

Pasir Ris Sports Centre

SPORTS FOR EVERYONE

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Images by Sport Singapore/ Courtesy of CPG Consultants Pte Ltd





PROJECT CREDITS

Location: Pasir Ris Central Road, Singapore **Client:** Sport Singapore (formerly Singapore Sports Council) **Completion Date:** 2011 **Architect/ C&S/ M&E/ Quantity Surveyor/ Green Mark Consultant:** CPG Consultants Pte Ltd **Acoustic Consultant:** CCW Associates Pte Ltd **Main Contractor:** Quek Hock Seng Construction Pte Ltd **Pool Specialist:** Putra Water Treatment **Mechanical Contractor:** Kurihara Kogyo Company Ltd **Electrical Contractor:** Bee Kong Electrical Engineering Pte Ltd **Solar PV Panels:** Grenzone Pte Ltd **Site Area:** 14,000 m² **GFA:** 12,000 m²

Pasir Ris Sports Centre was envisioned as a universally friendly public space for individuals as well as families from varied backgrounds to come together to enjoy sports and to unwind. With the ultimate objective of creating a vibrant communal space that will bring the community together, the design team explored its architectural features thoroughly to infuse universal design elements, while keeping the public's feedback in mind. The result is an array of not only quality sports facilities but also retail spaces to enhance the social and leisure experiences of visitors.

The sports facilities comprise: a fitness gym; an indoor sports hall with badminton, basketball, and volleyball courts; outdoor tennis courts; a five-a-side soccer court; and swimming pools, including an Olympic-size lap pool, learner pool, wading pool, and jacuzzi. There is also a dance studio and a large multipurpose foyer for events as well as food and beverage and retail spaces.

According to 2013's visitor rates from Sport Singapore (the recently rebranded Sports Council), Pasir Ris Sports Centre is one of the top five most visited sports venues, with the swimming pools alone attracting a monthly visitorship of 25,000 to 30,000 people. In addition to the facilities, the sports centre also offers various ActiveSG programmes that are available for the community. These programmes include Aqua Aerobics, Masala Bhangra, KpopX Fitness, Zumba, Yoga, and Bokwa.

Site and Context

The building is sited on what used to be part of the Pasir Ris Town Park. Located north of the Pasir Ris fishing pond, it is linked by the Pasir Ris Park Connector Network (PCN) along Sungei Tampines

to Pasir Ris Park and its mangrove coastline, forming part of the "green" lung of Pasir Ris Town. On a wider context, the Pasir Ris Sports Centre is also one of the "play" elements that are being injected into the green lung, amidst its neighbouring water park, country club, and chalets.

The development of Pasir Ris Sports Centre is a cornerstone of Sport Singapore's Sports Facilities Master Plan, in which a network of innovative sports facilities and programmes is integrated with the parks, park connectors, and waterways to support more holistic leisure lifestyles, enhancing the liveability of the neighbourhood for residents.

Overall Design Strategy

"Sports in a Park" was the adopted design concept that provided the community with respite from the urban environment. The spatial relationship with the surrounding Pasir Ris Town Park is intentionally porous and designed to be as open and inviting as possible. The landscape design builds upon this concept to complement the neighbouring parkland with its tropical greenery.

In order to enhance accessibility, visitors can enter Pasir Ris Sports Centre through multiple routes. Beyond the main entrance, there are also footpaths that connect Pasir Ris Sports Centre to the park, and this is made possible by minimising fencing and limiting it to necessary areas such as the paid pools and back of house.

The spacious, high-ceiling, and breezy foyer on the ground storey is a conducive community space that facilitates spontaneous encounters between joggers and cyclists. It also serves as a multipurpose white space for organised events at the sports



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centre and its vicinity. The flexible nature of the space allows for casual social interactions, fostering the *kampung* spirit among the residents.

Pasir Ris Sports Centre aims to serve a broad range of demographics—including families with young children, working adults, teens and youths, senior citizens, and users with special needs. Hence, design solutions had to be tailored to create user-centric and user-friendly spaces with the adoption of universal design principles.

For example, at the children's shower facility by the pool, walls have been deliberately designed to be lower than the average wall height, enabling parents to watch over their children. Designated wheelchair parking areas have also been catered for at the sports hall. Corridors are kept wide and visually unobstructed for ease of access. The building has been designed with clear functional zoning. Bright colourful signs are strategically placed throughout the building, easing the wayfinding process for visitors.

Tropical Design

The building form is kept simple so that it blends in with the natural surroundings. Envisaged as a huge pavilion in a park, clear and accessible architectural imagery and language were adopted. The primary indoor and outdoor courts are expressed as rectangular blocks, but each is articulated differently. The indoor court is expressed as a cube painted in variegated banded shades of greys and accented with stainless steel strips. It is set behind

steel colonnaded tropical verandahs and timber sunshading louvres that are made from the timber benches of the old National Stadium. On the other hand, the outdoor court is enclosed by a green fence, which is softly textured by folding tapestries of creepers. This camouflages the otherwise ubiquitous fence, while creating a conducive play environment that screens players from the distractions and pollution of external elements.

For the outdoor pools, tensile shade structures are expressed as geometric shapes to reflect the playful elements. The roofs over the pool spectator gallery and slide tower are expressed as folding undulating planes, to continue the language of the folding green walls. The gym, which is an annex building to the main building, spans in between the indoor court and outdoor pools. It takes on a more amorphous kidney-shape, with curved glass walls and views to the pools and park.

The architecture draws inspiration from its natural green surroundings and incorporates tropical and green elements within the building. The external elevation is characterised by timber-screened verandahs with overhanging roof eaves. Landscaping is used extensively to enhance the visual experience for users. In particular, green walls express the tropical and green aspirations of the building. High ceilings and naturally ventilated areas provide a sense of spaciousness, and lush tropical landscaping evokes a rustic *kampung* atmosphere within the contemporary construction of concrete and steel.



1. Seamlessly transitioning to the adjoining Pasir Ris Town Park, Pasir Ris Sports Centre is part of the “green lung” of Pasir Ris Town.

2, 3. The outdoor court is enclosed by a green fence textured by folding tapestries of creepers. This screens players from surrounding distractions and pollution.

4. The extensive use of greenery helps to reduce heat island effect. Inspired by “tropical”, “resort”, and “lush” themes, a mix of shrubs, palms, and frangipanis was selected for their ease of maintenance.

5. Tropical landscaping evokes a rustic kampung atmosphere within the contemporary construction of concrete and steel.

6. With minimal fencing, the sports centre is designed to be as open and inviting as possible.

7. Rainwater run-off from the tennis courts and driveway is channeled into the rain garden, which acts as a natural filter prior to releasing the water into the public drainage network.





10



11

The building's colour palette is a subdued dark grey and white on the exterior, reminiscent of the colours used in black and white bungalows. However, hues of vibrant, punchy colours are adopted for its interior facilities. Coloured glass panes are used for the store fronts. These are contemporary reinterpretations of the stained glass windows sometimes used in tropical vernacular buildings. Multicoloured light features also reference the lanterns familiar to Asian culture. At night, the illuminated coloured glass casts the building in a different light and offers a completely different and refreshing sensory experience for visitors.

Green Building


The overall landscape palette was based on "tropical", "resort", and "lush" themes. Generally, a mix of tropical plants was used, including shrubs, palms, and frangipanis, selected for their ease of maintenance. Six trees from the existing site were brought to a nursery prior to start of construction and subsequently transplanted around the pool and perimeter areas. At the front of the building, along Pasir Ris Central, the planting palette was complemented by the lush roadside planting. A fast-growing hardy climber, *Tristellateia australasiae*, was selected for the vertical green walls surrounding the outdoor courts.

Overall, the landscaping has been well received by visitors to the sports centre. The complex manager shared that most visitors said the centre gave them a "homely" and "resort" feeling. This was particularly true for the pool area, as such planting is not typical to public swimming pools. The poolside features a mix of leafy tropical planting, such as *Ficus*, *Roystonea oleracea*, and *Plumeria rubra*, complemented with a selection of warm colours (for example, beige or resembling wood) for the floor tiles and finishes.

The public foyer and circulation spaces are placed adjacent to the exterior to enhance natural daylight and ventilation. The building's high ceilings allow for warm air to rise, and openings in the façade are inserted at strategic positions. Coupled with the provision of a central courtyard, they effectively channel winds through the interiors of the building, creating naturally ventilated spaces for the enjoyment of visitors.

Environmentally friendly and energy-saving features are incorporated within the building. They include a rainwater-harvesting system to irrigate the landscape, vertical green walls and lush planting to reduce ambient heat gained, a rain garden to manage stormwater, and photovoltaic cells for solar energy.

A total of 2,400 square metres of photovoltaic thin-film cells, which are non-reflective and reduce glare to surrounding residential blocks, are installed on the roof. The energy generated from it helps to supply up to 12 percent of the total energy consumption in the sports centre. As a Green Mark Gold^{PLUS} certified building, the Pasir Ris Sports Centre is 25 percent more energy-efficient than an average building, with estimated energy and water savings of 711,440 kilowatt-hours and 27,948 cubic metres respectively per year.

Another eco-friendly feature integrated into the design is the timber used for the exterior sunshading louvres and interior decorative wall panels. These were salvaged and recycled from the spectator benches of the former National Stadium, which many Singaporeans have fond memories of. The recycling efforts seek to preserve our heritage and the environment, touching lives in the process. 



8. The undulating roofs over the pool spectator gallery and slide tower continue the language of the folding green walls.

9. The indoor sports hall with badminton, basketball, and volleyball courts.

10. The outdoor five-a-side soccer court and tennis courts in the background.

11. In the fitness gym, equipment is designed to allow gym users to generate energy to power its television.

12. Materials reclaimed from the old National Stadium's timber seats are recycled as louvres, acting as a sunshading feature on the external façade.

13. Energy-efficient LED lighting is used in key areas such as the foyer, offices, meeting rooms and corridors.

14. The roof is installed with about 2,400 square metres of photovoltaic panels to tap on the sun's energy.