

Development Projects in Hong Kong and Mainland China

Report by Ir. Thomas S K Lai

During his visit to the UK Chapter, President Ir. Dr. Andrew Chan of Hong Kong Institution of Engineers gave a presentation on 'Development Projects in Hong Kong and Mainland China' to a packed audience at a joint meeting with IStructE North Thames Branch and ICE London Region on 7th December 2009 at The Institution of Structural Engineers International Headquarters.

He first recalled the period of 'feast and famine', pre and post 1997. Stagnation was caused by the Asian financial crisis, high-tech bubble, SARS and financial tsunami. Subsequently, the Hong Kong Government announced the go-ahead for ten mega projects to provide new transport facilities (both local and cross-border), urban development, drainage, sewage and harbour area treatment. He gave a broad outline and challenges of these projects. He also touched on other public and private sector projects such as the International Commerce Centre, the Ocean Park and Disneyland expansions. Beyond 2016, when most of these projects will be completed, the Central Kowloon Route, Central Wanchai Bypass and Airport expansion will probably follow. His personal observation is that Hong Kong requires:

- A vision
- A long-term strategy
- Integration with Pearl River Delta
- EIA replaced by Sustainability Assessment
- Mega project co-ordination
- Continued upgrading for regional competitiveness
- Future prosperity and relevance to China.

He then moved on to Mainland China, where GDP growth continued at 8% despite the global economic downturn. China is investing RMB 4 trillion in infrastructures (high speed rails and metros), development in second line cities, energy efficiency, emission reduction and environment enhancement. He started off with iconic Olympic structures. He cautioned that designer's envisaged method of construction is not necessarily adopted in practice. He cited the construction of the Beijing Capitol Airport. The designer envisaged deployment of 90 tower cranes for roof erection. Instead, 35,000 welders were employed on site. A series of fascinating buildings all over China then followed. His company, Arup, has left in China a legacy of 'Liberated talents and contractors confident to export their expertise'. China is advanced in the field of sustainability and green environment. Good examples are the use of renewable energy, energy saving measures, such as 'Hybrid Ventilation Concept', good ventilation to the surroundings and adoption of 'Circle Economy' in material re-use in eco-cities. He observed that there would be continued demand for infrastructure and building development. There is very strong local expertise, ready to capture export opportunities.

In fielding questions, he forecasts a shift from land auction and profit transfer (to finance MTR projects) to PPP model in Hong Kong. There is a shortage of tunnellers and steel-fixers. Yes, bamboo scaffold is still in use but now requires calculations. A model of the whole Hong Kong is now available to assess the impact of air flow on the surroundings. In China language is a barrier in cross-cultural working. There is a stringent design code for earthquake; problem lies in construction deviation. Engineering projects are huge, such as the 16,000 km of high speed railway.

The presentation was both informative and inspiring. A senior engineer remarked, 'It is better than many I have attended'.