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CUBES

A photograph of the interior of the Bamboo Sports Hall, showing a large, arched structure made of bamboo. The floor is a light-colored wooden surface with yellow and red lines, resembling a basketball court. The ceiling is a complex, woven bamboo structure with several small, round, white lights hanging from it. The structure is open on the sides, revealing a green landscape outside.

INDE.Awards Official Shortlist 2018
Bamboo Sports Hall, Chiangmai Life Architects
Jurong Town Hall A&A, Forum Architects and WSP
Turenscape's Sponge Cities
'Designing Resilience'

The Learning Space

Partner:
living edge

The Learning Space honours an environment that promotes connection and learning in the ways it needs to happen today – be it formal or informal.



52Arts
PAL Design Group



**A Journey of Self-Exploration,
Bukit Panjang Public Library**
Grey Canopy



**Artemis Centre,
Melbourne Girls Grammar**
BVN



Macquarie University Incubator
Architectus



Quaine Library
Branch Studio Architects



**Returning the Green,
Nanyang Girls' High School Extension**
Park + Associates

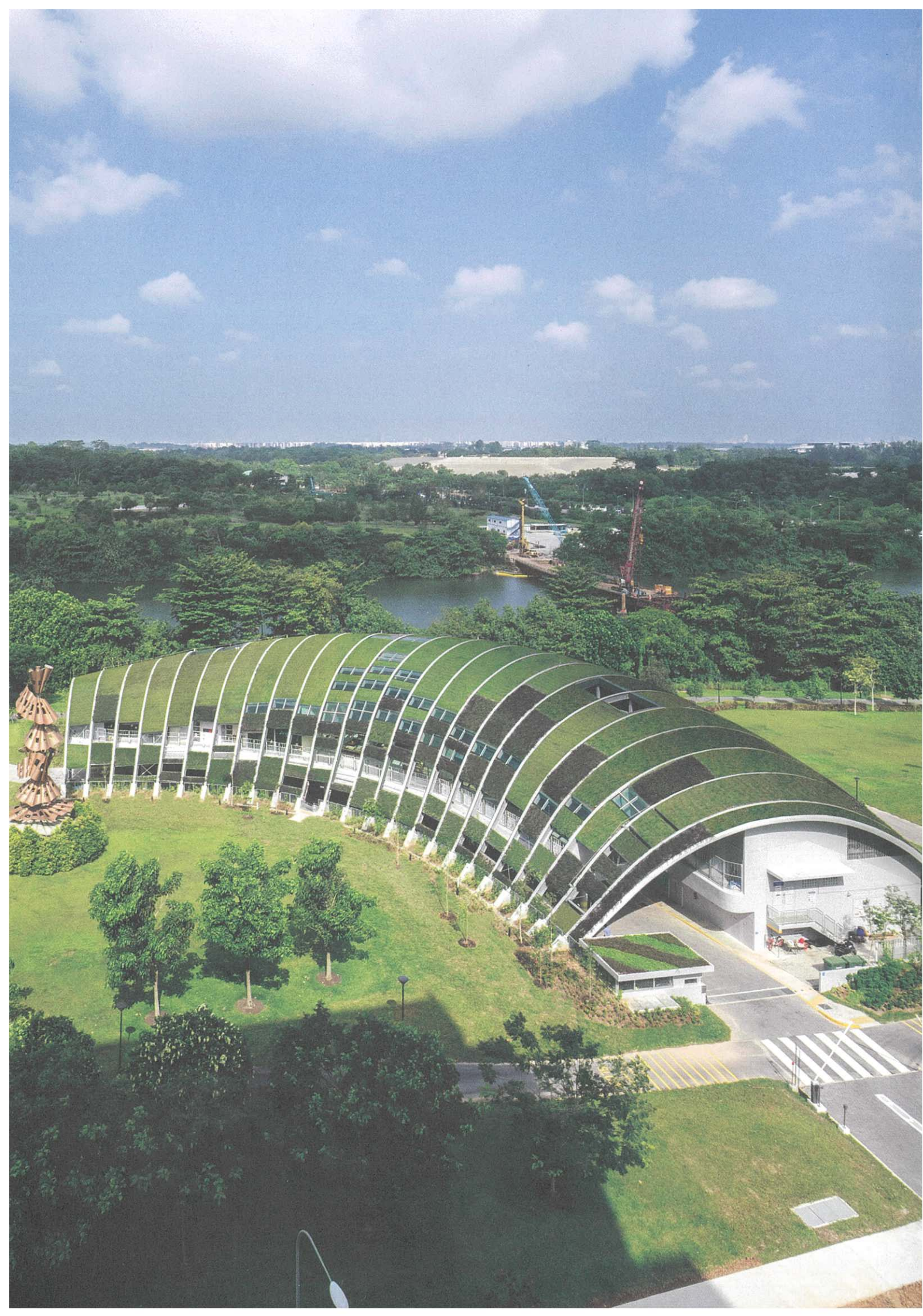


Sengkang Riverside Park Centre
Freight Architects



Wondrous Light Children's House
CHANG Architects

Photography, from top left: Dick Liu, Andrew Phua, Peter Bennetts,
Brett Boardman, Peter Clarke, Edward Hendricks, Darren Soh, Albert Lim KS



With the Sengkang Riverside Park Early Learning Centre, Freight Architects offer new possibilities for government childcare centres and the ways kids should learn. Is this the start of another chapter in Singapore's 'city in a garden' story?

Learn and Play

Sengkang Riverside Park Early Learning Centre, by Freight Architects

Words *Asih Jenie*

Photography *Darren Soh (courtesy of Freight Architects)*

Opposite: The Sengkang Riverside Park Early Learning Centre is akin to a green cocoon situated at the edge of Sengkang Riverside Park. The green roof offers an insulating effect, and in conjunction with passive design strategies it helps to reduce the hours during which air conditioning is needed in the classrooms.

Government childcare centres in Singapore used to be primarily associated with modestly sized spaces in the void decks of HDB blocks. Convenient and affordable, these centres have been the saviours of parents, but most have a limited capacity – so much so that it is common for parents to camp in front of their computers waiting for the online registration to open. It's been reported that in some areas, the waiting list could last for a year or more.

The Early Childhood Development Agency (ECDA) has been tackling this capacity issue by building more and building larger. In mid 2016 it opened Singapore's first 'large childcare centre' in Punggol (designed by LAUD architects, read the feature in *Cubes* 84). Defined as a centre that can provide care for 300 to 500 children, the 'large childcare centre' is now an established term in Singapore's planning lexicon. And it is gradually changing the image and perception of government childcare services, one project at a time.

The latest of these large childcare centres began operating in February. Managed by operator Skool4Kidz (a consortium formed by Kinderland Educare Service and Dr Jane Ching-Kwan) and designed by Freight Architects, the Sengkang Riverside Park Early Learning Centre spans 4,000 square metres and accommodates 460 children. The centre has achieved two important 'firsts': it is the first large childcare centre to be situated within a public park, and it is the first collaboration between ECDA and the National Parks Board (NParks).

"Studies have shown that being closer to nature and participating in outdoor activities can enhance children's wellbeing and nurture their appreciation for the environment," says Kee Jing Zhi, Director at Freight Architects. Designed like a rolling hill that blends with its context, the two-storey childcare centre blurs the notions of indoor and outdoor using its 'cocoon' – a curving green roof structure. The roof is perforated by skylights and left open on the ground and second levels, providing fresh air and dappled natural light for the indoor areas as well as a replacement green area for the outdoors.

The campus features a garden atrium populated by trees and shrubs, an eco pond, and a sky bridge on the second level. The Reggio Emilia-inspired indoor garden directly borders the park, giving the impression of inviting the nature in. "The idea is to teach biodiversity to the children and let them see, touch and feel. They

can feel the running water, see the fish, smell the herbs and touch the trees' leaves from the sky bridge," says Kee.

There are plenty of open spaces for the children to explore. Above the garden sits an atelier loft – a dual-purpose open space that accommodates artistic pursuits as well as reading. The centre's 'cocoon' form wraps ample seamless play corridors that wind along the second storey to enhance 'natural discovery'. They also serve as a safe and sheltered cycling track, while providing multiple open-ended play and learning spaces. The classrooms and staff offices are arranged inside the wings on each side of the atrium garden.

Practitioners and academics have expressed the need for government agencies to collaborate more (read the discussion on page 64) to create a more resilient environment. For this centre, ECDA tapped on NParks' expertise for the incorporation of educational materials on Singapore's biodiversity – for example, composting and the farm-to-table concept. The school makes its own compost and plans to incorporate vegetables and herbs harvested from the school garden and the adjacent community garden (part of NParks' Community in Bloom initiative) into its lunch menu.

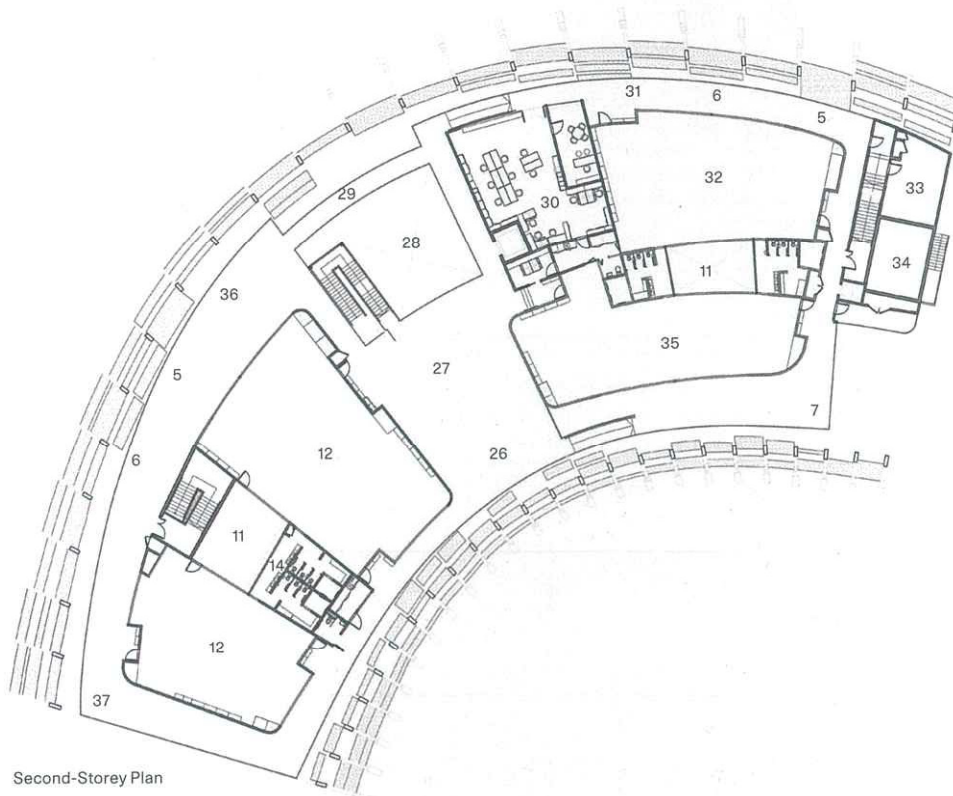
According to Kee, aside from the tight budget and short timeframe, the biggest challenge in realising the project was the inter-agency collaboration process. This also happens to be the project's biggest accomplishment. The boundaries of various jurisdictions between government agencies, he said, could benefit from a higher degree of permeability, as this project demonstrates.

He elaborates, "This project means a lot in terms of pushing the childcare sector. We referred to examples in countries like Japan and Norway that have used childcare as a focal point to bridge certain areas, because children are at the centre of a community. I hope that when people see we managed to build this in Singapore, and it works, they will be bolder in exploring their ideas." His mind races ahead: "Why don't we make the roof accessible? Why don't we integrate further into the park? Or mix typologies, like co-locating childcare with senior care?"

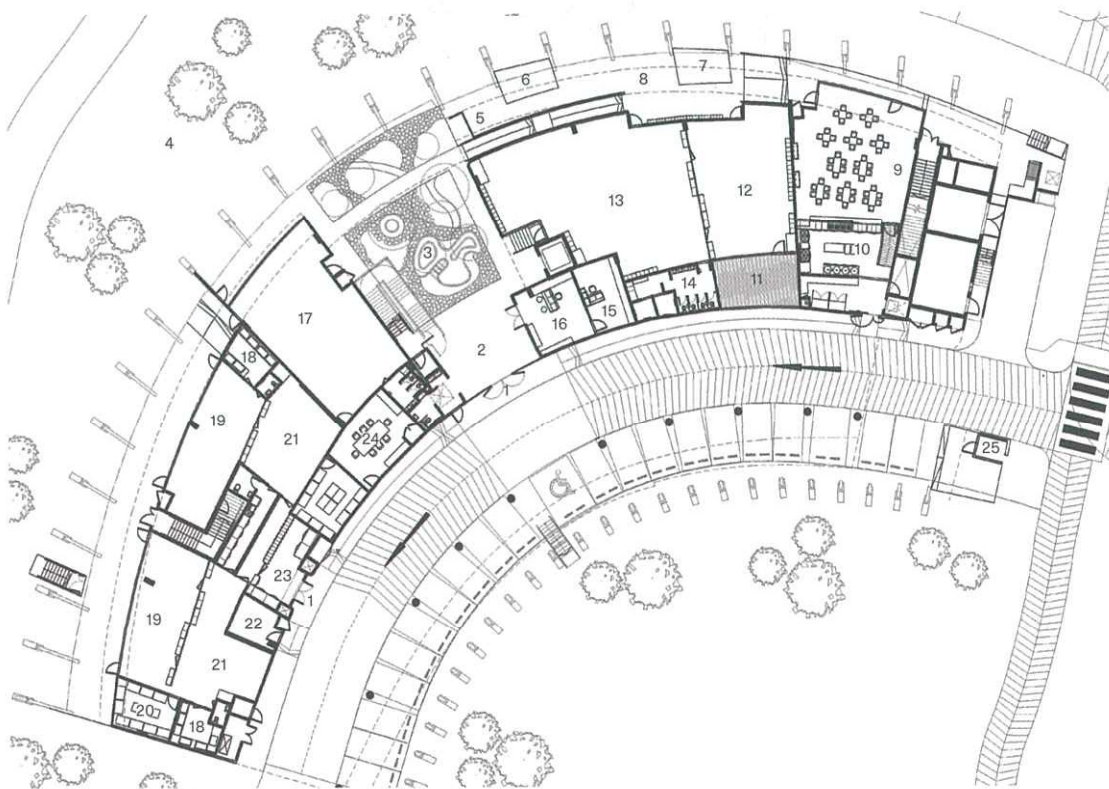
freight.sg

Opposite, top: The sun-dappled view of the atrium from the second floor. As the trees mature, children will be able to have the experience of touching their canopies as they make their way across the sky bridge. Opposite, bottom: The eco pond in the atrium has begun to attract wildlife such as frogs and insects. The adjacent pathway leads to a butterfly lodge outside the perimeter fence.





Second-Storey Plan



First-Storey Plan

Legend: 1 Drop-Off Point | 2 Parents' Corner | 3 Atrium Tree House | 4 Garden | 5 Water Play | 6 Sand Play | 7 Water and Sand Play | 8 Corridor | 9 Dining Area | 10 Kitchen | 11 Courtyard | 12 Nursery | 13 Play Group | 14 Children's Toilet | 15 Principal's Office / Sick Bay | 16 Customer Service | 17 Multi-Purpose Room | 18 Diaper-Changing Room | 19 Mobile Area | 20 Sleeping Room | 21 Non-Mobile Area | 22 Pump Room | 23 Foyer | 24 Meeting Room | 25 Guard House | 26 Activity Corridor | 27 Atelier | 28 Atrium Void | 29 Sky Bridge | 30 Teachers' Resource Room | 31 Soundscape | 32 K1 | 33 AC Ledge | 34 Substation | 35 K2 | 36 Kitchen Play | 37 Discovery Play.

Opposite: The lofty classroom spaces are large flexible areas, with courtyards between them that maximise the delivery of natural light indoors.

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