

# A Green Future – Made in China

## A CO-EVOLUTION Symposium on Urban Sustainability and International Collaboration

Venue: CUBE – 2nd February 2008-02-02

Organized by CUBE, the Danish Architecture Centre and UiD

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### **Simon Guy – Prof of Architecture, Manchester Architecture Research Centre, University of Manchester (Moderator)**

The event will focus upon answering three key questions.

- Will eco-friendly cities of the future be Made in China?
- What role will architects and planners play?
- How can Eastern and Western architects learn from each other?

Prof Guy outlined some key issues underlying these questions:

- How can China proceed with its ambitious project to improve living conditions for its population without exhausting the very resources needed to sustain a better future?
- What do we mean by sustainability? When you try to interrogate the term you realise that it means different things to different people – in policy, however, there is a push to try to define it further leading to an 'Instrumentalisation' of sustainability.

Professor Guy has identified six competing discourses for sustainability including Ecotechnic, Eco-aesthetic, Eco-cultural, Eco-medical and Eco-social.

Dongtan, the highlighted as the first so called 'eco-city' currently being developed on an island near Shanghai was highlighted and Prof. Guy mention that Arup presented on this to the British Govt and this has led to an impact upon the Governments approach to sustainability.

### **Henrik Valeur, Creative Director of UiD and Curator of CO-EVOLUTION (Speaker)**

Gordon Brown recently announced 50 million £ towards development of green technologies in China. This was highlighted as being of benefit to both China and UK, with UK businesses gaining from this. Also General Motors have recently announced that they are to set up alternative fuel research centre in Shanghai.

Dongtan – whole island is a new eco-friendly urban development for Shanghai. Bridge and tunnel currently under construction and many of the buildings are also on-site. Valeur ran through a copy of a presentation on Dongtan that had been delivered by Roger Wood (of Arup's) who unfortunately could not be at the event today. The island was cited as adopting a holistic approach to the development of a new city, with consideration having been given to issues such as agricultural production in the area

in order to feed the population. It is planned that the city be compact – with low rise & high density – 3 to 6 storeys/ 1.2 average plot ratio. 75 dwellings per hectares/80,000 people.

A pilot project for Dongtan is to be established shortly for 10,000 people however in 2050 it is anticipated that half a million people will live there, fed by the massive amount of rural Chinese currently moving to the cities. 20million Chinese people are currently moving to China's cities every year leading to resulting related environmental problems. Valeur talked about Ken Livingston speaking in, and being inspired by a visit to the Dongtan project and Shanghai and his announcement of plans to build 1,000 green homes in London. (See [www.Shanghaidaily.com](http://www.Shanghaidaily.com))

Henrik stated his admiration for Dongtan but did feel that such mass, excessive investment in one area and mass architecture did not assist in tackling some of the issues being faced in China at the moment, particularly its environmental problems.

Approx 50% of all construction taking place in the world at the moment is taking place in China. Water pollution is a large-scale problem with more than 75% of the water unsuitable for drinking, with it also being unsuitable, even, for irrigation of the land. As a result of these issues, the Co-evolution project asked four Danish architectural offices to collaborate with Chinese Universities, with some of these offices being represented at the event today.

Beijing was briefly highlighted as an example in support the issues highlighted. An area of contaminated land in the city became the focus of activity and led to 10 million cubic meters of the contaminated soil being transformed into 4 billion bricks and a park. This project boosted the local economy and cleared the area. The park produced, as a direct result of the project, 10million litres of re-cycled drinking water every day.

**Vanessa Miriam Carlow – principal Architect, COBE and CO-EVOLUTION partner (Speaker)**

Carlow highlighted that China could learn from the development of Manchester in terms of a move from a heavy industrialised environment to a more sophisticated city and service environment. The role that architects and urban planners do and will play in China does however need to be explored.

Carlow highlighted that she works for a Danish architectural practice called COBE and the organisations competencies include having designed 45,800,000 m<sup>2</sup> GFA for Chinese Cities which vastly outweighs the amount of space the company has designed in Denmark. Carlow cited a Chinese practice of land clearances and explained that often sites have already been cleared by the time the architectural practices are invited to work on the projects. Carlow explained however that where possible, architects should ask 'can we preserve some existing site characteristics and make consideration to aspects such as some of the trees or old buildings.

The 'Magic mountains' Project in Chongqing, China The average income in this area is approx 1/3rd of the Chinese average and plans for the area include the development of three new airports. No building is to be left in the area that was developed before the 1980's and public space will be developed for sports use and enjoyment. An ancient village did however sit on the site of the areas that COBE were designing for, with the area having been cleared prior to them starting.

The area is a very green and mountainous area and therefore the concept buildings designed by COBE are based on mountains and water. A physical and a virtual model of the area have been produced and are exhibited as part of the Co-evolution exhibition at CUBE. Carlow cited 'Architecture with a disclaimer'. The idea of the newly designed area is that you can reach everything you need within 5 minutes on foot. 1/3rd of the land is dedicated to a so-called 'green system' that will produce green energy and provide public space. 'Living clusters' have been identified with recommended massing and density levels highlighted.

**Dam building** The massive new dam, built in the neighbouring area but impacting directly upon Chongqing, was discussed and the related water rise. Slides were shown of ancient buildings that are now submerged under the water and it was noted that 16 cities, hundreds of towns and thousands of villages have been submerged as a result of the dam being built. 11% of the energy in China is to be produced by the dam with 1.2million people re-located as a result of the dam with the government having recently announced the re-location of up to an additional 1 million people. The cost of the dam is 25 billion US dollars to build and the project has been completed a year earlier than originally anticipated.

Carlow summarised that working in China has made COBE, and Danish politicians, think further about climate change. Investments towards tackling climate change could potentially be made in a 'better' way and for Denmark this may, for example, mean considering actions that can deal with and/or impact upon rising sea levels. Tree planting for example was identified as an action that could be further explored within urban environments. COBE has been working with the City of Rotterdam in the Netherlands as it has an ambition to become the world's first CO free city. The team working on the project calculated the energy consumption of an average Dutch person and considered what remedial actions would have to be taken to counter-act/balance this so as to result in a carbon neutral city. A 150meter high planting structure was identified as being required in order to achieve this with illustrations of the structure shown as part of the presentation. In addition, COBE have just started a new project to design a new business centre in a gateway city to Beijing

The presentation concluded that 'Will the eco-friendly cities of the future be built in China' is a political question that is dependent upon decisions made by the various relevant politicians.

### **Dr Sam Liang, University of Manchester (Speaker)**

#### Imagining China's New Housing – Exotic Architecture and Green Landscape

Dr Liang explained that he was born and raised in China and studied Architectural History in a Chinese University. He then worked in US on his PHD before joining the inter-disciplinary Chinese programme at Manchester University. Liang therefore views himself primary as an architectural historian and he still regularly visits China and lectures there.

Developments in China over the last 10-20 years have highlighted problems in architecture than can inform architectural decisions made in the future, and there are lessons that Eastern and western architects can learn from each other. During the 1980's western and global images of consumerist 'trendy' lifestyle poured into China and influenced lifestyles and landscape. There was a resulting re-discovery of the private home with residents being encouraged to buy their own homes, subsidised by their employers. Residential compounds were developed and marketed with sleek

designs built on city outskirts and re-developed from crumbling areas. Many of these residential 'closed' compounds were protected by private guards and were presented and marketed as providing a western style of living. Images used to sell such developments included Kingston Hill, Caribbean harbour's and Buckingham Palace with marketing promoting the idea of being away from the 'polluted urban environment'. The new residential architecture was ornamental and monumental. Many of these developments were built on former arable or forest lands and were lower density than those in the city centres with many semi-detached villas. The developments promoted car usage and targeted the wealthy and ex-patriots. One such development 'Beijing Dragon Villas' was not available to the Chinese and could only be purchased by foreigners. Such developments were also promoted as holiday homes. By the end of the 1990's, such spaces started to be marketed also to the new 'Chinese elite'.

'Country garden' developments started to spring up across China and Hong Kong and all promoted working in the cities but living in the suburbs as well as promoting a 'five-star' lifestyle similar to that of a five-star hotel. This clearly copied western models with an image of a monumental style club-house often being shown as part of the developments. This style was very influential by the mid to end of the 1990's and the global discourse on environment was included in the design and promotion of the compound however it was limited to the delivery of fancy gardens rather than through the use of green technologies. A photograph of Castle Hill Luxury Homes, Guangzhou illustrating detached two-storey homes next to a lake with the city clearly rising at the far end of the lake. Dr Liang highlighted that the process of developing such areas was very much about the visual image of the development - the images were and are rather banal which was what was generally desired at the time in terms of consumerism. Environmental concerns are included in the designs but in a superficial and banal way - Dr Liang termed this 'banal-isation'.

An example of a specific compound was shown and it was noted that this had been promoted as the first ecological centre however this development consumed rather than contributed in ecological terms. The oval design shape was selected as it symbolised ecology, but did not provide an energy efficient environment. Hi-rise towers also started to encompass the western styles and exotic areas and a slide was shown of a building developed in 1995 with a Pink facade (based on European/western design styles) and this was highly unusual in China at the time but a huge commercial success. 'Regal court' was another example highlighted which representing western architectural 'classical' style in residential compounds.

Dr Liang's reflections on the images shown – they are typical examples of how globalisation has impacted upon Chinese residential developments. Current construction efforts focus upon the visual images of lifestyle rather than looking at genuine use of technologies etc in construction. Dr Liang cited this as less than ideal with partisans being used rather than designers. Many architects from the west are taking commissions in China and are commissioned to provide original sketches and concepts which are then passed to Chinese architects to implement. There is therefore a rigid separation of western and Chinese architects and a need to focus more on the social and technological in Chinese architecture.

Residents of neighbourhoods should in future play a participatory role in developments. There is no grass-roots involvement currently in China.

Dr Liang summarised that it is a daunting task to deliver new development in China

that does not de-generate into a mere visual homogenous approach with little or no local tailoring or identity.

## Questions and Answers

Which most expensive in multi storeys in Chinese high-rise developments - top floors or lower floors?

- (Dr Liang) The third floor is the most expensive. Higher floors less expensive as have to climb further to get to them

*Attendee commented how she was surprised at the lack of vision and creativity on the part of planners and architects and asked why the modernist movement and influence in architecture illustrated by Spanish, French and UK developments is not featured in China and that developments are so 'banal'?*

- Dr Liang highlighted the influence of the media with examples of American TV and images of 'dynasty' being admired and reflected in the architecture.
- Valeur commented that modernist planning is at the heart of some of the mistakes that have been made in China. He also highlighted that it is important to note that Chinese developments are generally very different to those in the west in terms of density. Valeur also cited an example in Shanghai where he asked a colleague why is it so difficult to use bicycles there, and it was noted that the bus had been viewed as a preferable mode of transport to cycles as it was public rather than private.
- Another attendee cited examples in the UK that were banal and produced as a result of time and financial pressures and where architects copy the work of others. Copying of design was however noted as not necessarily being all bad as sometimes very successful designs should be replicated.
- Another attendee commented that architecture may sometimes be looked at as ugly by architects but actually may work in urban design terms. Equally some of the developments in Manchester may look very good, but may not work well in urban design terms.
- A different attendee flagged some Chinese residential developments including the delivery of public toilets but no toilet facilities within the individual residencies. Dr Liang commented that this was historically normal practice in China, although it may seem strange when judged by western standards.
- It was noted that the traditional Chinese city was low rise but very dense, and most life took place out in the street. These are being replaced by a very different urban structure with high rise residential and elevated highways.

*A comment was made from the audience about the incorporation of Chinese tradition in the development of Dongtan and suggested that this should be considered.*

- Dr Laing commented that in an equally banal way, developments have taken place that try to re-create historical Chinese traditions and cited examples in Beijing. The delivery of such developments are not purely just architecturally influenced, they are also influenced by policy and social change.
- Henrik commented that the work being undertaken within Co-Evolution is providing

an opportunity to deliver something that is new that is based upon neither Western/European design nor traditional Chinese design.

*Question re style and nature of sustainable urban design and architecture of the future, particularly when delivering whole areas and cities from scratch. Also a comment that such 'Grand urbanism' is only also being experienced in Dubai and Saudi Arabia.*

- Dr Liang commented that the Chinese government proclaimed in 2005 (approx) that sustainability was at the top of their agenda, and since then, new developments have cited their ecological merits (even those these only often exist on a superficial visual level).
- Valeur believes however that the Chinese Govt does have a genuine recognition and commitment to sustainability and it must therefore develop a genuine dialogue with its people, through education, and with the developers themselves, in order to deliver sustainable developments. Otherwise the government will fail to deliver more sustainable urban development in the future.
- East Berlin examples were cited by Carlow – projects delivered by western architects – 'open door policy' developments, seen as very positive.

*Question re use of public space. Historically public space in China was highly used, is this likely to change?*

- The Chinese people are very social and therefore public squares and spaces (even when semi-private) continue to be well used, particularly when compared to the use of public space in European towns and cities.