

Embrace the Future with the Past:

“Canal Heritage” and the Role It Plays in the Development of Its Host City in China

Introduction and Aims

Taking advantage of the opportunity to work with the on-going World Heritage listing application for the Beijing-Hangzhou Grand Canal, this paper outlines a project which explores the issues of “canal heritage” conservation in the built environment of China and how heritage can aid realizing urban revitalization in the chosen area. Specifically, this paper presents a brief introduction to the urban development and heritage conservation situation in China, background information on the Beijing-Hangzhou Grand Canal and Zhenjiang – the sample city in this research, a discussion on “canal heritage” in Zhenjiang, an examination on the influence “canal heritage” has had upon the urban environment of Zhenjiang, and a tentative investigation into conserving “canal heritage” while revitalizing its host city.

Urban Development and Heritage Conservation in China

Heritage is found both in rural and urban areas. However, it is in urban areas that revitalization planning and heritage conservation are mainly studied and applied. These studies and applications usually address solutions to mainly urban problems disregarding rural ones. Moreover, because of the relatively faster development speed, compared to rural areas the urban environment is under constant pressure to accommodate alternative functions and uses. The conflicts between development and conservation in the urban environment are accordingly more consistently evident. Thus, even though both urban and rural environments are multilayered accretions that reflect processes of change occurring over time, the main focuses in this paper are urban development and heritage conservation in the urban environment (Alanen and Melnick 2000).

Urbanization is the process by which more and more people leave the countryside to live in cities (Cambridge Advanced Learners Dictionary). The regular pattern of urbanization worldwide indicates that urban development will accelerate when the urbanization level reaches 30% while the country or region's GDP per capita reaches US\$1,000 (Lu 2007). According to Leeming (1993), in 1949 China's level of urbanization was low, calculated at 10.6%. After the reform and opening up in 1978, there have been major developments in the cities. Based on the statistics in the Blue Book of City Competitiveness (2009), China's urbanization rate was 36.9% in 2000. By the end of 2005, it reached 43% (Lu 2007). It will be above 50% in 2030 (Chinese Academy of Social Sciences 2009). The GDP per capita of China stood at over US\$4,000 in 2010 (Zhu 2011). Empirically and statistically, Chinese cities are under rapid development. This development results in spectacular urban images but at the same time has brought enormous pressure on heritage in urban areas.

Since the establishment of the People's Republic of China in 1949, historic preservation has been national policy. In 1961, the first list of 180 key national historic sites was published by the State Council. Later on, an important policy shift from protecting individual buildings and sites towards a more comprehensive approach was the designation of "Historic Cities or Towns" in 1982. Since then, 113 settlements around the

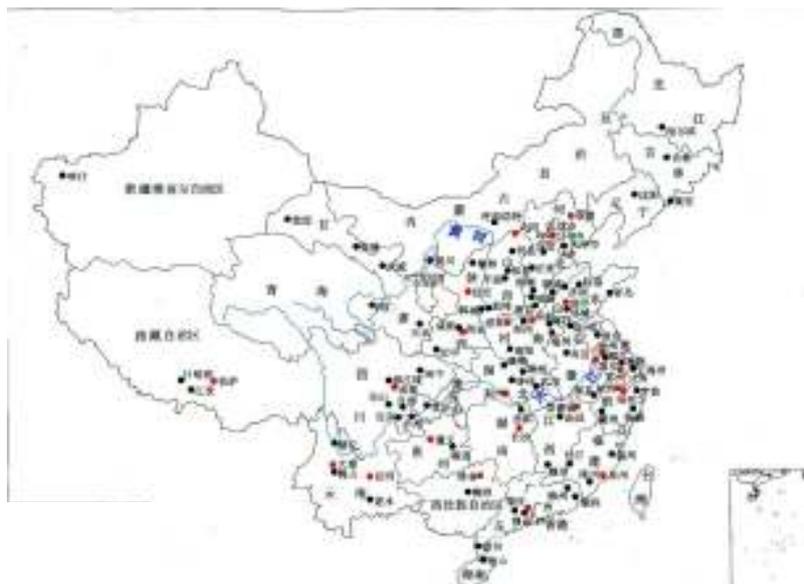


Fig.01 map of "Historic Cities or Towns", 1998

Luo, Yameng et al. eds. 1998. *A Dictionary of Famous Cities in Chinese History and Culture*. Beijing: People Daily Press.

country have been designated as historic cities or towns by the central government (Wang 2000). In the last two decades of the 20th century, heritage conservation was carried on. But with vast urban economic growth taking places, it had not been a major focus. Not until the end of the 20th century, has the value of "tradition" really come into urban administrators' perspectives. However, these perspectives are unavoidably accompanied by concerns over citizens' daily living needs, modern urban planning trends, fueling economic development, political achievements and other complex factors (Song 2011). Therefore, it is possible to conclude that within China a whole practical heritage conservation system has not yet been set up.



Fig.02 location of the Grand Canal

<http://cominganarchy.com/2007/07/25/perhaps-theres-hope-for-china-after-all/>

At the same time, since there are so many differences lying between the Eastern and Western world in the concept of heritage, "including accepted meanings, values, and preservation priorities"; and for a long time Western standards have been dominating in heritage conservation field, some heritage in China in many cases is having a hard time even being recognized or understood by international heritage conservation organizations and research institutions (Alanen and Melnick 2000). This leads to the fact that it is almost impossible for China to adopt the widely accepted Western theories or methods in heritage conservation.

Heritage in China's urban areas is facing crisis caused by both rapid urban development and inadequate



Fig.03 location of Zhenjiang

Image by author based on

http://www.moc.gov.cn/2006/06shuiyuns/2001-2005CJ/jhyh_map.htm

conservation approaches. Moreover, the practical and theoretical gaps between urban planning and heritage conservation are calling for integration. As a response to these two challenges, this project examines the potential for “canal heritage” to contribute to, and integrate both heritage conservation and urban revitalization in a medium-sized city in China.

The Grand Canal and Zhenjiang

The Beijing-Hangzhou Grand Canal has a history of 2,400 years and a length of 1,800 km. Along the canal there are more than 20 prosperous cities. Together they have formed a canal city network with connected watercourses and thriving commercial culture in history. Construction started in the Sui Dynasty (AD 581-618), and the canal was the arterial transport system and the foundation for the following dynasties' flourish. Today, there are rich resources of both

cultural and intangible cultural heritage left along the canal (Kaldun 2008). China State Administration of Cultural Heritage has listed the Grand Canal itself, constructions and cities along the canal in the tentative list of World Heritage on 28th March 2008 (UNESCO 2008).

Zhenjiang (Jiangsu Province) is one of the cities along the Beijing-Hangzhou Grand Canal. Situated in eastern China the city is at the junction of the Grand Canal and the Yangtze River, hence it has served as one of the most important ports connecting the south and the north of China from the Three Kingdoms (AD 220-280) till the Qing Dynasty (AD 1644-1911). Railway links between Zhenjiang and Shanghai were developed in 1908 and this led to the introduction of modern industries (Zhenjiang Annual Compilation Committee 1984). In two time periods - from July 1928 to December 1937 (invasion of the Japanese) and from August 1945 (end of the Anti-Japanese War) to 23rd April 1949 (take-over by the new government) - Zhenjiang was the capital city of Jiangsu Province (now Nanjing is) (The Zhenjiang Institute for Historical and Cultural Cities Research 2010). After 1949, Zhenjiang has been developing fast in industries



Fig.04 map of Zhenjiang

of transportation, manufacture, commerce and tourism. Now Zhenjiang is a city with an area of 3,847 km² (Prefecture-level city; 1,082 km², Urban) and a population of 2,687,700 (Prefecture-level city; 749,000, Urban. 2008). In 2009 the GDP was ¥167.2 billion and GDP per capita was ¥54,732 (£1= ¥10.4122) (statistics from <http://www.zhenjiang.gov.cn/>).

“Canal Heritage” in Zhenjiang

Having an overall length of nearly 60km, the Beijing-Hangzhou Grand Canal Zhenjiang Section is one of the oldest sections of the whole canal. The construction of this section began in the Spring and Autumn Period (770-476 BC). The watercourse continued to be widened and deepened in the Sui Dynasty (AD 581-618). After more than 2000 years' change, now the canal has three estuaries to the Yangzi River in Zhenjiang (see fig.02). From west to east they are Jingkou Zha (“Zha”=sluice gate), Dantu Zha and Jianbi Zha. Jianbi Zha is currently the main estuary of the Jiang Nan Canal (the part of the Grand Canal in the south of the Yangzi River). The watercourse from Jianbi Zha in Zhenjiang is navigable, with a length of 42.74km. The watercourse in the north of Jianbi Zha ending at Jingkou Zha is the ancient canal

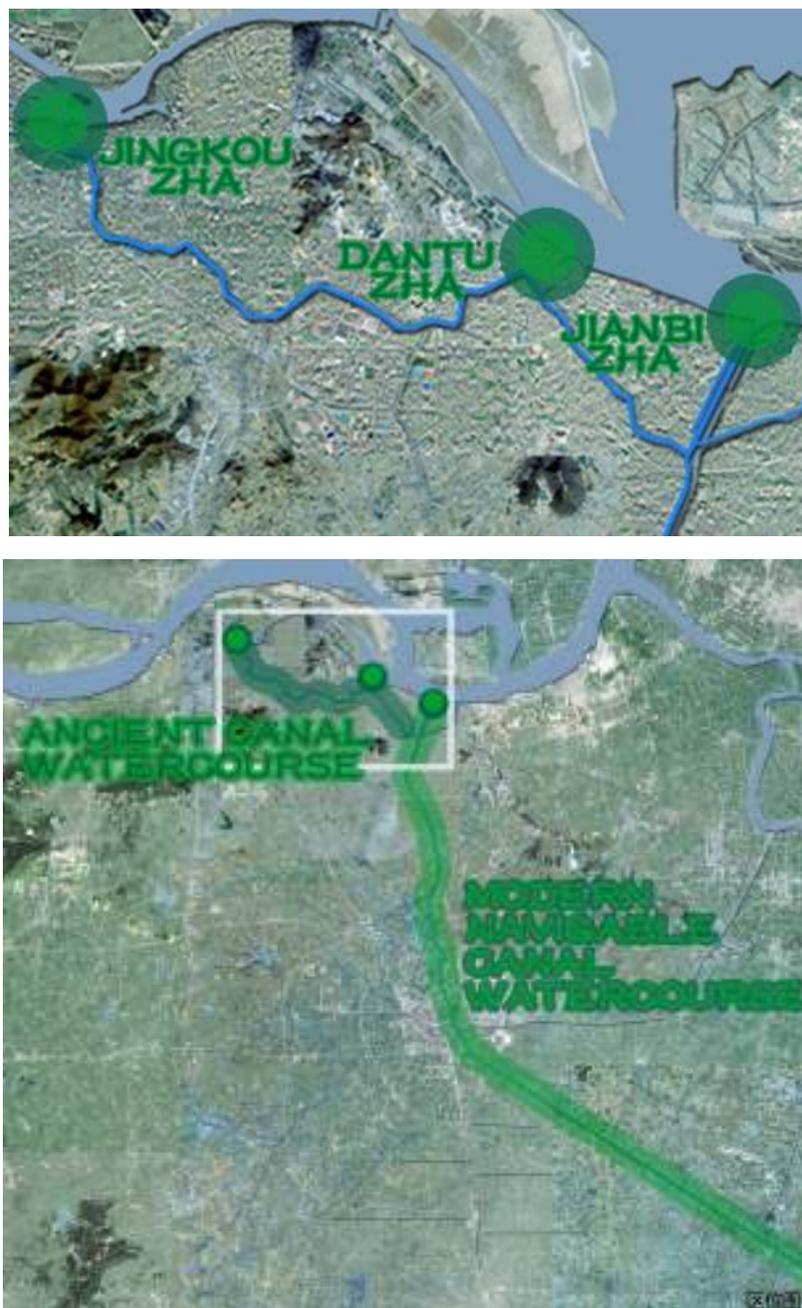


Fig.05 estuaries and watercourses

Image by author based on Architecture Design and Research Institute of Southeast University, and Zhenjiang Administration of Cultural Heritage (2009) Conservation Plan for the Grand Canal, Zhenjiang, China

watercourse. It is now without navigation function, with a whole length of 16.69km and 5.17km of it passing through the historic downtown area of Zhenjiang (Architecture Design and Research Institute of Southeast University and Zhenjiang Administration of Cultural Heritage 2009). The areas along this ancient canal watercourse are the major research areas.

“Canal heritage” here is a comprehensive concept not only referring to watercourses of the canal. Hydraulic structures, shipping facilities, administration and service organizations and institutions, documents and archives of the canal are all parts of it. Other important parts of canal heritage include building blocks, streets and communities that have formed because of or interacted with the canal. Intangible cultural heritage, the bioecological environment and the landscape related with the canal, and other cultural heritage in the city which is not necessarily adjacent to the canal itself but has witnessed the changes in the city caused by the canal, are all important components of canal heritage as well (Architecture Design and Research Institute of Southeast University and Zhenjiang Administration of Cultural Heritage 2009).

For instance, on 21st December 2009, during a transformation project (Shuang Jing Road Block Project) in Zhenjiang, relics dated from the Song Dynasty (AD 960-1279), the Yuan Dynasty (AD 1279-1368) and the Qing Dynasty (AD 1644-1911) were uncovered. They included remains of a Song Dynasty barn with an area of 40,000 m², a Yuan Dynasty large-scale stone arch bridge, a Yuan Dynasty ferry pier, and a Qing Dynasty relay station for post horses (Zeng 2009). In this case this group of canal heritage includes “administration and service organizations” (the barn and the relay station) and “shipping facilities” (the bridge and the ferry pier). They have all had irreplaceable functions in the history of the canal’s and the city’s development.



Fig.06 Ancient barns date back to the Yuan Dynasty along the canal were destroyed

<http://www.022net.com/2010/7-15/515373252867483.html>

The types of canal heritage in Zhenjiang are various, and the scales range from specific sites to entire regions. In addition, it carries multiple layers of culture, history and meanings. Canal heritage in Zhenjiang is one of the most important elements that well represent the city’s character.

The Relation of the “Canal Heritage” to the Urban Environment in Zhenjiang

The Beijing-Hangzhou Grand Canal has been of prime importance in Zhenjiang’s history. It has significantly influenced the city’s economic development, urban form and historic culture.

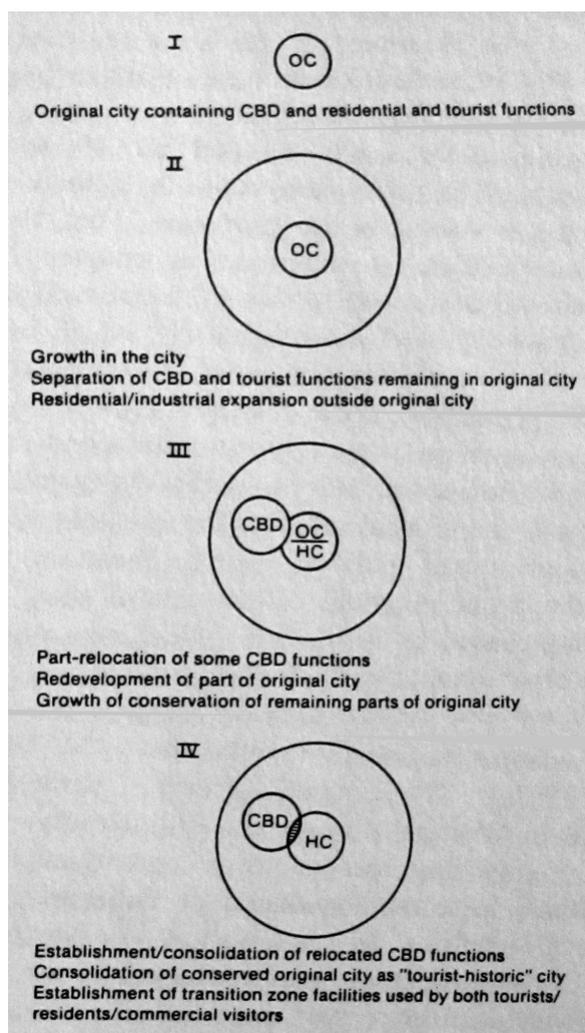


Fig.07 model of urban development
Ashworth, Gregory (1991) *Heritage Planning: Conservation as the Management of Urban Change*, Groningen: Geo Pers

Canal heritage has stood as a remarkable testimony to the dynamic changes in the city.

The construction of the Beijing-Hangzhou Grand Canal started in 486 BC. After the unification of North and South China in the Sui Dynasty (AD 581-618), the major part was finished, with a width of 30 to 70 meters and extending more than 2700 km. The part of the canal in the south of the Yangzi River which is called Jiang Nan Canal starts from Zhenjiang, which makes the city the intersection of the Grand Canal and the Yangzi River. Only through Zhenjiang Port, were Cao Liang (rice transported to the capital by water), taxes and goods from all the areas in the South, Southeast and Southwest China transported to the North. Therefore, Zhenjiang was one of the most important ports along the canal. In the Tang and Song Dynasty, its traffic volume amounted to 1500,000 Dan (Chinese unit of dry measure, 1 Dan is about 6.35kg) per year (Zeng 2009). The city had thus infinitely developed and became one of the top cities in China's history.

Because of the different river levels between the Yangzi River and the Grand Canal, ships that arrived at Zhenjiang by the Yangzi River had to wait for the rising tide to enter the Grand Canal through Jingkou Zha. In order to



Fig.08 Zhenjiang's urban development influenced by the canal from the Three Kingdoms to the late Qing Dynasty

Xi Jin Du Project, Dong Wei Studio, School of Architecture, Southeast University

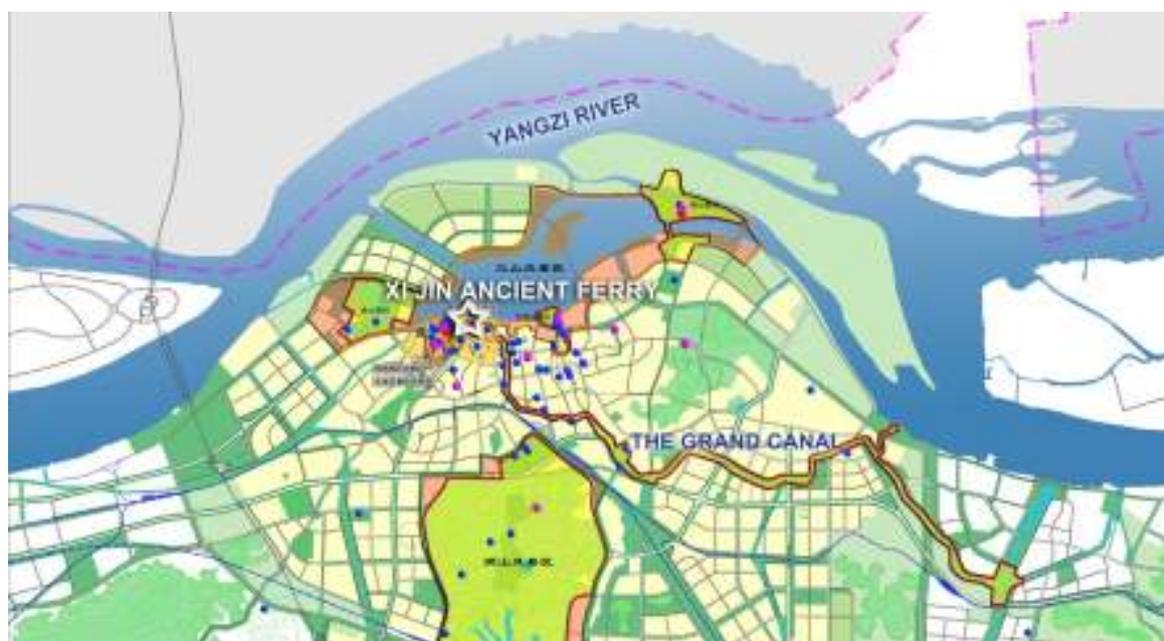
store Cao Liang and other goods the ships transporting to the North China before the tides, a number of barns and warehouses were built close to the canal. Lodges for the ship crews and markets for trades were built adjacent as well. A prosperous commercial center of the city had formed consequently along the canal and by the Yangzi River. This is a prominent example of how the canal has been playing a part in forming the city's distinctive local historic features and land use pattern.

Xi Jin Ancient Ferry and its changing roles in Zhenjiang tell a good story about the city's history and culture. Zhenjiang in history was the major port of both the Yangzi River and the Grand Canal. The port itself is called Xi Jin Ancient Ferry. Xi Jin Ancient Ferry is located by the Grand Canal and along the Yangzi River. First formed during the time of the Three Kingdoms (AD 220-280) and fully functioning as a ferry in the

Tang Dynasty (AD 618-907), this area firstly completed the alternative transitions between a military garrison and a business center along the Yangzi River; having been a water transport hub connecting the north and the south of China for more than one thousand years, in 1861 the area went through the transformation from a general business trading place to a concession; after 1908, as the construction of the railway finished, Xi Jin area started a new era of being the cradle of Zhenjiang's modern industrial development based on the water



Fig.09 Archaeological discovery in Xi Jin Ancient Ferry area: Pavements of different dynasties



*Fig.10 location of Xi Jin Ancient Ferry (and the heritage marked by blue and pink dots)
Image by author based on Protects and plans in the historical cultural city of Zhenjiang, Urban Planning & Design Institute of Zhenjiang*

source and ease of transport. In this long process, the function of the urban area has been changed accordingly, as well as the layout, the image, and economic, social and political aspects.

“Canal heritage” has

been closely participating in this process. The heritage is now left after this process but at the same time begins to be a part of the new development. Studying “canal heritage” is an effective way to understand the city. Moreover, treating it will be a crucial link to bring a bright future to both the heritage itself and the city it is located in.



Fig. 11 diverse culture in Xi Jin Ancient Ferry

Conserving “Canal Heritage” while Revitalizing the City

“Heritage conservation” and “urban revitalization” have been two phrases put together or mentioned together for a long time. Standing for “the preservation and presentation of the surviving buildings, relics, memories and place-associations from the past” and “planning intervention to rehabilitate and revitalize local economies and communities” respectively, these two fields indeed have stopped developing largely independently of each other and have had overlaps in “the contemporary industry that uses these historic resources to satisfy modern demands, many of which are associated with leisure” (Ashworth 1991: PREFACE). However, “heritage conservation” and “urban revitalization” are still two separated objects: they can serve in favor of each other, but still neither in theory nor in practice have they been dynamically connected.

It is predicted that China’s urbanization level will rise to more than 75% around 2050. Alongside the climbing urbanization rate are the continuous expansion and development of the urban areas, which come with increasing demand for urban construction sites (Lu 2007). However, The Urban and Rural Planning Law of The People’s Republic of China is clearly indicating that Chinese cities have entered the phase of massive renewal, and new construction land will be strictly limited for approval (The Central People’s Government of the People’s Republic of China 2008). These leave a dilemma to urban development in China. The situation will be different if conserving heritage is not only an approach for the heritage



Fig. 12 Taitung old railway station reuse

Photos by Professor Jianqiang Yang, School of Architecture, Southeast University

itself but also towards revitalization of its host city. Adaptive reuse of some heritage and its surroundings can provide space for new development in the city. But before taking any action, the heritage and its surroundings should be evaluated and the reuse proposal should be analyzed to insure that the heritage is below certain level of importance and the reuse will not interfere with the heritage and its surroundings' standards of authenticity and integrity. As in Zhenjiang, canal heritage such as old shipping dock structures can be transformed and reused as urban lighting facilities, new advertisement space and etc. Considering "to conserve the heritage" as "to revitalize the city" is one step to dynamically connect the two.

"Urbanism and the cultural facilities of capital cities were the modern shop window of a reconstructed identity, and the materialization of the national spirit" (Monclús and Guardia 2006:xvi). By revitalizing the city, physical expression of the local culture is enhanced, genius loci is lifted, a contemporary identity is created, local culture and authenticity is strengthened and made visible. In this way, while the city is becoming a place that its citizens are proud of living in, more attention will be paid to its history and heritage. Thus heritage will be better managed, its accessibility will be improved, and as a result, it is well conserved. Cockatoo Island (Australia) used to be a forgotten area no one paid visits to, by revitalization activities, the island is now one of the most popular cultural attractions throughout the country. Managed by the Sydney Harbor Federation Trust, by running all kinds of events throughout the year, the island has gradually drawn the public's attention to it, and managed to turn its history a living memory. In terms of Zhenjiang, since the Xi Jin Ancient Ferry area revitalization projects took place in 1999, a large amount of funding has been drawn to the area for both economic and historical research purpose, the whole society's attention has been greatly attracted to the area, and a lot more buried historic relics have been found during revitalization activities. Heritage conservation is not standing in the way of the urban development any more. In fact, via urban revitalization, heritage



Fig.13 the more "Zhenjiang" the more fashionable!

a show window of a wedding photography studio in Xi Jin Ancient Ferry area



Fig.14 events on Cockatoo Island

<http://www.cockatooisland.gov.au/index.html>

conservation is achieved at the same time.

Sometimes unavoidably, the heritage is taken as “development engine” to turn cultural assets into sources of income. It is not absolutely unacceptable to urge development by all means, but after all heritage is unique and fragile. Besides, delicately conserving heritage has been proved having led to the success of its host city: right after successfully inscribed on the World Heritage List, the West Lake (Hangzhou, Zhejiang Province, China)’s administrative institution formulated Hangzhou West Lake Cultural Landscape Protection Management Regulations (draft). The protection for the West Lake therefore was largely strengthened. In addition, the Regulation set a limit on the number of visitors in contrast to trying to draw more. And the entrance is still free. At the same time, the municipal government of Hangzhou invested 7.5 billion Yuan in comprehensive treatment for the West Lake. The efforts have paid off – in 2010, the number of domestic visitors is 6,304,890,000, 137.7% higher than 2002; the number of domestic tourism income is 91.085 billion Yuan, 257.48% higher than 2002; and overall tourism income 102.57 billion Yuan, increased 248.4% from 2002 (Song 2011). In respect of Zhenjiang, compared to presenting the heritage and making the full use of it, starting and settling with protecting and interpreting the heritage will be a powerful route too. Truly understanding the inner inseparable relation of conserving heritage and revitalizing its host city is the key.

Heritage conservation and urban revitalization are strongly linked, but this does not mean that making efforts towards one goal will automatically succeed in achieving the other. Also, to realize either of them, measures should be taken on different levels. On the one hand, a strong role has to be played by the authorities and top-down approaches have to be taken in the finance and negotiation process for such a large-scale project. This occurred in the case of the new Cheong Gye Cheon project (Seoul, Korea). Cheong Gye Cheon Elevated Road (construction: 1967 – 1971) had once been the ‘symbol of modernization’ and economic growth, but as the Urban Renaissance went on, it soon became the “city’s horrid thing”. The



Fig. 15 Cheong Gye Cheon elevated road and the new Cheong Gye Cheon project
Lee, Taehee. 2011. “The South Korean model of urban renaissance: Cheong-Gye-Chun restoration
and Dongdaemun Design Plaza in Seoul”;

<http://debon108.blog.sohu.com/49075197.html>;

<http://2008.sina.com.cn/torch2008/hd/other/p/2008-04-26/150374930.shtml>

new Cheong Gye Cheon project has turned it to the “Space of post modernity”, and the quality of the place is widely recognized as greatly improved. On the other hand, the actual historical research, conservation and revitalization proposals should not be rushed into being completed. Compared to the old one, the new Cheong Gye Cheon project has successfully changed the urban character and provided the citizens with urban space of much better quality. However, the “battle speed” in which the project was finished and which is highly praised by media and gained a great deal of public support could have brought serious problems. The construction was started without finishing a specific plan and design (Lee 2011). Probably it has the advantage in having flexibility and dynamic intervention with space, but in such a rush it is impossible to avoid unnecessary damage or interference to the historic environment. Although there are positive interactions between heritage conservation and urban revitalization, deliberate moves ought to be made for conserving heritage while revitalizing its host city.

Conclusion

For a long time, urban planning has been considered as a tool for solving problems. However, as problems are becoming more and more complex in the fast changing environment nowadays, they need to be solved by interdisciplinary cooperation among different specialties and professional teams including urban planning. Having multifaceted methods such as “City Vision” (feifei db 2011), urban planning is not only an engineering industry, but also an effective way through which questions will be addressed and problems will be identified. Similarly, the relation between heritage conservation and urban revitalization is not one-way. While conservation interacts with revitalization, more difficulties will arise, and be faced via widely discussion and collaboration. In this case, facilitated by the on-going World Heritage listing application for the Grand Canal, it is possible to carry out systematic research on the feasibility of implementing approaches. In this way, questions can be answered.

To conclude, this paper is a starting point for studying "canal heritage" in Zhenjiang, its relation to the city, and how to conserve the heritage while revitalizing its host city. Rather than a report of research results, this paper makes an introduction to the urban development and heritage conservation in China, provides a background of the Beijing-Hangzhou Grand Canal and the city of Zhenjiang, and raises more questions than it provides answers. In the paper, some examples are given from other parts of the country or world, many of the concepts and models mentioned still await application and testing in “canal heritage” and Zhenjiang.

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