

## THE JOCKEY CLUB ENVIRONMENTAL BUILDING – HIGH QUALITY COMMERCIAL BUILDING WITH AWARD WINNING ENVIRONMENTAL FEATURES



The Jockey Club Environmental Building, located on the junction of Tat Chee Avenue and To Yuen Street, Kowloon Tong, was opened by the Hon Mrs Anson Chan, CB, JP, in September 1996. The ground floor of premises houses a 120 seat auditorium and a 220m<sup>2</sup> exhibition facility, whilst the upper levels comprises of two storeys of office space. The design team for premises include the project architect, Simon Kwan and Associates, the M&E design consultant, J. Preston Limited and the project manager, Swire Properties Ltd.

As a winner of the Hong Kong Institute of Architects *Certificate of Merit* in 1997, not only the fibrous architectural design applied, many environmental design concept and consideration were actually adopted as below: -

### BUILDING SHAPE



For this 22m tall building with gross area of approximately 4,000m<sup>2</sup>, a cylindrical building shape was designed. In terms of environmental concern, this building design gives benefits in minimising external wall area for the required floor area allowed.

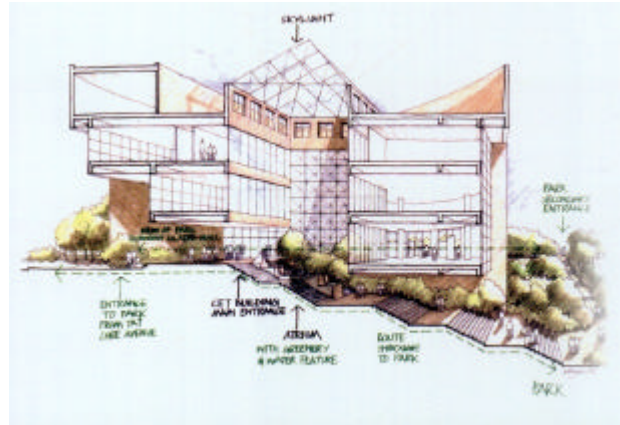
Therefore, material use, such as for the façade wall, was reduced significantly. Consequently, the corresponding internal cooling load required was also reduced due to limited solar heat gain from external sunlight.



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### SKYLIGHT ATRIUM



An atrium with skylight is located at the centre of the building. With glass walls installed surrounding the atrium, natural sunlight is introduced and can be utilized to reduce the in house artificial lighting consumption in daytime, which can be reflected in the energy bill.

### NATURAL VENTILATION

Right inside the open atrium, a footpath is introduced which links up the building and the park behind. This footpath encourages air circulation through the building. With the pyramidal open skylight topping at the top of the atrium, natural ventilation is enhanced to provide a comfort environment within the atrium where no stagnant effect would occur.

Furthermore, with openable windows outside office facing the internal atrium, cool air can be drawn into the office areas while warm air is allowed to rise naturally and escape through the roof openings. Internal mechanical cooling demand can be reduced in cooler months.



### BUILDING MATERIAL

During the construction period, application of recycling material was introduced to minimize the waste generation. Recyclable hoarding was applied which consisted of recycled polystyrene with cast in concrete into lightweight panel instead of traditional plywood hoarding. After the building structure completed and boundary fence was erected, the entire hoarding was removed and reused as internal permanent partitions inside the building.



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**AIR-CONDITIONING SYSTEM**

The indoor environment of the premises is provided and controlled by a centralised ventilation and air-conditioning system. Two air-cooled chillers using R134a refrigerant with acoustic treatment were installed. Although R134a refrigerant is already non-ozone depletion potential, an advanced refrigerant leakage detection system is introduced to further protect the nearby environment and people. Universal dye is injected into the refrigerant system which has no adverse effect to the chiller performance. Leakage can be pinpointed by ultraviolet lamp even in the daytime and the application can also used to assist in repairs and perform preventive maintenance.



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