



Prizes and Awards

Innovation Awards for Construction Industry 2001/02

The Prize Presentation Ceremony of the Innovation Awards for Construction Industry 2001/02, organised by the Hong Kong Institution of Engineers, was successfully held on Wednesday, 29 May 2002, at J W Marriott Hotel.

The Institution is honoured to have the Financial Secretary, Mr Antony Leung to deliver the keynote speech and the Chairman of the Provisional Construction Industry Co-ordination Board, Mr Henry Tang to present the prizes to the winners.

The Organising Committee was delighted for receiving such an overwhelming response with 52 multi-disciplinary submissions from the industry, the academia and the Government. The winners were selected through rigorous screening processes. Two finalists were selected for the Awards.

The winner of "Innovation Award" is "Underground Flood Alleviation Scheme". The "Underground Flood Alleviation Scheme" at Tai Hang Tung is the first large scale underground stormwater storage scheme in the urban areas of Hong Kong. It could solve the flooding problem in Mong Kok. It is environmentally acceptable and can be built safely with minimal public disruption. Its design has combined complex mathematical analysis with sophisticated physical hydraulic modeling.

The winner of "Special Merit Award" is "Modular Construction". It is a revolutionary and unique environmental-friendly new system of construction. Container sized, precast concrete modules are firstly manufactured and fitted out in factory-controlled conditions, including decorations, bathrooms and kitchens, before being delivered to site. It is cost effective and could enhance the quality of building.

The Organising Committee is most privileged to have the Hon Henry Tang to be the Honorary Adviser of the Awards and member of the Panel of Judges. Besides, we are honoured to have a very strong Panel of Judges consisting of leader of the community and learned institutes with a view to ensuring the highest quality of the awards.

This is a new initiative of the Institution to encourage innovation and technology in local industry. It aims to enhance the quality, safety and cost effectiveness and also foster a closer link and co-operation amongst the stakeholders. Nominations were open to all innovative products, systems, process, or services which could enhance the quality, effectiveness or otherwise contribute to environmental protection and safety.

List of Awardees

	Winning Project	Innovators	Owner
Innovation Award	Underground Flood Alleviation Scheme	<ul style="list-style-type: none"> ■ Drainage Services Department, The Government of the HKSAR ■ Binnie Black & Veatch Hong Kong Ltd ■ Ir Prof Joseph Lee, Redmond Chair of Civil Engineering, The University of Hong Kong 	Drainage Services Department, The Government of the HKSAR
Special Merit Award	Modular Construction	<ul style="list-style-type: none"> ■ Ir Ted Edward Lawton, Gammon Skanska Ltd ■ Mr Ken Cox, Gammon Skanska 	Gammon Skanska Ltd

Innovation Awards

Underground Flood Alleviation Scheme

The "Underground Flood Alleviation Scheme" at Tai Hang Tung is the first large scale underground stormwater storage scheme in the urban areas of Hong Kong. The Scheme forms an integral part of the government's overall drainage improvement strategy to solve the flooding problem in Mong Kok by 2004.

The Owner of the Scheme is Drainage Services Department who commissioned Binnie Black & Veatch Hong Kong Limited as the Engineer for the design and construction of the Scheme; and Professor Joseph H W Lee as the Hydraulic Advisor for the Scheme. It has been a joint effort between the construction industry, academia and the government in developing this unique and innovative urban flood control solution.

The team has developed the flood detention concept, and economically applied it on a large scale for the first time in Hong Kong. It is environmentally acceptable and can be built safely with minimal public disruption. Its design has combined complex mathematical analysis with sophisticated physical hydraulic modelling. The Scheme will be a useful reference for future flood control works not only in Hong Kong, but also worldwide.



Figure 1 Artist's Impression of the Underground Flood Alleviation Scheme
圖1 地下防洪計劃示意圖

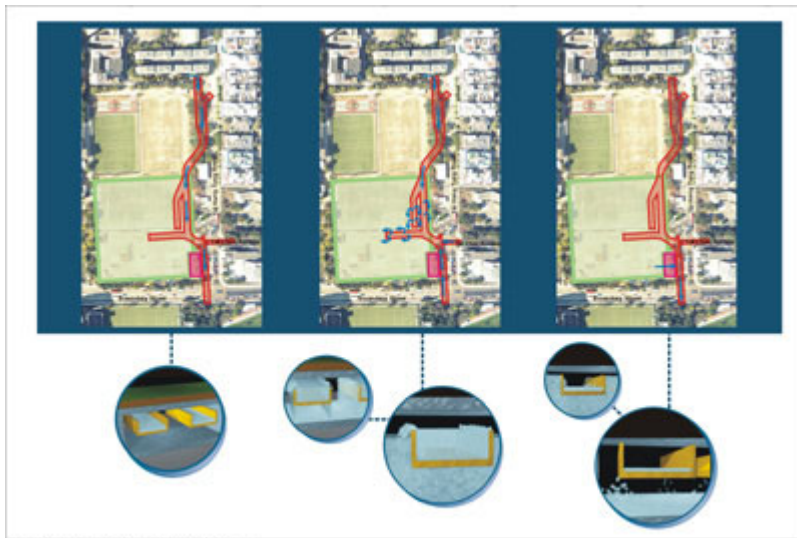


Figure 2 Schematic Operation of the Scheme
圖2 地下防洪計劃的操作流程



Figure 3 Triple Weir Arrangement
圖3 三重溢流堰系統排列

Special Merit Award Modular Construction - Staying Ahead with Innovation

Although the construction industry has made a great contribution to both the infrastructure and the economy of Hong Kong, the next generation of building technology will be vastly different to that prevailing today.

The modular construction system where construction takes place largely off-site in factory controlled conditions was developed by Gammon Skanska Limited over the last three years.

The technology has its origins in the offshore oil, shipbuilding and car industries. A typical 40-storey residential tower can be built in between 4½ to 9 months less than the current programme, but still achieving a very high level of quality.

This approach brings dramatic benefits not only to developers and residents, but also to the wider community and the environment. As well as residential developments, it is applicable to a wide range of other types of building such as hospitality, institutional and commercial developments.



Fig 1. Modular Construction



Fig 2. Stacked modules, complete with windows, tiles and air-conditioner reeves