

NZCFS 2018 Urban Development Delegation to China

Overview report

Prepared for
New Zealand China Friendship Society

October 2018



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consulting engineers and scientists

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By
Anguillid Consulting Engineers and
Scientists Ltd

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Introduction

Background

The New Zealand China Friendship Society was founded in 1952 to foster opportunities for New Zealanders to learn about the 'new' China that emerged after the Cold War. Accordingly, the aims of the Society are to:

- **Promote:**
 - friendship, understanding and goodwill between the peoples of China and New Zealand by encouraging visits and exchanges of ideas, information, culture and trade between the two countries;
 - the study of the Chinese language by New Zealanders and advanced English studies in this country by Chinese.
- **Foster:**
 - interest in and promote the study of China, its history, culture, political and social structures — past and present;
 - on-going development of all sister-city links between New Zealand and China.
- **Support** specific aid projects in China.
- **Assist** both visiting students and new migrants from China requiring help to fit in to New Zealand society.

The New Zealand China Friendship Society facilitates 'tours' between the two countries to further the aims of the Society. In so doing, the tours provide an opportunity for next generation of young New Zealand leaders and mid-career professionals in key sectors to connect with China. In 2018 the focus was upon Urban Development.

Tour overview

This year's delegates (see Photo 1) were:

- Vijay Patel, Senior Associate- Structural Engineering, Beca Ltd;
- Jennifer Chivers, Senior Planner, Auckland Council;
- Cassandra Kenworthy, Transportation Engineer, Aurecon;
- Caleb Tien, Planner, Queenstown Lakes District Council;

- Greer Rasmussen, community advocate;
- Vanessa Coxhead, Architectural Graduate, Jasmox.

The delegation was led by Jenny Chu of City Rail Link Ltd. Dr Carron Blom of Anguillid Consulting was a last minute replacement for the group's senior member and industry mentor.

The objectives of this year's Urban Development Delegation to China were as follows:

- Build relationships.
- Exchange knowledge on Urban Development.
- Increase delegates awareness of Chinese culture.
- Commemorate the legacy of Sino-New Zealand relations.

These objectives were to be achieved through gaining first-hand experience of best practices and the lessons learnt from China in urban planning and value-capture development. Particular attention was given to the role of human-centered design approaches to placemaking, heritage protection considerations, and the creation of diverse and inclusive communities. The tour also provided an opportunity for the sharing of knowledge and innovation, together with the challenges and successes being experienced in each of the visited and home cities.

The tour entailed:

- a) Site visits to significant heritage sites of cultural importance/modern landmarks — and exploration of urban planning along the timeline of the development history of those places.
- b) Briefings and exchanges on the urban planning system in China with local authorities, institutes and organisations involved in urban development, plus case study examples of the key changes in urban planning and development practices in China in recent years.
- c) Goodwill exchanges with sister city representatives.
- d) Cultural activities to better understand the Chinese culture and environment.

A summary of the itinerary is provided by Figure 1, overleaf.



Photo 1: NZCFS 2018 Urban Development Delegation to China. *Left to right: Dr C Blom, V Patel, G Rasmussen, V Coxhead, J Chivers, J Chu, C Kenworthy, C Tien.*

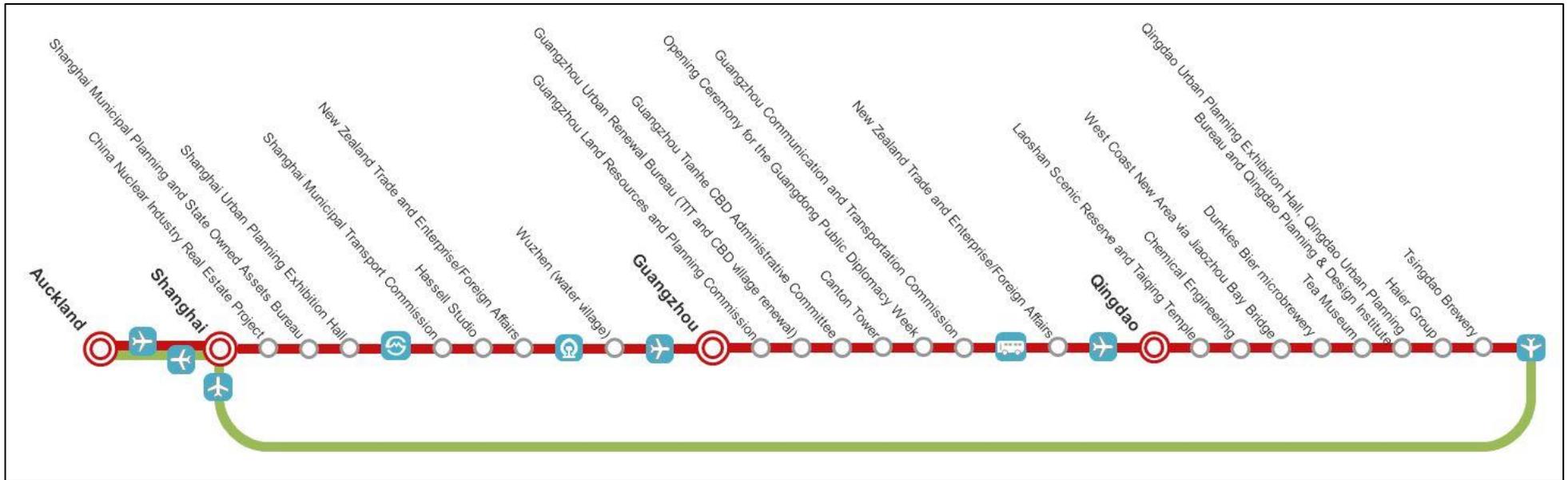


Figure 1: Summary of itinerary

This document

This document provides a brief overview of the abovementioned tour. As such it does not attempt to detail the information provided as part of the tour, or to minute the exchanges therein. Rather, this document provides a summary of the tour highlights, insights into the experience, and preliminary thoughts on possible opportunities stemming from these. Highlights from each of the cities are addressed in turn before providing a brief synthesis of the tour as a whole. It is noted that as the tour included broader cultural components, some of the insights and highlights are consequently personal to our delegate.

Shanghai

Highlights and insights:

- Active intervention and planning is required to provide for, and manage, population pressure in Shanghai. The population is currently around 24 million, and is to be capped at 25 million (to 2035).
- The core of Shanghai is to be supported by orbital cities/hubs and the infrastructure is being developed to support this strategy with a focus on efficiency. Accordingly, local transportation is focused around mass transit with a hierarchy of high speed rail to metro to bus, and sits within the overarching Yangtze River Delta and national One Belt, One Road strategies.
- The city and its surrounding areas are being actively re-oriented away from manufacturing, towards higher productivity/return ventures (i.e. a centre of innovation and 'excellent global city').
- There are acknowledged challenges with the co-ordination between the agencies responsible for the delivery of outcomes, and also with the growing and ageing population (as there are here).

However, there is an urgency and clarity of purpose in the pace and scale of development:

- This has seen the development of some 100 public transport hubs, 385km of bus lanes, 666km of the planned 1,000km of metro lines, but is also to see a doubling of green space in the region. Attention is given to public transport uptake and first & last-leg journeys.
- This urgency is also reflected in the pace and scale of urban development and change. For example the mixed use, 'nuclear themed' development we visited was some 13km² (compared with Guangzhou's 20km² redevelopment of the financial district) and to be completed within the next couple of years. The use of precast construction is being encouraged to support the pace of development.
- Land banking is discouraged through the conditions attached to the 70 year property leases.

Surprises:

- *The public are actively engaged in the process and the use of exhibition halls play a key role in this. Displays are informative, educational and interactive.*
- *The approach to land ownership differs from New Zealand, with implications for how development is facilitated/advanced.*
- *The Lost and Found Museum is an art exhibition found whilst walking through downtown Shanghai by myself — tucked away in a quiet inner city spot. The displays were not in English, so this was initially enjoyed as an art installation in its own right. Educational packs were freely available so later, once translated, this was able to be more fully understood and the broader message and intent appreciated; which was around the impact and issues associated with drink driving. This was brilliantly executed and a great surprise.*



Photos 2-5: Lost and Found Museum, Shanghai. Photo 5 captures what is lost (gold items) at the moment of impact (shadows/metallic skid marks), subsequent depression (photo 4), and the educational tool kit (photo 3); **Photo 6:** Shanghai science and technology (nuclear theme) park development under construction; **Photo 7:** Transportation display, Shanghai Urban Planning Exhibition Hall; **Photo 8:** High Speed Rail (Shanghai to Wuzhen).

Guangzhou

Highlights and insights:

- Guangzhou appears to have adopted a similar proactive approach to Shanghai for its master planning, which includes the focus on increased productivity, differentiating the 'value add' of the core regional cities and supporting these through orbital hubs. Once again the plans sit within the context of wider regional (Greater Bay) and national strategies.
- Again, the focus is upon efficiency which sees the 'leapfrogging' of interventions. For example, WeChat money and payment using QR codes has superseded the need for EftPos. Inner city low rise 'villages' are being redeveloped as modern high density, high-rise apartments (with different income provisions for villagers). Similarly cycling, including the uptake of electric bikes, is discouraged in favour of mass transit. Essentially the sheer scale and volume of transactions/movements necessitates a different approach from what we might be used to in New Zealand. Whilst the drivers might be different, the approaches adopted in China nonetheless might offer New Zealand a 'disruptive opportunity' (i.e. rather than incremental change) in some instances.
- Like Auckland, Guangzhou's BRT has delivered benefits to the function of the city's transportation system. Long wheel base buses are favoured over double-deckers due to loading efficiency and issues with retrofitting routes (height requirements) within existing infrastructure. The buses were clean and tidy, but clearly well used with plain plastic seating. Wear and tear due to patronage volumes are clearly a consideration and signal the need for us here in New Zealand to regularly review specifications – as plush seating and a conventional design life (for example) may prove impractical and irrelevant in the face of patronage and efficiency requirements in the future.

Surprises:

- *Development in Guangzhou includes extensive underground areas which include shopping, parking, and public transport. The extent is such that there is an Underground Master Plan. This is something to earmark for the future.*
- *The Textile Industries and Trade (TIT) Centre, is a refurbished industrial park. The low level development is at face value at odds with the wider city strategy, but shows the value added collectively by creative industries / spaces can keep pace with high density / conventional initiatives.*
- *As a thank you to our hosts, our delegation made a whaikorero and sang a waiata at the opening ceremony of the Guangdong Diplomacy week. This was positively received by our hosts and other delegates, which surprisingly snowballed into songs from Nepal, India, and Tonga.*



Photos 9-12: Textile Industries and Trade (TIT) Centre, Guangzhou — refurbished industrial park integrating a fashion design school (Photo 10), repurposed industrial hardware (Photo 11), plus restored buildings and murals (Photo 12). Includes offices for tech organisations such as WeChat/Tencent (Photo 9) and Kiwi Game (photo 12); **Photos 13-14:** Displays at the Guangzhou Urban Planning Exhibition Centre; **Photo 15:** A 'slow transportation' option; **Photo 16:** Bus Rapid Transit system, Guangzhou.

Qingdao

Highlights and insights:

- The Qingdao approach to urban planning was consistent with that articulated in Shanghai and Guangzhou and provided triangulation in this regard. It is clear that there is a very strong national strategy, and implicit that there is a longer term plan underpinning the current 'long term' master plans.
- We also heard that the framework is regularly adjusted; interventions are made, society reacts so new patterns and behaviours emerge, which are then reviewed and the plans adjusted to realign with the overarching objectives and outcomes being sought (i.e. utilising 'adaptive backcasting'). As such, each of the cities, and China as a whole, appears to be advancing as a 'complex adaptive system'. Accordingly, the plans and their interventions clearly depart from the convention of 'predict and provide' thrust of infrastructure and urban development more generally.
- In tension with the level of development, but also complementary to it, is Qingdao's 'Blue Sky Dream' (also flagged in Guangzhou). This is a vision to return local skies to blue once more. The unified strategy of moving away from manufacturing and towards technology and value-add service sectors, aligns with both this, and the goal of improved productivity. We noted this vision was even captured in the advertising of electric vehicles.
- Rather than having to scale up for complex projects/specialist construction requirements, Qingdao (as with the other cities we visited) appear to be capturing plant and equipment, technology, and industry skills and utilising these to their fullest extent, which enables the ongoing rapid deployment and delivery of projects.

Surprises:

- *The scale and pace of the Jiaozhou Bay Bridge construction (Photo 17) is impressive. It would be interesting to know how the structures will affect/ have affected harbour use, circulation, and ecosystem diversity (i.e. whether the piles act as artificial reefs).*



- *Haier's Systems Thinking approach was good to see. Anquillid promulgated the concept of 'collaborative volunteers' so it was gratifying to see similarities and synergies with a much larger organisation (and that this approach had clearly been successfully in place for some time).*
- *Buildings are designed not just for daylight, but also to create a sense of place at night (via seasonal/evolving light shows).*



Photos 18-19 and 21: Taiqing Temple, Laoshan Scenic Reserve; Photos 20 and 22: West Coast New Area, Qingdao. Passive Building (Photo 22); Photo 23: Haier Group; Photo 24: Qingdao Urban Planning Exhibition Hall; Photos 25-28: Qingdao Tea Museum archives (Photos 25-26) and tasting (Photos 27-28).

Synthesis

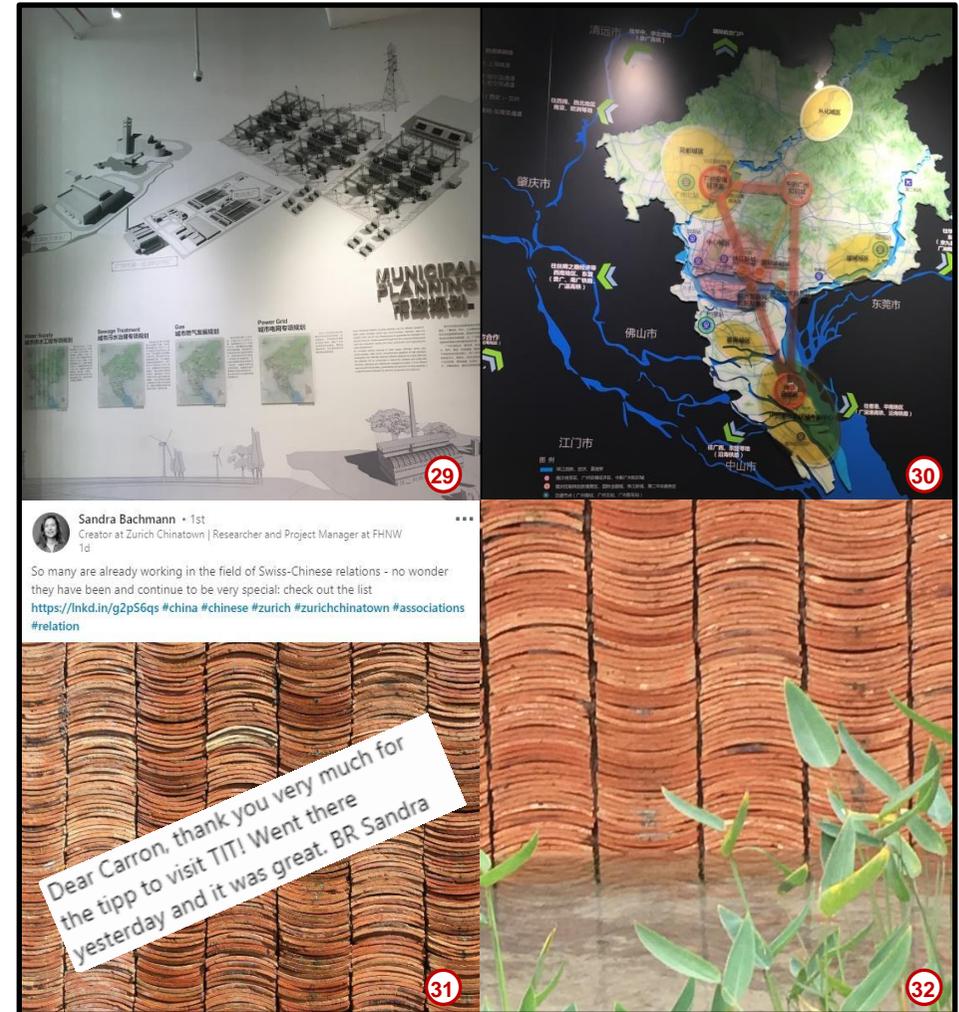
Reflections

Whilst the scale and pace of urban development was not surprising, it is nonetheless impressive. What was surprising was the extent system thinking and coordination at the national and strategic level underpinned what was seen within the plans and on the ground. There is clearly a long term strategy which extends beyond the 30 year horizon seen here in New Zealand, and that rather than atrophying, strategies appear to make use of adaptive backcasting so acknowledge the needs of a complex adaptive system at its core. Many of the issues those strategies seek to address are shared with New Zealand even if the detail and the drivers differ. This provides salient lessons in the need for disruption and how both strategies and solutions can be rendered redundant in the face of growth demands and technological advancement.

Actions

We are pleased to say that the trip has already had an impact before we had even left Guangzhou. Discussions at the opening ceremony of the Guangdong Diplomacy week resulted in a visit to TIT from a Swiss delegate interested in high end products coming out of China.

Other actions and opportunities we have identified include socialising experiences and learnings with our networks (e.g. WeChat money, Guangzhou BRT) and research opportunities stemming from the use of systems thinking in public infrastructure strategy and management.



Photos 29 and 30: Urban Planning Exhibition Hall (Guangzhou) featuring displays showing planning at the local level (Photo 29) and within the wider Guangdong region (Photo 30). **Photo 31:** LinkedIn post from Switzerland using a feature from TIT and a (separate) message acknowledging our recommendation. **Photo 32:** Feature wall at TIT using repurposed tiles.