

# The Interlace: A Landscape of Interlocking Polygons

Text by Henry Steed

Images courtesy of ICN Design International Pte Ltd

## Project Credits

Location 200 Depot Road, Singapore  
Client Ankerite Pte Ltd Completion Date 2013  
Landscape Architect ICN Design International  
Pte Ltd Architects Office for Metropolitan  
Architecture, RSP Architects Planners &  
Engineers Pte Ltd Structural Engineer TY Lin  
International Pte Ltd Mechanical & Electrical  
Engineer Squire Mech Main Contractor Woh Hup  
Pte Ltd Landscape Contractor Blooms & Greens  
Pte Ltd Site Area 8 ha GFA 170,000m<sup>2</sup>

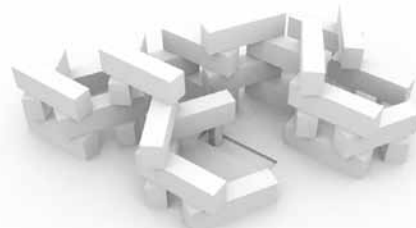


The Southern Ridges at Telok Blangah Hill may not be high, but from the crest at the old Gillman Heights, around 40 metres above sea level, the views are spectacular. Looking south towards the sea, there is a swathe of forest rising east to the hilltop park, and stretching west across to the rich greenery of Alexandra Park. To the north, the view is urban, over the Ayer Rajah Expressway (AYE) to the densely built city beyond.

Although Gillman Heights occupied a wonderful location, the property was becoming outdated and by current standards, the site was well below capacity. It was time for the inevitable “en-bloc” sale. In anticipation, designs for the new project began in early 2008. The famously innovative architecture studio Office for Metropolitan Architecture (OMA) was appointed to design the new project, supported by RSP Architects Planners & Engineers who took the project through to completion. Soon after, ICN Design was appointed to work on the landscape of the project. The architectural concept was certainly a break from the norm. Envisaged as a “vertical village” rising from the green folds of the Southern Ridges, the building mass would be fragmented into modular blocks perched delicately one on the other in polygonal formations.

This was a big shift from the tower block. The new design almost playfully stacks up 31 symmetrical “bricks”, each six stories high, rising to a total height of 24 stories. In between the multi-angled built formations there are eight open courtyards, each accessible by wide connections between blocks, allowing pedestrian movement, light, and breezes to flow through one continuous garden. Each space has a separate function and appearance. This reflects the style of many famous historic landscapes that were laid out as a series of “rooms”, to be enjoyed by people moving through distinctive enclosures in a free and relaxed manner. The gardens are meant to be experienced right across the site from outer boundary to boundary. To provide a pedestrian spine to anchor all of the spaces and linkages, a broad concourse traverses the site from the main entrance on Depot Road to the Alexandra Road gate.

In 2009, the venerable Gillman Heights was finally purchased for redevelopment. Based on the firmed up architectural forms, the landscape concept ideas were translated directly into detailed designs. This was not an easy task. Since the site is on the crest of a ridge, there were many landform challenges. The main deck was already high, controlled by the levels of the primary access along Depot Road: the highest point of the ridge. This meant there would be a big drop from the main deck



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down to the original ground on the north side, and to the much lower embankments along Alexandra Road, plunging nearly 15 metres to the AYE. These apparent constraints had to be turned into design opportunities, or significant land areas would become unusable.

To address the whole array of design challenges, the design team held a series of intensive workshops. There was much debate on how to access those lower areas outside the basement edge, and to determine what facilities could be placed there and made attractive to the residents. A key element was the fire-engine access that would have to be an “outer ring road” circling the building mass. The solution was to make this a perimeter walking and jogging track, and create pathway connections to both upper gardens and the downhill facilities. This resulted in the creation of an accessible landscape at the lower levels, where swimming pools, tennis courts, playgrounds, and fitness areas could be accommodated.

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1. When viewed from outside, the Interlace rises up like a mountain, but is surrounded by trees, which bring it down to earth and connect it to the hill and ridge.

2. OMA’s original massing of the building blocks, stacked to maximise views and provide the open spaces that would become the gardens.



It was clear that the outdoor landscape at the Interlace would never be flat – but a varied topography can make a landscape more interesting and diverse. So the design celebrates the ups and the downs, making the experience of each space different as one moves from the central concourse upwards to the main swimming pool, surrounding deck and gardens, which are situated on the roof of function rooms below. By contrast, the spa garden was set below the concourse level, well screened from the car park, allowing it to become a private, lush, and shady garden retreat complete with refreshing bubble pools and lounge decks.

More functional elements like the basement car park ventilation system were studied to see how to provide sufficient air-openings, without having numerous voids breaking up the landscape. Several methods were ultimately employed, including the use of circular openings in the main deck. In these, trees were planted in the ground below, allowing the canopies to rise up from natural ground and shade the concourse above, while letting air flow into the basement.



- 3. One of the nine roof gardens located on the roof of the lower blocks and below the bridging upper blocks.
- 4. The Lotus Pond, seen from above. The large ventilation voids into the car park, together with the hexagonal stepping stones and circular planting islands, form part of the design pattern of the pool.
- 5. An aerial view of the Spa Garden shortly after completion, with the plants in place and the pool systems switched on.
- 6. Each group of buildings has a passageway linking the outer gardens to the inner. These are designed to be naturally lush, attracting birds and butterflies.



Finally, all these design solutions were stitched into place at every level of the project. Nine roof gardens, each with a specific theme such as play gardens, essence garden, and bonsai garden, were created in the spaces below the triangulated blocks. Each was designed to be accessible from the conjoined blocks. Roof gardens on the top floors are accessible from lift cores or as private terraces. Lower level units facing the main deck have private enclosed spaces which are perched on car park ventilation slots. Sunken gardens, compatible with car park levels, screened with mesh panels and climbing plants, become hidden, verdant enclaves.

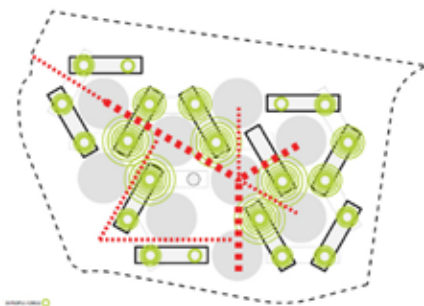
Thus evolved a multilevel landscape, which is accessible from multiple points and levels. This allows residents to enjoy all of them, even though it might take some exploring to find them. Exploration, the design team suggested, is part of the fun of being in a place. What a pleasure it would be to swim in different pools from time to time, bask in a forest spa, or sit with friends and family in a shady bamboo grove. Privacy and communal space are available equally. Noisy elements like the tennis courts are tucked away, easy to find, but not occupying prime communal space. The noisiest children's play is positioned well away from the buildings, half way down the outer slope.

Once all of this was worked out, the construction began. At nearly eight hectares, the project is one of Singapore's largest condominiums to date. Such a complex building needed the consideration of landscaping issues before embarking on construction. Many landscape elements were relevant to the earliest construction of the basement car park; the complex topography brought the landscape architect into the fray right from the start. Structural design had to be coordinated to ensure that there was sufficient soil volume on roof-deck levels, to allow for significant tree planting. Where "true-ground" was available, opportunities to plant big trees were maximised.

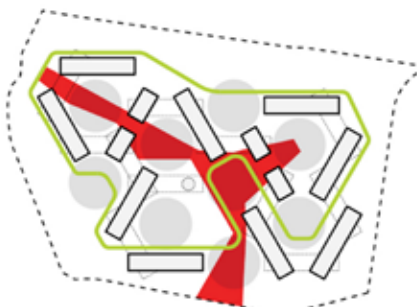
Existing trees in some parts could be retained, including 30 large raintrees, so tree protection rules had to be imposed. For new trees and large palms, it was important to ensure that the planting would be mature enough when the development was ready for occupation. So the full range of trees and palms, some of which reached 12 metres tall, were pre-grown under an Advanced Procurement Programme for two years before installation. The advantage of this is that all selected species can be achieved at the sizes required. Since all plants were containerised, they were brought to site at the time of planting in full leaf, and were able to recover and grow in a short time.



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SECONDARY PATHS






One of the big challenges for the planting contractor was bringing these enormous trees—some weighing over five tonnes—into such a tight site. Many of the spaces between buildings were too narrow for the full crown of the trees to be brought through by vehicle. As a result, they were manually carried in by workers. This was, by normal standards, a difficult job.

To achieve as much biodiversity as possible, and to take into account the varying microclimatic conditions, an extensive plant palette was used. The patterns of sun and shade vary during the day as the sun passes over, so, with the density of the building blocks, many areas receive little sun. For these parts, shade tolerant plants are used and large overhanging trees are not needed. Other areas that are permanently open to the sky, and are bright and often hot, need the shade of trees to help keep the spaces cool. It is not always possible to predict these variations, so plants that are able to tolerate both sun and shade are given preference. This approach allows nature to take its course. Any plants which struggled to survive during the contract maintenance period were repositioned to fit the site conditions.

It is hoped that over time, the gardens will become a haven for local birdlife, butterflies, dragonflies, and animals like squirrels, many of which might migrate from the adjacent forest. Wherever possible, native plant species have been used, and in time, an ecosystem will evolve to provide a diverse habitat, bringing nature closer to people's homes. By including opportunities for hands-on activities such as tending to the plants at the Herb and Vegetable Garden, this will hopefully foster environmental awareness.

The project has now been completed for around three years. From conversations with residents, it is clear that they are very proud of the place where they live. However, its attractiveness today is just a beginning. The success of any landscape is the maturing of the vegetation as trees grow and provide shade to pathways, as palms rise to their full height and create visual drama, and as shrubs develop into full, rich masses to define spaces and add colourful visual diversity to the landscape. The constructed landscape of swimming pools, pathways, plazas, playgrounds, seating, steps, and railings remain static and begin to age over time. The planting, however, when looked after well, gains in beauty with every passing year. As the trees grow, the buildings settle into the surroundings. Looking after the gardens, as any gardener will tell you, is a lifelong task and pleasure. However, the hard work always pays off as beautiful, well maintained gardens add value to a property, and give never-ending delight to the residents. 



7. The main swimming pools are clustered on the upper deck, located over the function rooms below. These include a children's wet-play pool as well as a 50 metre lap pool.

8. The layout plan, showing the circulation with the primary concourse and the fire engine access route that forms linkages to all areas.

9. An early base master plan that illustrates the main zones and features of the landscape.

10. The Herb and Vegetable Garden offers residents a chance to do some hands-on gardening.

11. Workers had to carry in the trees as the spaces between the buildings were too narrow for the full crown of the trees to be brought through by vehicle.

12. The Bamboo Courtyard is one of the courtyards along the central concourse. Slender Siamese bamboo is planted around the curved seats that look across a plaza scattered with rocks and ironwood trees.