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The Singapore Architect

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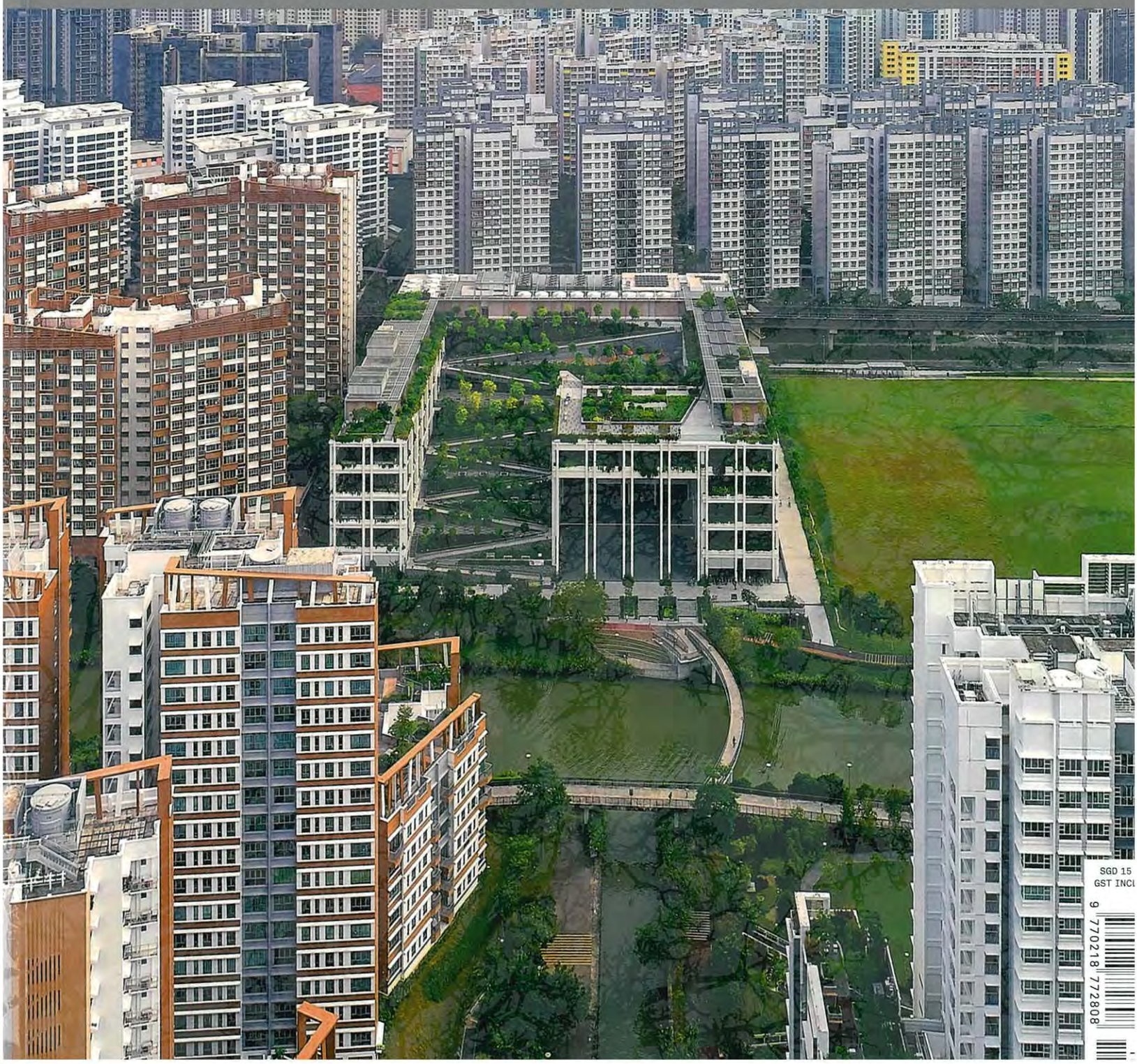

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The school is embedded in the park

FEATURE

A Pioneer Species

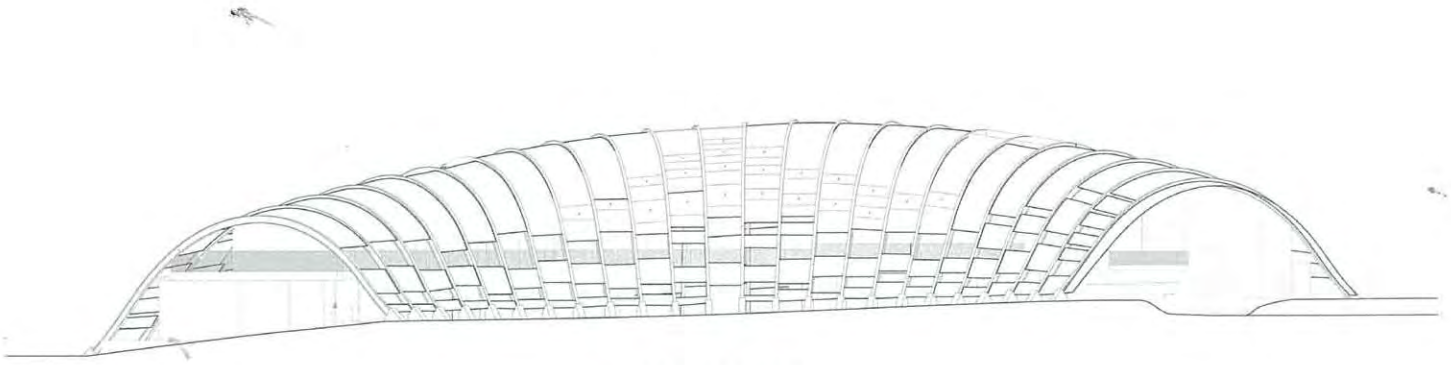
Skool4Kidz@Sengkang Riverside Park by Freight Architects LLP

WRITTEN BY Joshua Comaroff

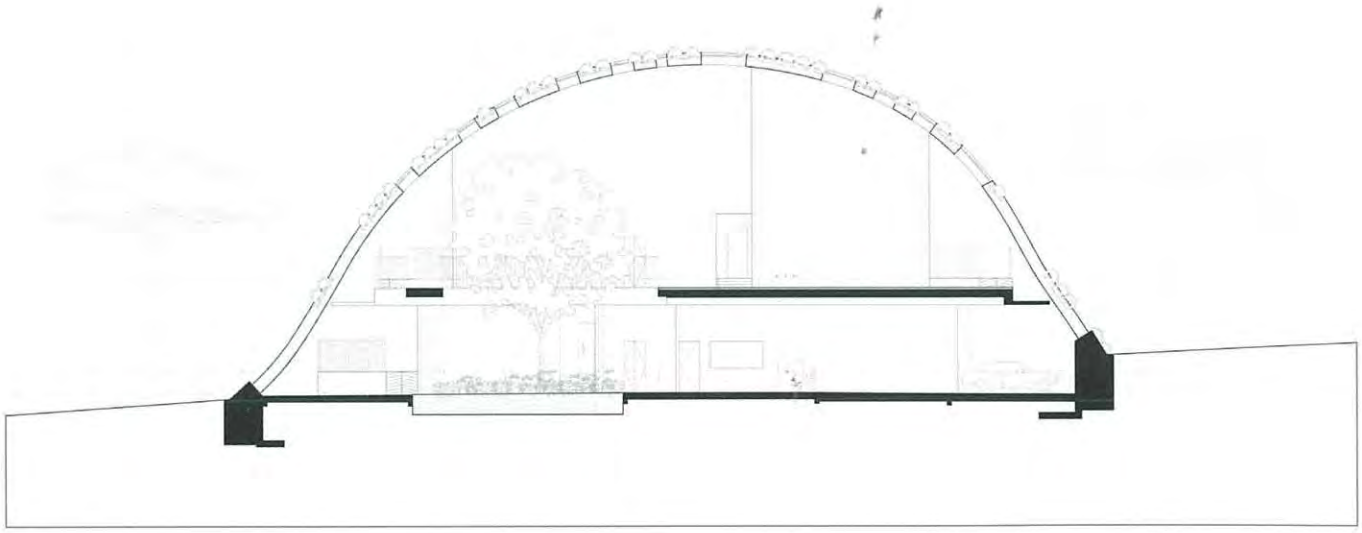
DRAWINGS BY Freight Architects LLP

PHOTOGRAPHS BY Darren Soh

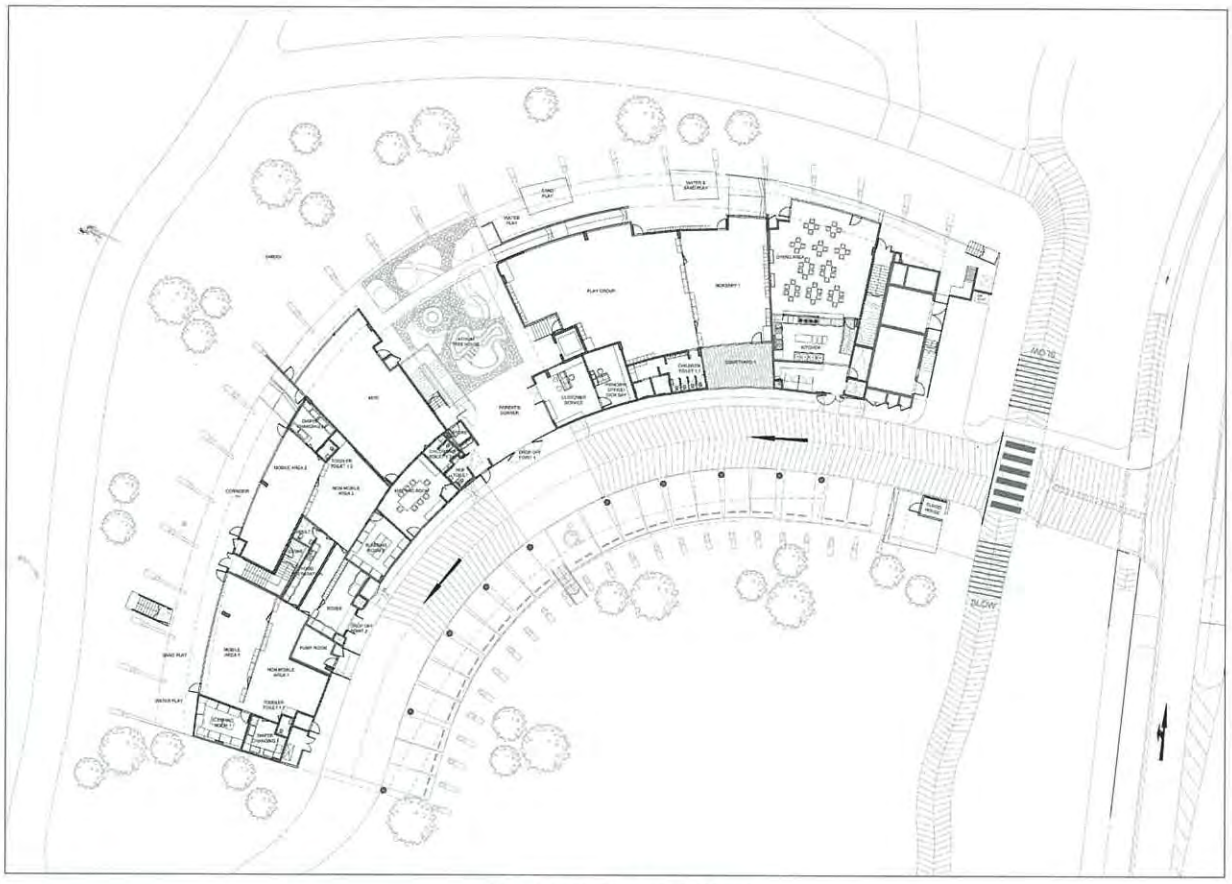
In 2014, I worked with Lekker Architects on a book titled *A Different Class: Preschool Spaces Rediscovered*. This was a dream project — Lien Foundation sponsored the design of ten prototypical early learning environments. These were intended to show how inspiring Singapore's schools could be, if given enough space and a decent budget. We shared the opinion of Lien's CEO Lee Poh Wah that our preschools often suffer from being plugged into opportunistic spaces: void decks, mall shop units, and sometimes offices or old houses. To get around the cramped character of these, we proposed a number of new potential sites for kindergartens and day cares. One of these was an NParks landscape.



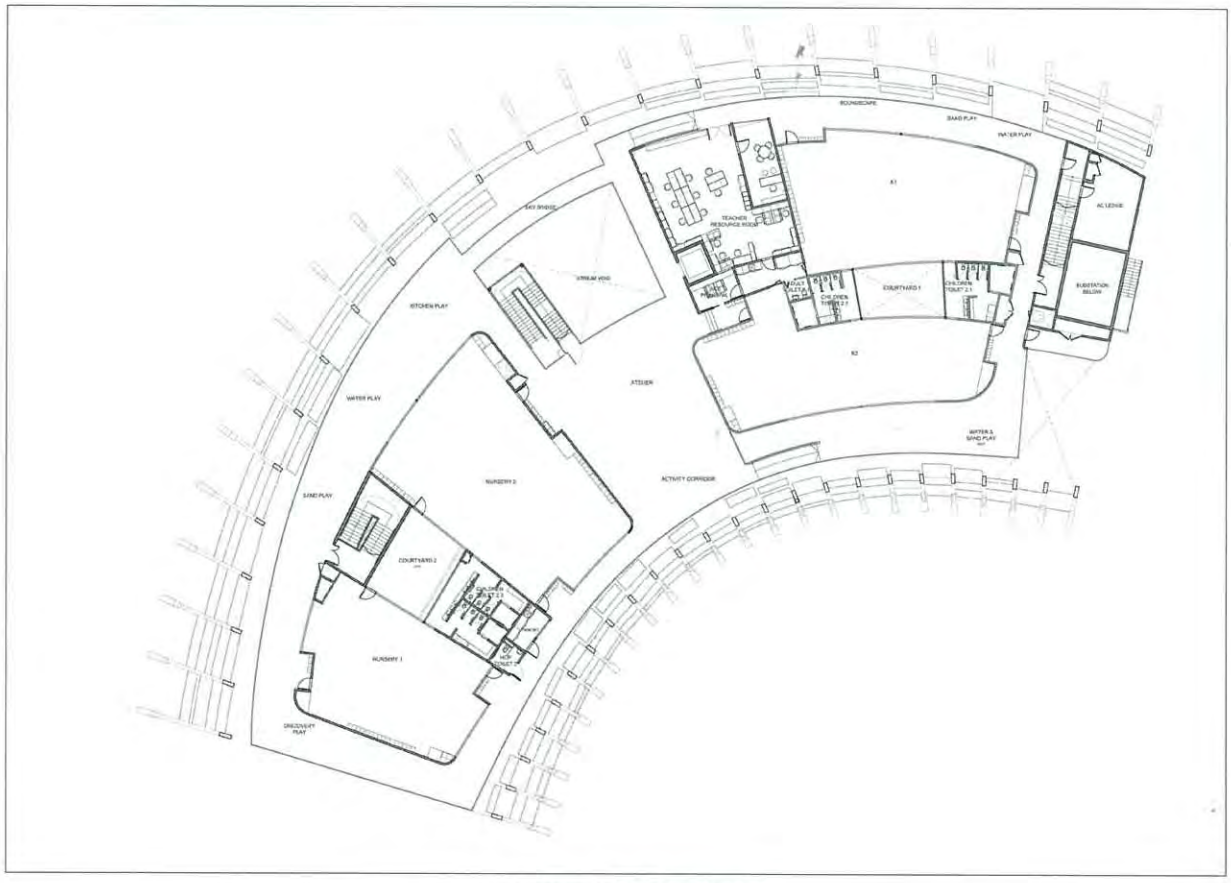
FRONT ELEVATION



SECTION



1ST PLAN WITH SPACE ANNOTATION



2ND PLAN WITH SPACE ANNOTATION

A knoll in the landscape

Semi-outdoor play areas are located in the interstitial spaces of the curved form

The classrooms take advantage of the soaring ceilings

Aerial view of the school

I do not know whether the Skool4Kidz@Sengkang Riverside Park, by Freight Architects, resulted from this; regardless, the building demonstrates very well the potentials of a purpose-built early learning centre. For anyone familiar with typical childcare offerings, it is a rare pleasure to see a line of children walking directly into an open landscape — not as a special "outing," but during a routine recess. Given the high quality of Singapore's parks, this would seem to be a potential resource to set our schools apart, in much the way that risk-tolerance and designed quirk distinguishes Japan's.

Set within an extensive greenspace, and adjacent to the Sengkang waterway, Skool4Kidz is a lofty learning environment that deftly solves the challenges and requirements that came with a new typology and site. There is a big-tented generosity about the building's volumes that recall the famous Reggio-Emilia schools in northern Italy, with their purposeful expanses of light and space.

At the same time, though, Freight's experience shows quite clearly how diverse, even absurdly contradictory, the demands upon an architect can be — and how difficult it is to design the first building in a new context. The sheer variety of constraints and stipulations makes it seem a miracle that the building was completed — least of all in a strict construction period of only six months. Certainly, it suggests that the regulatory climate for experimental buildings such as these should be, if not more lenient, then at least more coherent. This is quite clear when one considers the various demands made upon the exterior envelope.

For example, the URA requested that this (rather large) new building read as transparent, so that the design would preserve uninterrupted views to the river. The preschool operator, in protecting the students' privacy, required that the edge of the space be gated against outsiders, as well as people who may wish to photograph the children from outside. To make matters murkier, NParks (as providers of public space) had their own stipulations: that the building have no fencing; that a green buffer be maintained; and that visitors to the park be able to walk freely on the building's roof. Also, the agency was clear that the building would need to "blend in with its environment" — principally a flat lawn.

At first impression, Freight's solution appears something like a long hairy knoll, of what Rem Koolhaas calls "IKEA height." The frequency of openings within the greenery — windows and voids of a slightly rhomboid

Seamless transition between park and school

shape — fluctuates along the building's length. As one walks the perimeter, the green coverage also changes. The result is that the school appears sometimes like a massive object, and at others like a light framework of arches. Freight's design of the green roof was intended to address NParks' stipulation (above) that the building blend into the scenery. This seems like a rather quixotic request, given that Skool4Kidz is more than two storeys tall. Certainly, the building does not disappear into its context. It does not look out of place, however, and (if anything) the park is more interesting for its presence.

Continuity between roof and façade has become something of a design cliché — but it works, here. This is for a few reasons. Firstly, unlike many attempts to do this elsewhere in Singapore, the architects met the technical challenge of the green roof and were not forced into using artificial turf. The resulting surface has an appealing shagginess, and some species celebrate the sunshine with explosive growth (this would be even better if NParks had not nixed the architects' proposal to mix species within the planting trays). Most importantly, Freight handle the difficult transition to horizontal with an appealing, structurally irrational fillip that nicely completes the contiguity. The roof does not plunge straight into the ground, but meets it at a tangent.

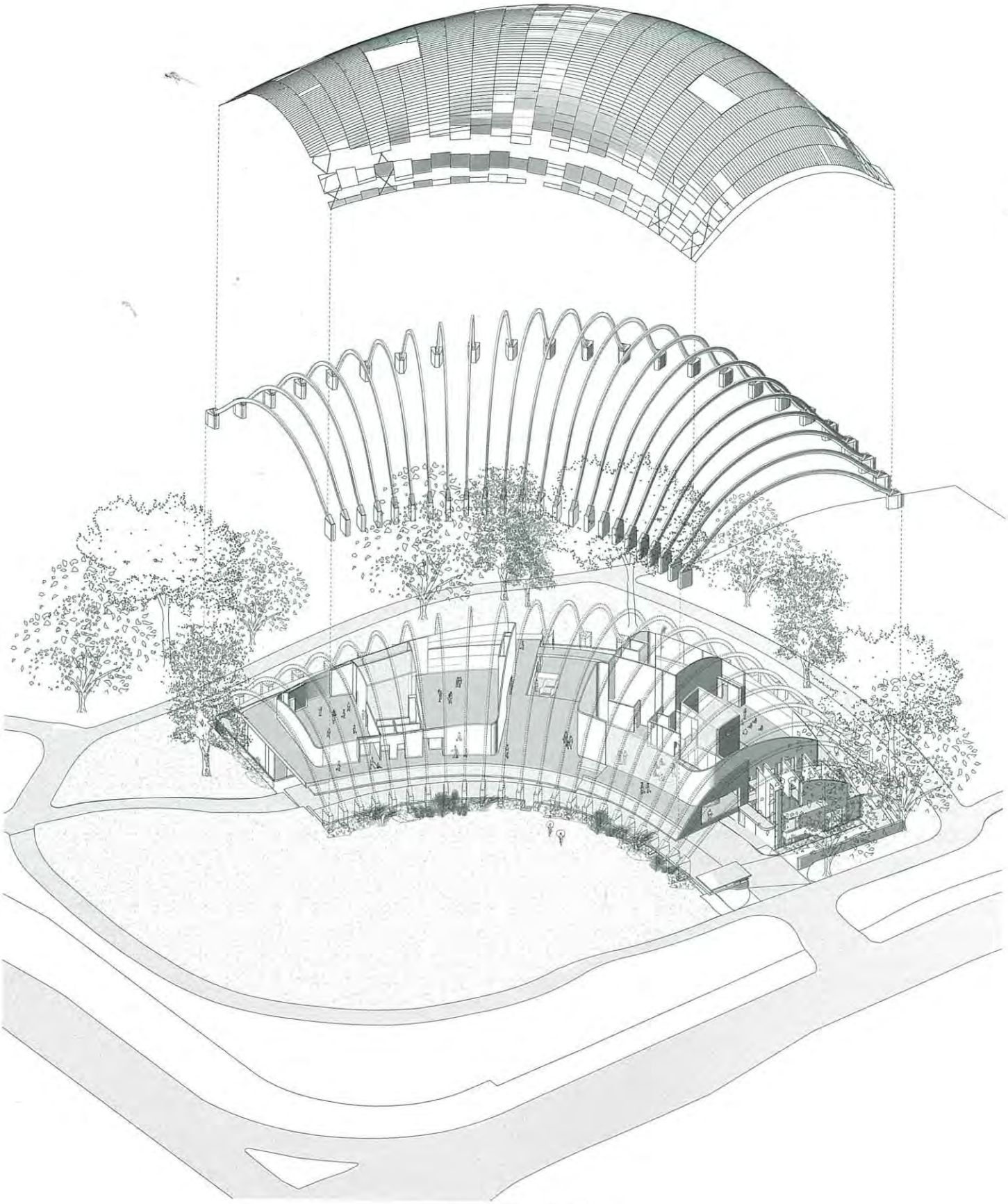
At the same time, this rib geometry results in a series of sections that give the interior a powerful spatial identity. The classrooms are soaring spaces, and do not suffer from the noise and constriction of typical preschool classroom dimensions. They are also pleasingly cool and ventilated, as the hot air rises above the perceptible zone and allows cool air to rush through. We spent some time exploring, and at no time did the non-air conditioned spaces feel hot or still. Architect Kee Jing Zhi, of Freight, mentioned his concern that the spaces are consistently large — conventional wisdom being that children's spaces should be intimate, at least in places. I don't share this worry, however; it was refreshing to see students running about in large volumes, a sense of freedom. Perhaps "nooks" could be provided, but this could certainly be handled at the scale of furniture (more later). At the same time, the classrooms for nursery students and Infants are on a lower floor, in spaces that are lower and more lateral.

The architects have generally handled the section very well; this includes, also, the slight undulations of the site. In fact, the topography is higher on one side by approximately one meter. This has been used to a functional advantage, vertically off-setting the school's kitchen from its dining area by the same amount. This results in a buffet counter that is comfortably accessible to both children and the cooking staff — and avoids, perhaps, the chronic back-ache and ill tempers of the auntie who has to repeatedly bend over during meal service. The passage of the access road under the building is handled with a similar skill, as the resulting service space feels airy and sheltered, where it might have been dank and basement-like.

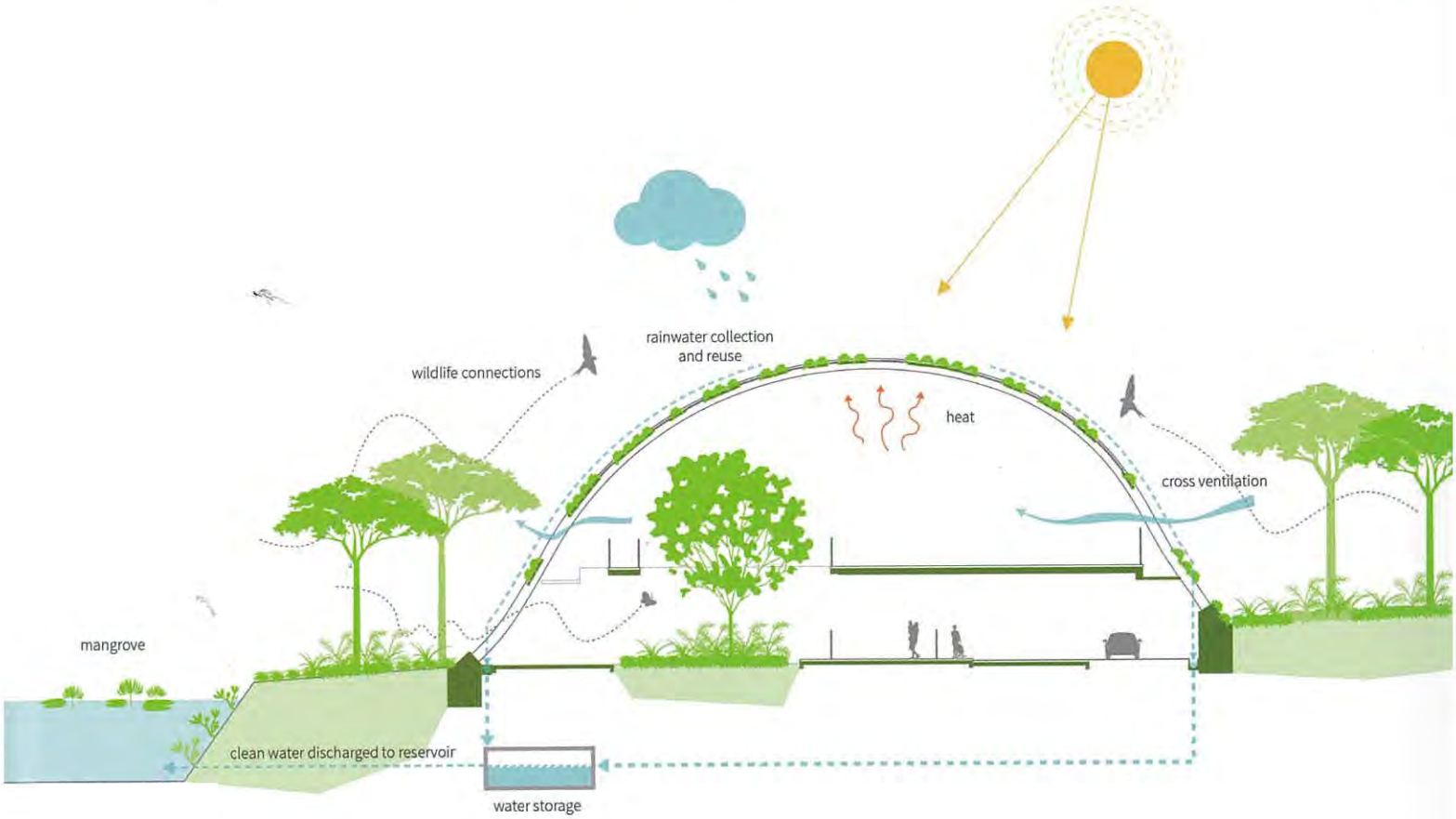
An airy, light-filled interior

There are some aspects of Skool4Kidz, however, which suggest that a reconsideration of both budget and detail requirements might be in order. The Early Childhood Development Agency maintains strict criteria for licensed preschool spaces and outdoor play areas, from the fillet of furniture edges to the height of railings. The latter is a significant drawback in the case of Freight's building — a series of potentially lovely vertical connections are ruined by clumsy metal fences that stand at 1.8 meters tall. These block the visual connectivity and make for a prison-like perimeter around the second floor. I recognize that the required height is to prevent a fall by a child climbing (scaling the cabinetry, for example). However, it seems that such a risk could be mitigated through the practice of the staff. Preschools are highly invigilated spaces, and care is required in many other cases — for example, in crossing the street when taking children outside, or on play structures.

The case of the railings also makes clear the tight budgetary limitations of the project. It is frankly impressive what Freight have done with the money, and a shame to see that the budget could not encompass the proper resolution of key detail elements — lights, rails, interior furniture and finishes. The same goes for furniture.



LARGE SPAN STEEL RIB STRUCTURE



SECTIONAL CONCEPT

In preschools, the latter takes on an unusual importance. These are not merely functional and ergonomic, but (given the students' height) typically frame the edge of the visual envelope. The desk, the shelf and the cubby are constant touchpoints; designing them well requires time and budget. Freight were given too little of both, and this is a shame. The architects have managed the acrobatic challenge of "cheap, fast, and good"; there are limits, however. Those who regularly commission architecture should understand the difference between design and magic. A little more money and time would have made a significant difference.

Regardless, it is heartening to see a proven case of school in the park. Given the number of parks within mature estates, we may hope to see more solutions to this problem in coming years, as well as in other under-utilized sites in the national landscape. Being "land-scarce" is, as much as anything, a matter of priorities — and it is high time for the urgency of early childhood education to be channelled into more ambitious schools, where architecture is free to play a liberating and didactic role.

PROJECT INFORMATION

- **CLIENT**
  Skool4Kidz Pte Ltd
- **TIME TO COMPLETE**
  9 months
- **TOTAL FLOOR AREA**
  4000 sqm

CONSULTANTS

- **ARCHITECTURE FIRM**
  Freight Architects LLP
- **PROJECT TEAM MEMBERS**
  Chen Kian Khiong, Kee Jing Zhi, Tan Kian Teck, Tan Sock Chin, Genie Ngui
- **CIVIL AND STRUCTURAL ENGINEER**
  KCL Consultants Pte Ltd
- **M&E ENGINEER**
  William Ng Consultants Pte Ltd
- **QUANTITY SURVEYOR**
  Barton Bruce Shaw Pte Ltd

CONTRACTORS

- **MAIN CONTRACTOR (BUILDER)**
  Sanwah Construction Pte Ltd
- **LANDSCAPE CONTRACTOR**
  Nature Landscapes Pte Ltd

SUPPLIERS

- **FLOOR TILES / FLOOR FINISH**
  EPDM (Semec)/ Vinyl floor (NSK baustoffe)
- **ROOFING MATERIAL**
  LCP roofing system/ Elmich Versicell system
- **CEILING**
  Ceiling: OWAcoustic®/ partition: BORAL Impactstop
- **SANITARY WARES**
  Rigel
- **ANY NOTABLE FINISHES, FURNISHINGS & EQUIPMENT**
  Samsung ACMV
- **ANY OTHER NOTABLE MATERIALS USED IN THE PROJECT**
  Schindler lift