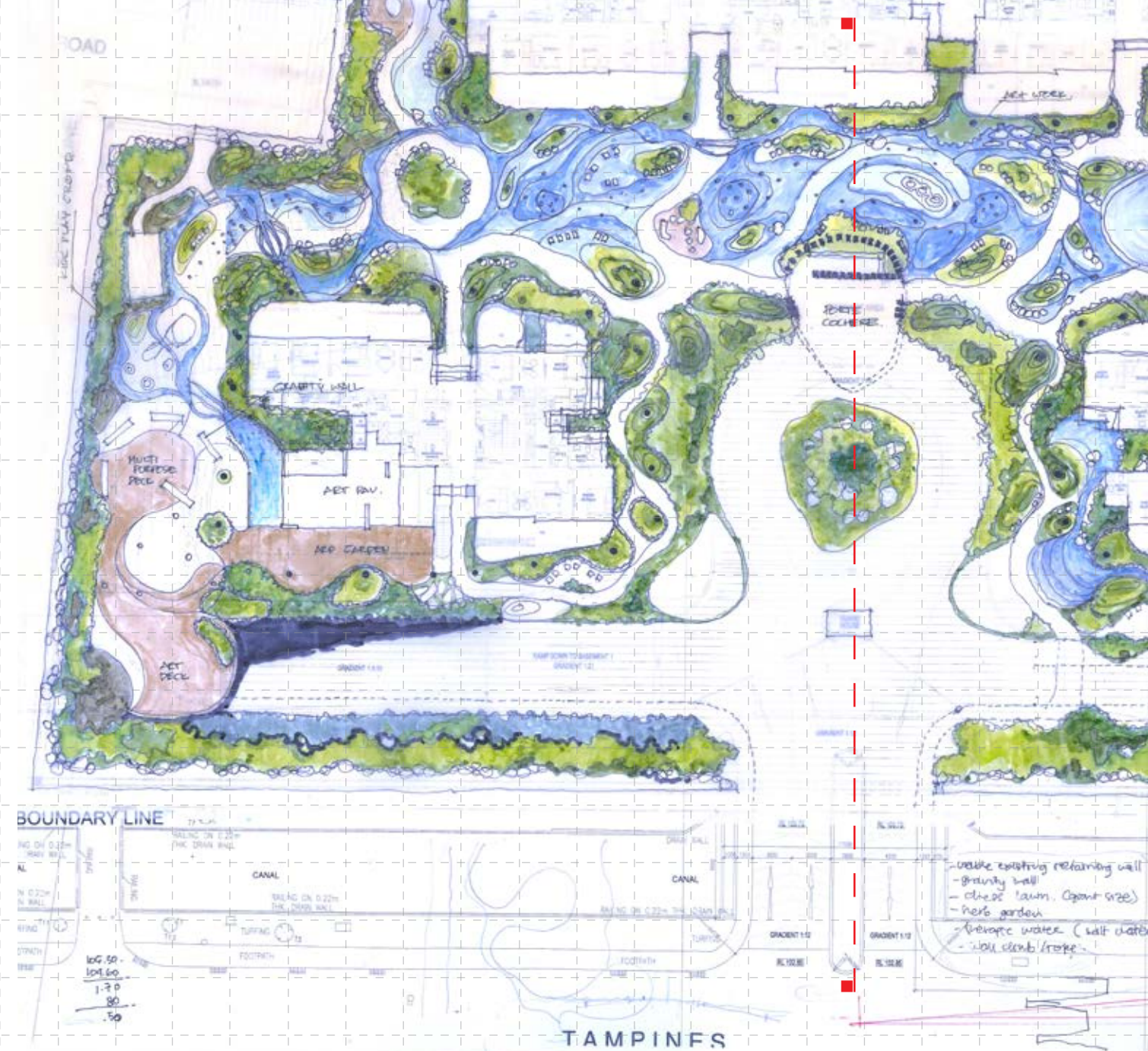


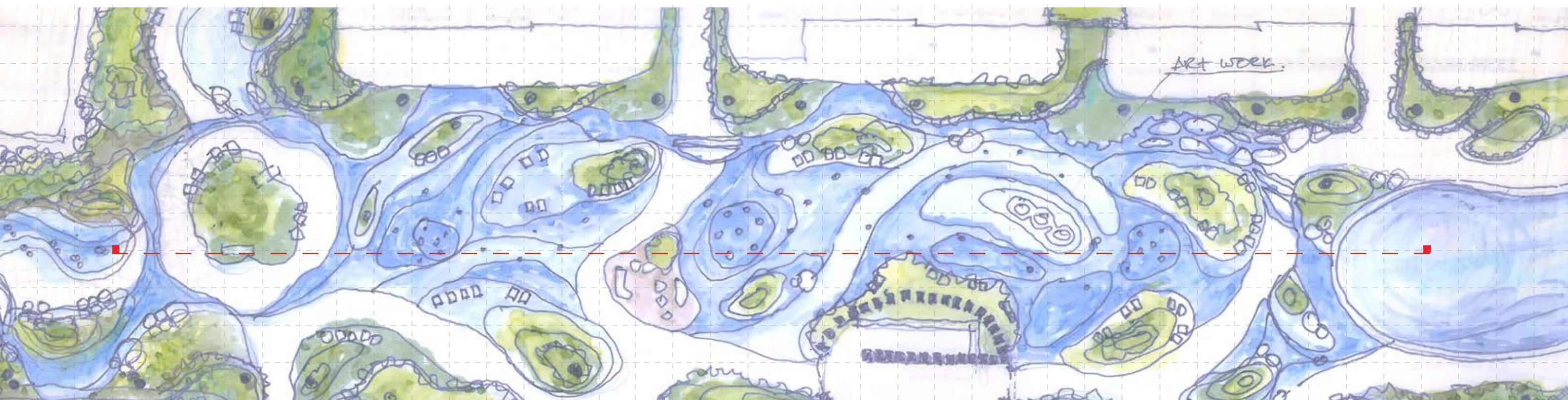
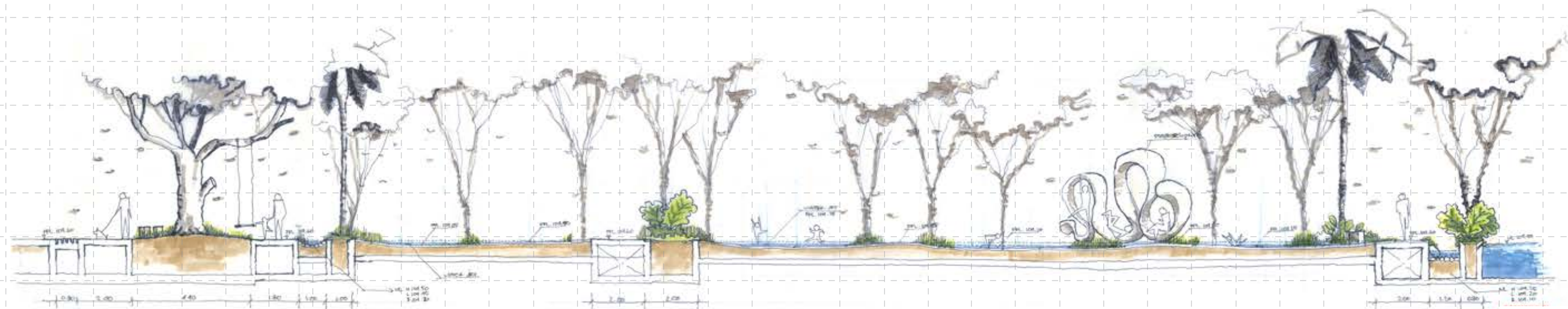
design in progress



At Tembuşu, the landscape attempts to create a forest-like setting by interweaving nature into the built setting. On the ground, clearings for various activity zones punctuate densely planted forest walks, creating a sense of discovery at every corner. Similar to a forest, trees and vegetation of various densities seem to rise in the most unexpected areas - around boardwalks, and from the middle of water ponds, creating spaces of great beauty and welcome respite from the hot sun.

Innovative design thinking and technology are at the heart of this extraordinary experience. Water Sensitive Urban Design (WSUD) principles are used for the efficient management of rainwater. This involves capturing, retaining, treating and displaying natural rain water and slowly releasing it into the drainage system. Many of the water features in the landscape serve as catchment basins during heavy rains; in addition to cooling the atmosphere and providing aesthetic beauty and ambience to the environment.





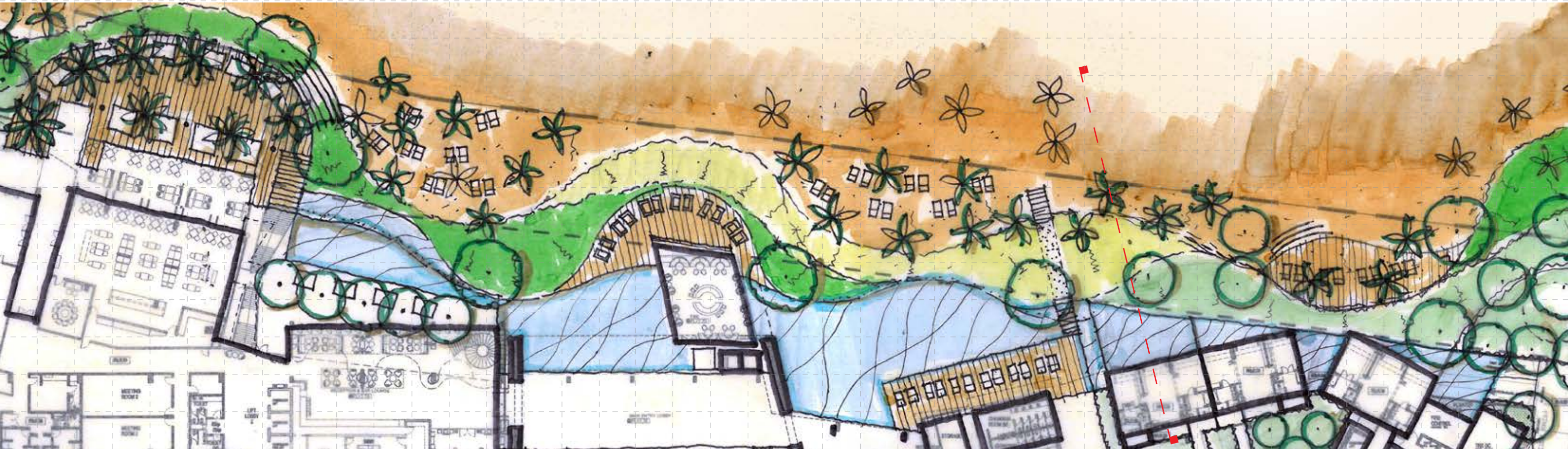
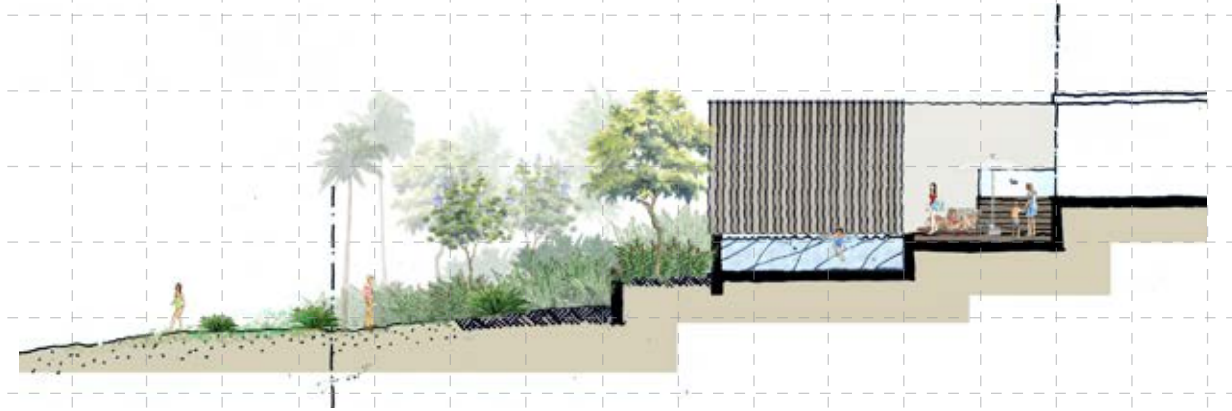
Angsana Penang

Location: Malaysia

Area: 29 876m²

Nestled between the ocean and a verdant hill, the resort and service apartments take advantage of these two diverse and natural environments. Instead of pushing the hotel out toward the sea with platforms and piers the sea is brought into the hotel by reflecting the waves in the curvilinear vocabulary of the landscape. Alternatively, the forest is brought more toward the sea by integrating as much planting area as possible along the sea-side.

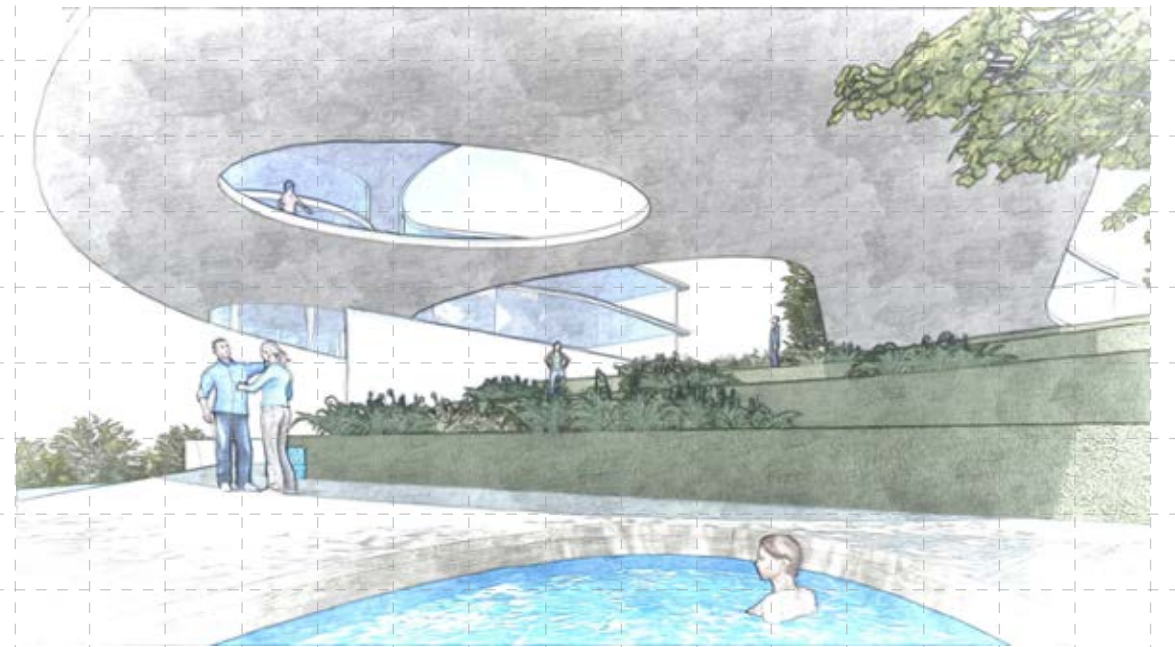
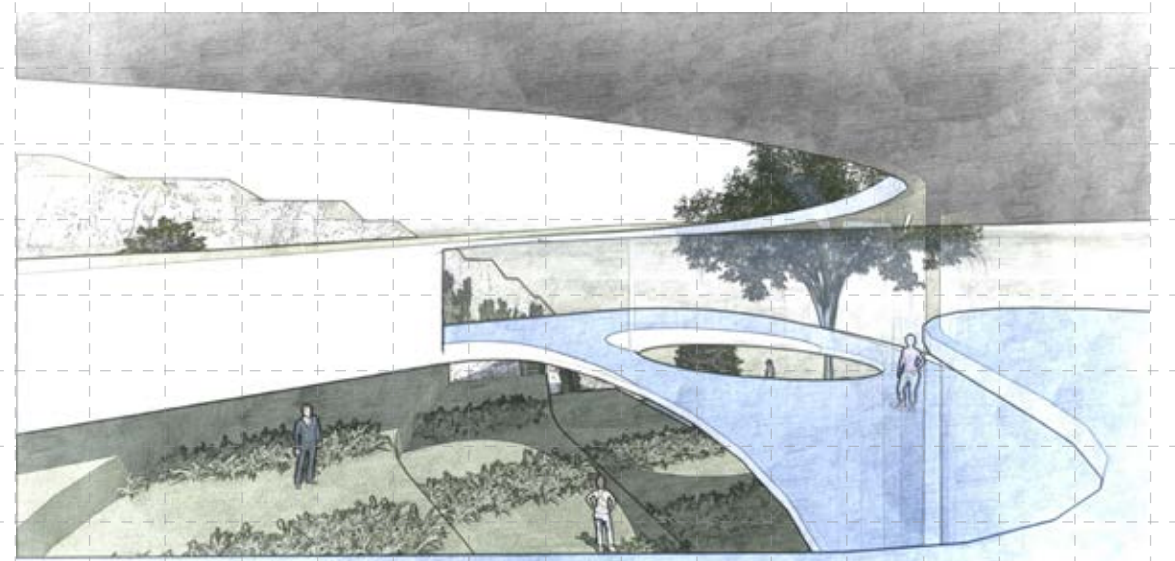
With the desire to make people feel relaxed, comforted, sheltered and well taken care of, we have incorporated woven curved lines to define edges of water, landscape and common deck areas, thus creating a contrast to the geometric qualities of the building and setback defined by straight lines. Ultimately the language of weaving the sea, the forest and the built environment together should read strongly to identify the resort as a unique and special place.

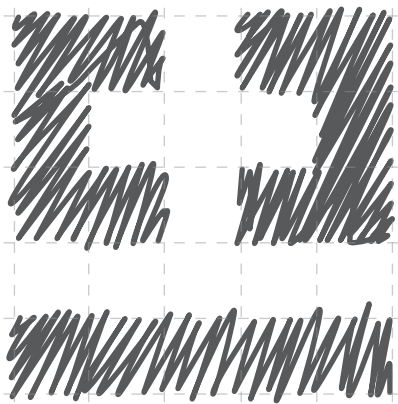


Chen Residence

Location: Taiwan
Area: 2 645m²

The Chen Residence site is perched on top of the mountains and enjoys panoramic views to the city in the North and the spectacular Taiwan landscape to the South. Maximising this in the design are curved floor-to-ceiling glass windows extend along the main living spaces. Working with the levels on site, the design cantilevers over the tiered landscape creating areas of protected space beneath. Despite its distinctive design, the building will be camouflaged from its neighbours through dense planting and a green roof, embedding the building into the mountain top.





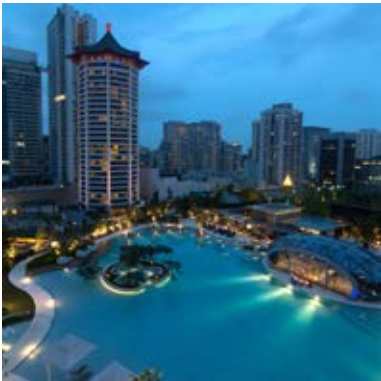
Other Selected Projects

Hospitality



Banyan Tree, China

Residential and Commercial 1st Storey



Ion Orchard, Singapore

Residential



8 Napier, Singapore

Commercial



158 Cecil Street, Singapore

Airport



Changi Terminal 3, Singapore

Utility



Marina Barrage, Singapore

Awards and Honours

President's Design Award Singapore, Design of the Year
Park Royal on Pickering, Singapore, 2013

Skyrise Greenery Awards, Outstanding Award
Park Royal on Pickering, Singapore, 2013

Skyrise Greenery Awards, Excellence Award
Ocean Financial Centre, Singapore, 2013

SILA Merit Award
Tate Residence, Singapore, 2013

SILA Outstanding Award for Excellence
Park Royal on Pickering, Singapore, 2013

SILA Gold Award for Excellence
Park Royal on Pickering, Singapore, 2013

SILA Gold Award for Excellence
158 Cecil Street, Singapore, 2013

The Business Times, 18 October, Page 12, The World's Biggest Vertical Garden
Ocean Financial Centre, Singapore, 2013

International Rooftop Landscaping Association, World Best Roof Greening Project Award
Park Royal on Pickering, Singapore, 2013

BCA Construction Excellence Award, Residential Buildings Category
Livia Condominium, Singapore, 2013

FIABCI Prix d'Excellence International Awards, Silver Winner in the Residential High Rise Category
Soleil@Sinaran, Singapore, 2013

BCA Construction Excellence Award, Residential Buildings Category
8 Napier, Singapore, 2012

SIA Architectural Design Awards, Honourable Mention, Special Category - Retrofitting
Hanging Garden in CBD - A Fusion of "Archi-Nature" at **158 Cecil Street**, Singapore, 2012

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