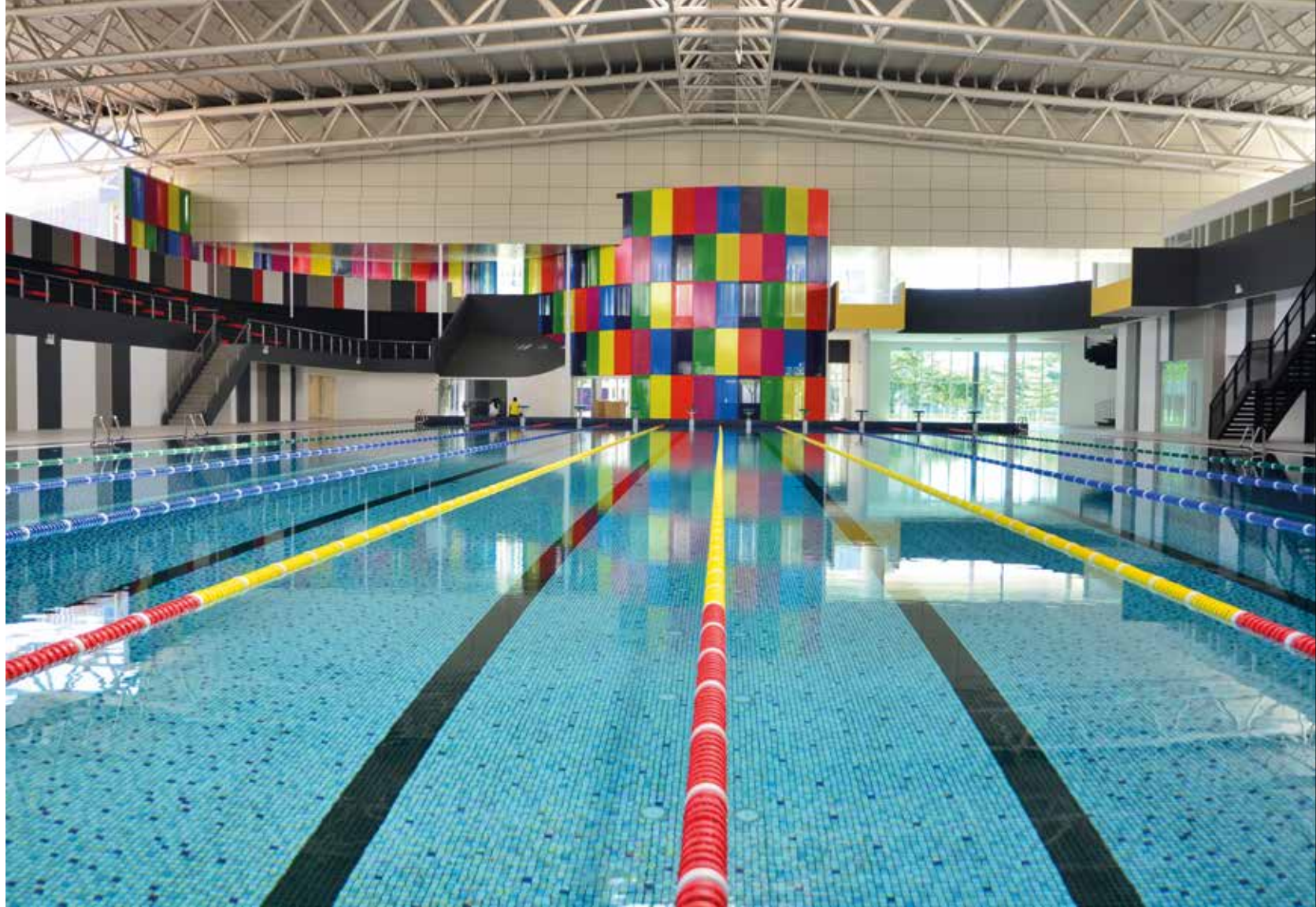


REFURBISHMENT AND UPGRADING WORKS TO THE AQUATIC CENTRE

What was once a glorious Aquatic Centre for the 2000 SUKMA Games turned into a

decrepit state over the years. But it has since been refurbished and renovated into a community-centred sports

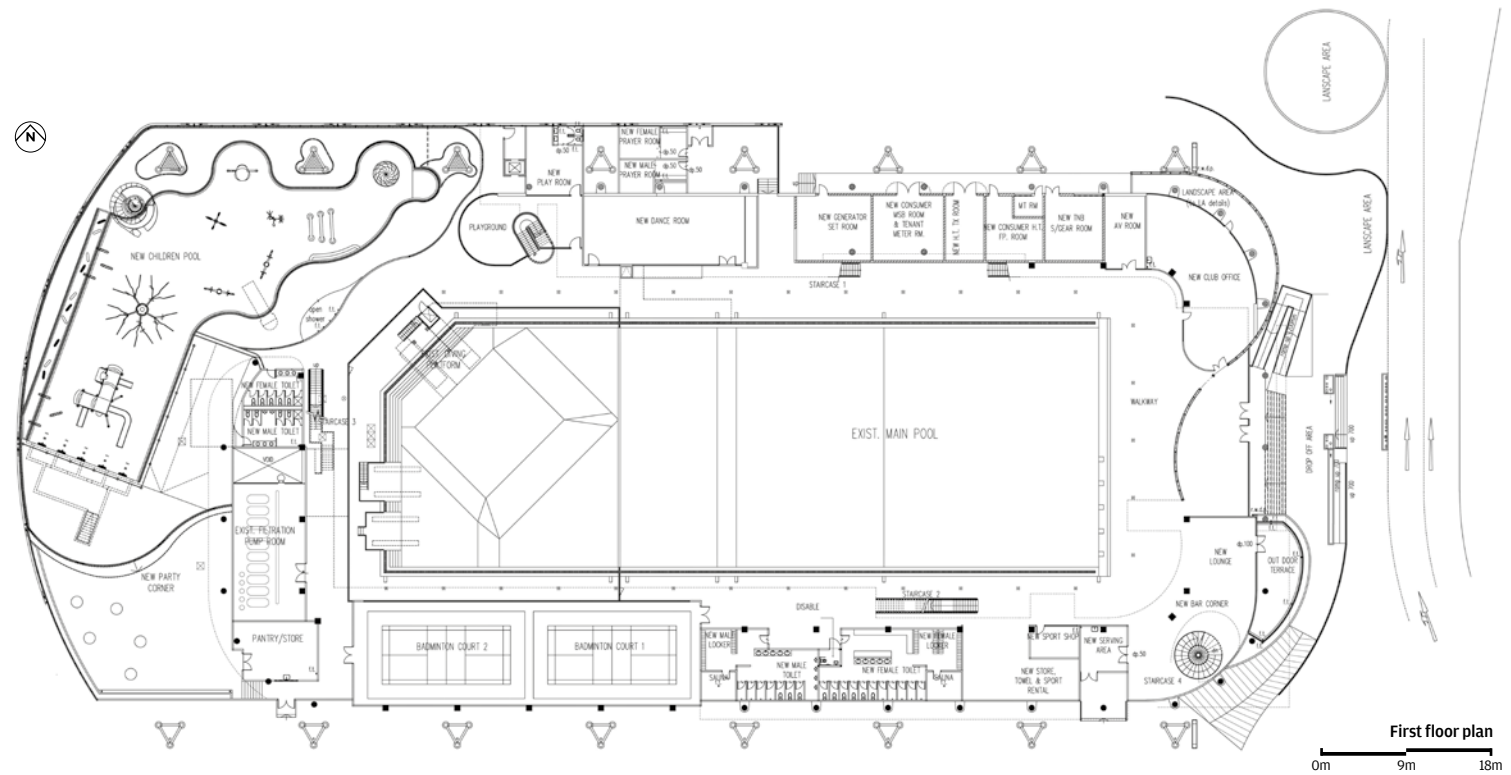
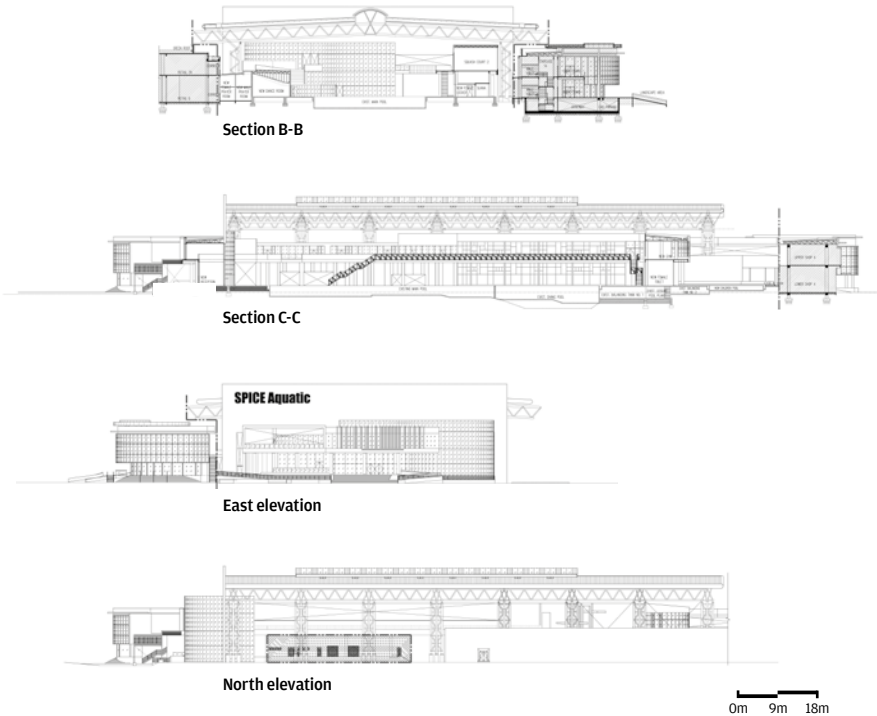
and recreation club to allow new life to shine through.



Multi-coloured panels bring life into the indoor Aquatic Centre



The existing Aquatic Centre before refurbishment works



First floor plan

The existing Aquatic Centre was built for the swimming event during the 2000 SUKMA Games. Therefore, the main focus of the centre was the Olympic-sized pool and diving pool. The concrete sitting terrace surrounded the facilities (locker and toilets) that were located below the terrace, and an organic-shaped children's pool was located at the back with a big tensile structure cover.

In line with the goal of creating a mega community sports and recreational club, the types of sports activity envisaged at the new Aquatic Centre include yoga, karate, taekwondo, dancing, badminton, basketball, volleyball, swimming and diving.

The aim was to refurbish the existing Aquatic Centre to encourage the public to utilise the swimming pool as a training facility, whilst being a family-friendly recreation club. The existing Aquatic Centre would also contain a world-class children's water theme

park, sports rooms and gym facilities.

The design concept was to use colourful elements to generate a new lease of life for the old structure. The entrance of the centre was relocated to face the main internal road, which is more prominent. The colour screen wall formed by perforated composite panels is a feature on the external wall and internal spaces – a coherent backdrop for the entire centre. It acts as an iconic element of the building and symbolises a sense of revitalisation, or the colour of life, for the building.

The schematic section shows the demolished terrace and new space around the pool. Only one-eighth of the sitting terraces remained and other reinforced concrete (RC) structures surrounding the pool were demolished. New function rooms were also added around the pool.

The design challenge of this refurbishment was changing the existing stadium arrangement structure into

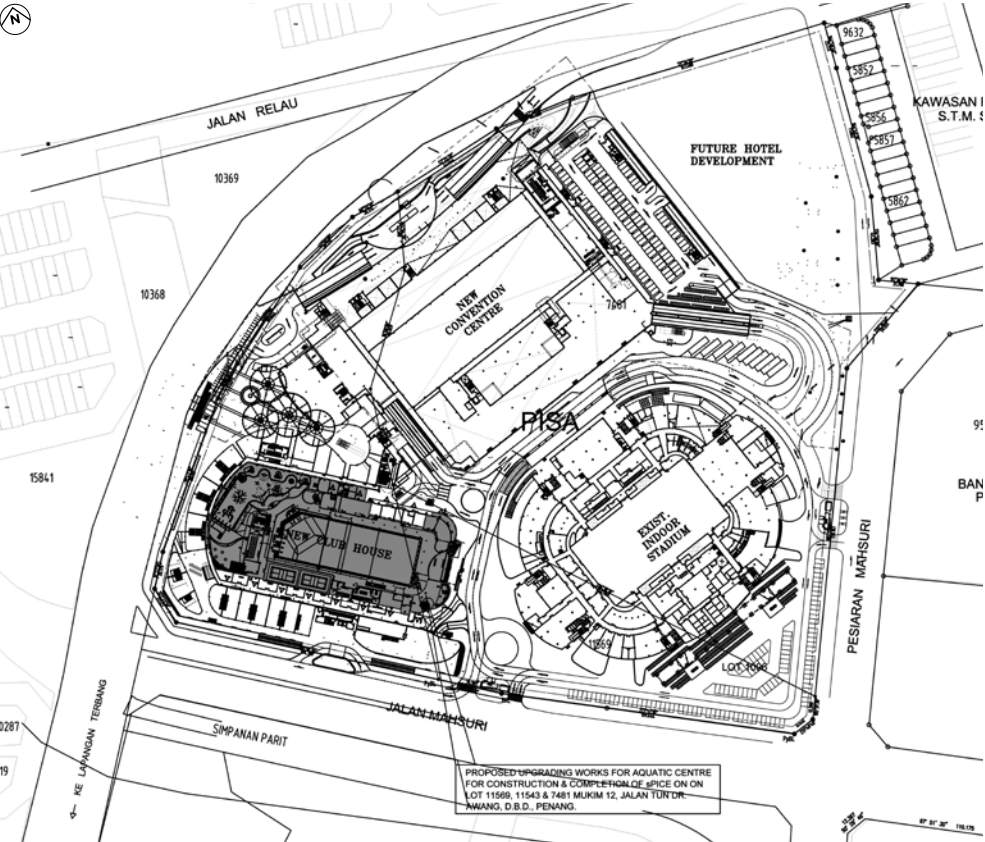


Colourful mosaic and equipment add to the vibrance of the centre



Candy Land water theme park

CLIENT ECO MERIDIAN SDN BHD	YEAR COMPLETED OCTOBER 2015	PROJECT TEAM TAN CHIEW HOON, LEE K. JIN	C & S ENGINEER ARUP JURURUNDING SDN BHD	QUANTITY SURVEYOR LANGDON & SEAH (M) SDN BHD	SWIMMING POOL SPECIALIST AQUATECH POOLS SDN BHD
LOCATION JALAN TUN DR AWANG, PENANG	ARCHITECT BYG ARCHITECTURE SDN BHD	SITE AREA 102,887.78 SQM	M & E ENGINEER GH CONSULTANTS SDN BHD / GH TAG CONSULTANCY	LIGHTING RP DESIGN	PHOTOGRAPHY JOHN ANG
	PROJECT PRINCIPAL Af MICHAEL ONG CHIN KEONG	FLOOR AREA 9,448 SQM	CONTRACTOR MAXRAJIN SDN BHD	LANDSCAPING LANDARC ASSOCIATES SDN BHD	



Site plan
* not to scale

recreational club facilities. Due to the budget constraint, the existing Olympic-sized pool and diving pool remained. The mega steel truss roof also remained, but not without a change of new metal roofing with insulation and a new coat of high performance anti-rust paint. The existing pool depth was 1.8m to 2.5m, which was too deep for a public pool. As the limitation of existing

piles cannot allow additional topping up, the RC pool was topped up to a depth 1.35m instead, which is the minimum depth for swimming training. Thousands of small RC cubes were used to form a base, with a new layer of waterproofing and mosaic patterns for the pool as well. Some green features were also incorporated into the Aquatic Centre. For example, solar photovoltaic (PV) sys-

tems were installed at the mega truss roof to generate a total of 700 KWp with 2,800 PV modules, making it the largest solar PV farm in Penang. As a result, 61 tonnes of CO₂ gas emissions are reduced every month, which is equivalent to the electricity consumption of 100 household units. Yet, the entire centre is naturally ventilated, except the gym and sports room which are equipped with air conditioning systems. ❧

Drop-off area



FROM LEFT: Badminton hall; Squash court; Olympic-sized swimming pool