

Roof & Facade Asia

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Copper Art on the Golden Gate

An innovative façade was created on the USA's west coast with a unique design courtesy of Swiss architects Herzog & de Meuron. Never before has so much copper been used to clad a building. Thousands of different-sized and different-shaped copper sheets, individually embossed and perforated, cover the façade of the De Young Memorial Museum in San Francisco.

De Young Museum

THE newly built museum in Golden Gate Park was originally constructed in 1919, but it was severely damaged in the earthquake of 1989. The building was eventually demolished in 2002. During the following three years, the new design by Swiss architects Herzog & de Meuron was implemented in collaboration with local architects Fong & Chan. The museum re-opened in October 2005 in a new building which bonds art, architecture and the local environment in a multi-faceted location. This building is a San Francisco landmark that houses an invaluable art collection. With an exhibition area of more than 8,000 m², visitors are given easy access to one of the most important and comprehensive art collections on the West Coast of the USA.

After many heated discussions among environmental

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Copper-clad Classic



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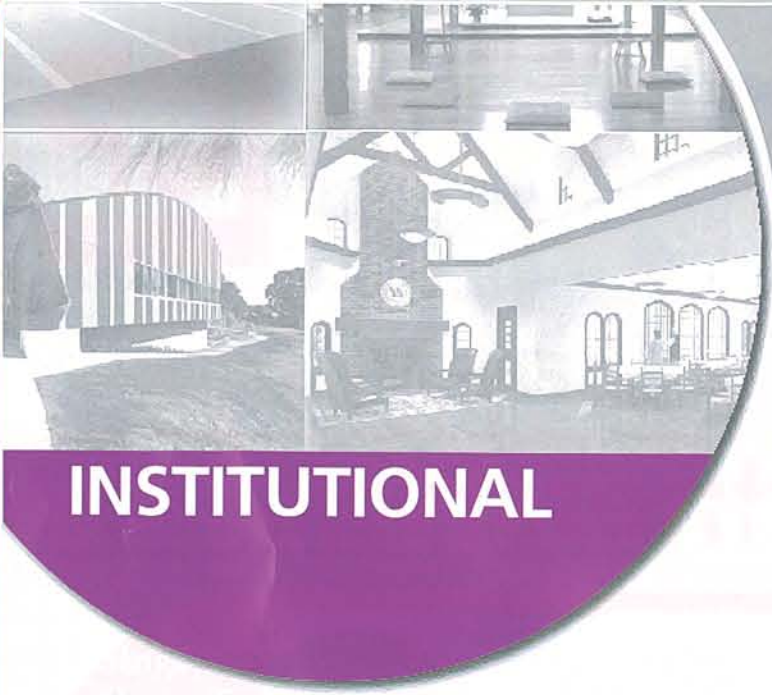
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INSTITUTIONAL

Simple Elegance

Located on a hill overlooking a beachfront in the developing resort township of Batu Ferringhi in the state of Penang, Malaysia, The International School of Penang, Uplands is a co-educational, secular, non-profit day and boarding institution offering international education to children between the age of five and 19. Designed by Architect T.Y. Au, the school is a combination of simplicity and elegance.

By Maimona Bte Abdul Wahab

LOCATED on a four-acre site in Batu Ferringhi, The International School of Penang, Uplands consists of four main blocks. They are a two-storey Administration Block, Multi-Purpose Hall and a four-storey Primary and Secondary Blocks. These four blocks are pivoted and centred facing a beautiful central courtyard which can be used by the school for conducive outdoor teaching and *alfresco* performances.

All of the buildings, except for the Administration Block, are interconnected at the first floor. Seamless corridors have been designed to provide greater security for students and staff. Consequently, the compact design of the school makes inter-communication and movement around the school easier.

A 'super verandah' has been created beside the Administration Block to serve as a main drop-off point. This verandah also acts as a welcoming space for official events, a covered play area and a gathering area for students awaiting their transport during rainy days. In addition, it allows teachers to monitor the safety of students from the Administration Block.

This new school has 36 fully air-conditioned classrooms located at the Primary and Secondary Blocks. The end wing of the latter is given prominence as this is where the library and IT laboratories are located. About eight special rooms have also been specially put aside for various studies such as art, music, drama, design and technology. Audio-visual (AV) equipped media rooms, laboratories for language learning and natural sciences are available for students in

the new premises. Wireless internet access is also available throughout the school.

The school's Multi-Purpose Hall houses an indoor gymnasium at the first level and a ground-floor cafeteria. This cafeteria is designed with terrace seating for spectators overlooking the large football field. Located next to the cafeteria is a 25-metre swimming pool that has an enormous pool-side deck for students to gather and socialise. Staircases were constructed primarily for egress, to meet pedestrian circulation requirements and to enhance the school's structure. The lift core is purposely highlighted to resemble a medieval tower overlooking a piazza. Aluminium louvres used to hide the air-conditioning units are designed to fit in with the façade treatment of the buildings.

Eight adjacent, semi-detached houses have been erected for boarding accommodation with three 'teacher-families' living in to supervise. Currently, there are about 75 boarders staying at the school excluding matrons and a school nurse.

New special infrastructure (which had not been used in T.Y. Au's previous work) has also been incorporated into the construction of the school. The reinforced concrete (RC) wall utilised a system created by Nehemiah Reinforced Soil Sdn Bhd, while the roof and galvanised steel truss was developed together with UAC Steel Systems Sdn. Bhd.

There were some real challenges to be overcome during the school's construction. For example, the sloping terrain presented a design obstacle for the architects in terms of accommodating provisions of the school: the football field took up a quarter of the site, car park needs and the many

stringent building codes had to be met. Another challenge was to come up with an overall building design that was interesting yet catered to the non-profit school's tight budget. To overcome these challenges, the architects made spaces flexible and multi-functional.

PROJECT CREDITS

Architect: Architect T.Y. Au

Civil & Structural Engineer: GTP Consultants Sdn. Bhd.

Mechanical & Electrical Engineer: H.P Beh & Associates Sdn. Bhd.

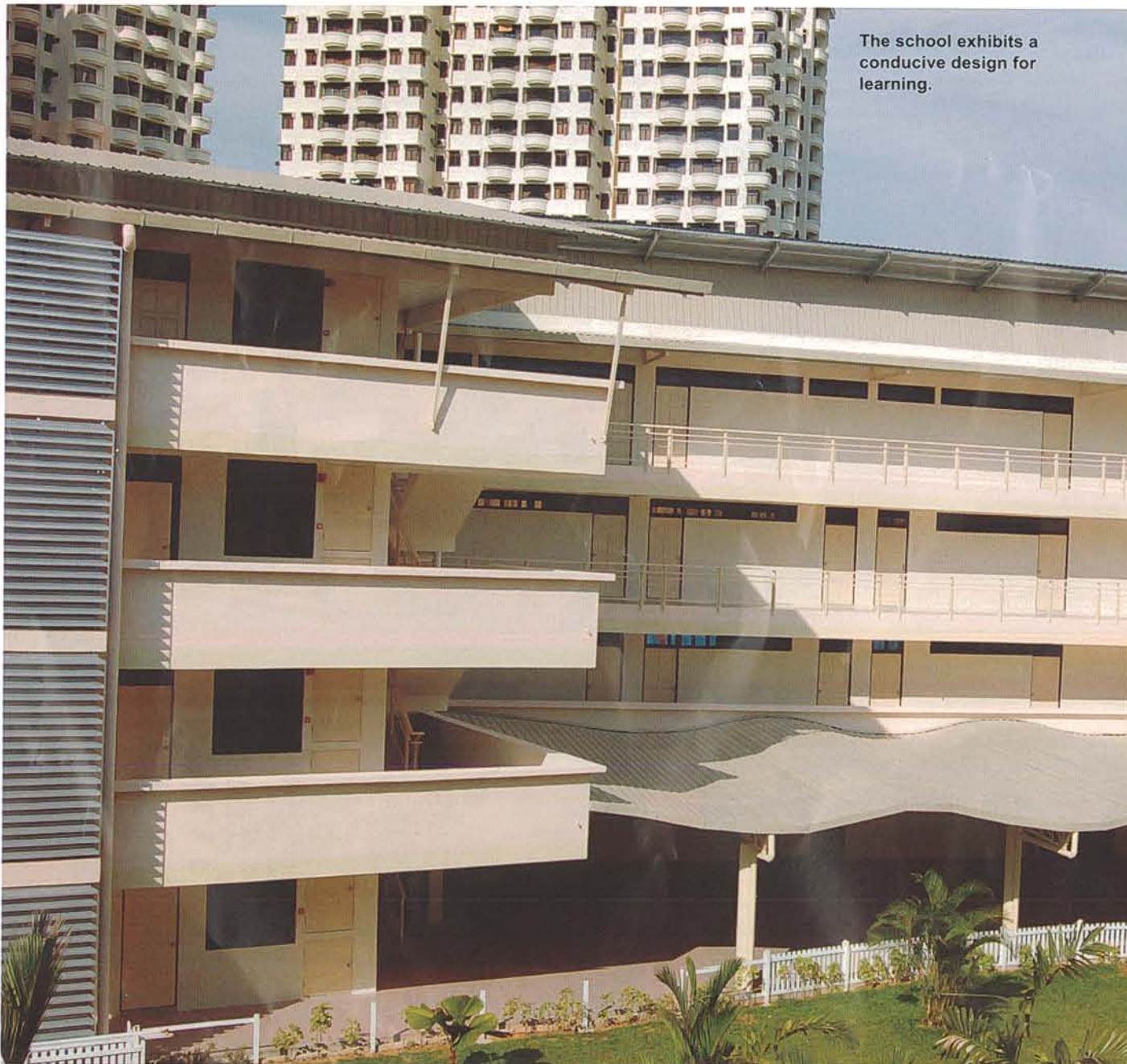
Quantity Surveyor: Unitech QS Consultancy Sdn. Bhd.

Main Contractor: Pembina Kawasi Utara Sdn. Bhd.

Lift Nominated Sub Contractor: MS Elevators Engineering Sdn Bhd

IT Nominated Sub Contractor: Lantro (Penang) Sdn Bhd

Enquiry No: 03/102



The school exhibits a conducive design for learning.

