



## GROUPINGS OF REGIONAL CITIES IN THE BUILT ENVIRONMENT SECTOR

**Category 1** – A large market with clear aims and objectives

**Category 2** – A large market with growing aims and objectives

### Category 1

Changchun	Hangzhou	Shenyang	Tianjin
Chengdu	Hefei	Suzhou	Wuhan
Dongguan	Nanjing	Tangshan	Wuxi

### Category 2

Baotou	Harbin	Quanzhou	Xiamen
Changsha	Jinan	Shaoxing	Xi'an
Changzhou	Nantong	Shijiazhuang	Yantai
Dalian	Ningbo	Weifang	Zhengzhou
Dongying	Ordos	Weihai	Zibo
Foshan	Qingdao	Wenzhou	

## THE BUILT ENVIRONMENT

Growth across China is most noticeably demonstrated by the huge amount of construction cranes, that even the casual visitor cannot help but notice. This building work is largely to accommodate the huge amount of people who have moved, and continue to move, from the countryside to the cities.

China's urbanisation has constituted the world's largest-ever human migration. Over 200 million people have moved to the country's cities in the last 10 years, swelling the total number of urban residents to 666 million. This trend is set to continue, with some projections suggesting a further 300 million will urbanise by 2035.

China's built environment will need to continue its breakneck speed of development to continue to accommodate this influx of new urban citizens. In addition, an increasingly affluent class of citizens will demand increasingly complex solutions for the built environment that surrounds them. This is going to continue to offer a wide range of opportunities for UK companies.

UK firms have won built environment-related business across China, and have been well served by looking outside of the traditional cities. UK companies have been involved in some of China's most famous modern buildings as well as large numbers of lower profile projects across China.

## BUILDING FOR AN URBAN BILLION

The influx of people into China's cities has pushed up the demand for housing. Private property has become more common, while property has also become a common investment vehicle. This, combined with rising wealth in regional cities, has led to a sustained surge in the residential building market and a rapid increase in prices. Growing wealth has also led to increasing levels of consumerism, while urbanisation has boosted the absolute market size in cities, leading to a boom in commercial and mixed-use building.

However, increasing prices have caused concerns of a bubble, and the government

has taken measures to try and cool the market. Price increases, and the cooling efforts, have been more marked in the major cities, but growth in regional cities seems to be following a similar course.

Another problem is that rising prices have stretched poorer parts of society. The government has been addressing this by emphasising the need to build 'affordable housing'. Hefei has announced that 10 million sqm of low-income housing will be built over the next five years, while 462,000 apartments will be launched as 'low-income housing' in Shijiazhuang.

### FIVE YEAR PLANS

Many cities have announced plans to spend heavily on infrastructure over the next five years. Nanjing will invest RMB 390 billion in infrastructure rebuilding and river regulation, Baotou will invest RMB 12 billion in infrastructure projects and Zibo will invest RMB 8.2 billion. Jinan intends to build 16 urban complexes covering 40sqkm of land and Tianjin plans to develop a new coastal area. In Changchun, RMB 5 billion will be invested in building a bonded zone and RMB 30 billion will be spent on building a central business district.

## BOTH QUALITY AND QUANTITY

Quantity is vital, and cheap building will undoubtedly continue. However, as wealth and experience have increased there is a growing drive for quality building across many regional cities, and this is now being incorporated into planning.

Ordos has announced that it will spend RMB 15 billion by 2015 to help it become the most

'liveable city' in its region –attracting foreign brands like Shangri-La and Starbucks is part of this strategy. Similarly, Shenyang has declared its aim to be an 'old-age friendly' city, and will provide more public facilities for older people.

The preservation and incorporation of cultural and architectural heritage is a part of this,

and is increasing in importance. For example, Nantong has pledged to 'protectively develop old urban areas and protect historic relics', while Changchun has earmarked RMB 2 billion for the latter .

## LOW CARBON DEVELOPMENT AND ECO-CITIES

Part of this quality drive will include devising and executing green building projects and an increasing focus on eco-friendly development. Mass urbanisation and industrialisation have had a large impact on the environment in China. There are, however, an increasing number of building solutions which can lessen the

ecological impact of the built environment. These range from green standards, to processes, materials, building management systems, technologies and techniques. Many of these are areas where the UK is strong. This is recognised in China, and there is an eagerness to work with UK expertise in this field.

## GREEN SPACES

This environment is central to much government planning in China, forming an important part of the next Five-Year Plan, both at central and local levels.

Many regional cities aim to be Eco- or Forest- Cities. Part of this drive includes targets to increase forest coverage across their administrative regions by 2015. They

have also set ambitious targets for green spaces within cities.

Some of these green spaces will be dedicated green communal areas. For example, Changsha aims to build over 100 community public gardens, Yangzhou plans to build 30 parks and Xi'an will construct more than 20 parks in the next five years.

Some of these targets will be met by green spaces being incorporated into general projects. Designers will increasingly need to factor this into plans when bidding for projects. Decisions taken by local officials may be influenced by how the final development will affect their targets.

## GREEN BUILDINGS

New buildings will increasingly look to incorporate the latest technology and techniques in order to lessen their environmental impact.

There have been lots of announcements at both national and local levels that new building will become increasingly green. However, the methods and standards that will be used are not always clear.

### GREEN BUILDING IN DONGGUAN

Dongguan has made a range of announcements on its green building plans. The city aims to build 0.5 million sqm of green buildings, convert 2.5 million sqm of existing buildings to green buildings and make energy- conservation standards for buildings compulsory. As well as the construction phase, green building also needs to be factored into ongoing management and maintenance. As a result, Dongguan intends for 100 government buildings to use monitoring systems to ensure efficiency.

## ENERGY

It's not just buildings that need to be developed for China to continue its growth. Many cities are struggling with power shortages, and will look to increase their energy capacity in coming years. Jiangmen has already announced that more than RMB 11 billion will be invested in power grid construction.

## WATER CONSERVATION

Water shortages are becoming a particular problem in the drier north. The Chinese government is working on a range of water conservation projects, including the 'South-North Water Diversion Project', which will affect a large number of regional cities. Part of the Middle section links central China to Beijing. The Eastern section is largely an upgrade to the Grand Canal, and is set to flow up to Tianjin, with another strand going into Shandong.



## WATER SUPPLY AND WASTE TREATMENT

There are business opportunities for UK companies with the ability to work on projects to improve water supply, wastewater and sewage systems, and refuse disposal.

Access to tap water will increase across China. Xi'an, Wenzhou and Nanchang have all announced plans to build new waterworks plants.

Wastewater and sewage treatment will also be improved. New water-treatment plants are planned for Tianjin, Zibo, Changzhou and Xi'an, while Xiamen, Zhuhai, Wuhan,

Kunming and Guiyang will extend plants and capacity. Wenzhou has announced plans to invest RMB 5 billion to expand sewage treatment, while Wuhan, Dongying, Foshan and Wuxi also have plans for expansion.

Cities also need better refuse disposal systems for both household and industrial garbage. Xiamen has announced plans for building plants for the treatment of household refuse as well as an incineration plant. Wenzhou intends to invest RMB 2.3 billion by 2015 in rubbish treatment.

## Transport and Logistics

The increasing size of China's urban centres, and growing economic activity, brings the need to expand transportation capacity within all the regional cities. Many regional cities act as transportation hubs, either on a local or provincial level, more widely covering swathes of the country, or as trade hubs linking to the outside world.

Roads	Most local governments have impressive road-building plans. Within cities, existing road networks will be upgraded and new roads will be built to cope with increasing populations and booming private car ownership. Public transport will also be improved. Roads are also increasingly linking city clusters. There will be a large programme of road building to expand reach to other neighbouring cities.
Rail	The rail network, including massive high-speed rail programmes, is increasingly linking cities, and clusters of cities, across China. Within cities, Metro lines will be developed to help ease the pressure on the roads, and help lower pollution levels.
Ports	Most of China's ports aim to increase capacity.
Airports	Links between city clusters will be increasingly bolstered by air travel. New airports will be opened, including an international-standard second airport in Qingdao
Tunnels	Changsha intends to build five tunnels to cross its river. Qingdao intends to build a second tunnel under the sea.

## TOURISM

Another growing opportunity will be in tourism. Certain regional cities are already internationally famous as tourist destinations such as Xi'an, home of the Terracotta Warriors. Domestic tourism remains a huge business, and cities across China are looking to promote themselves as tourist destinations, and require high standard facilities to attract higher value visitors.

Harbin plans to generate 15 per cent of its GDP (RMB 96 billion) through tourism by 2015. It hopes to become an international tourist city, and the government plans to invest RMB 18 billion in related projects. Cities such as Ordos want to attract international hotels to promote their image as tourist centres.



## METRO AND PASSENGER RAIL PROJECTS

Changsha intends to open 2 lines in 2013 and 2014, with 3 more lines to follow, with a total length of 140.3 km. Chengdu will add five more lines. Nanjing is investing RMB 100 billion in building two metro lines. Shenyang will extend its existing lines, and build three more. Suzhou will finish two lines, and commence building three more. Tianjin have five lines under construction.

Wenzhou intends to spend RMB 62 billion on 77.6 kilometers of passenger traffic rail. Over the next five years building will begin and RMB 10 billion is to be invested. Wuhan will build 140 kilometers of rail in the main city area to link the different parts of the city. Three passenger lines will be built in Xiamen, totalling 85 kilometers. Urumqi will build a new passenger rail line, and Nanchang will build two lines of 29km and 23km.