

# **Developing Relations between Heritage Conservation and Urban Revitalization: Lessons from China**

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Thesis submitted for the degree of

Doctor of Philosophy

University of Oxford

Hilary Term 2014

## ABSTRACT

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The overall aim of this thesis is to further understanding of the developing relations between heritage conservation and urban revitalization, by following the on-going World Heritage List nomination process for the Grand Canal in China. A review of the history and current situation of heritage conservation and urban revitalization establishes several key gaps in knowledge, for example, the field of systematic heritage conservation is still left blank. Taking advantage of the opportunity to work with this on-going nomination, the project examines the nature and challenges of heritage conservation research and practice for a heritage property of large scale and complexity, in the form of four linked studies. A critique of the national level nomination process to date illustrates the complexity of the task, and concludes that systematic heritage conservation has not been established as a concentrated and nation-wide heritage conservation activity in China. Focusing on the municipal level nomination process to date through a case study of the city of Zhenjiang (and Yangzhou as a comparator) establishes key reasons why one city has been more successful than the other in its participation in the World Heritage List nomination. A second case study, of the Xi Jin Ferry area in Zhenjiang (Jiangsu Province), provides a fuller account of the ways in which heritage conservation can contribute to, and work with, urban revitalization. Drawing on the case of Xi Jin Ferry, a theoretically-informed, but practically-viable approach to linking heritage conservation and urban revitalization is developed which learns from the past and looks to the future. Building on the empirical research projects, a critique of existing approaches to heritage conservation of large, complex sites leads to a proposal for a 'Heritage System' framework which would facilitate future evaluations and improve the prospects for on-going management of the Grand Canal.



## ACKNOWLEDGEMENTS

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Looking back the past 3 years and 11 months, I am sure only those who have had the journey would fully understand the bitter sweet moment now. Countless times of lost and found finally reach today's small achievement – this DPhil thesis. Pain and gain have been the theme of this journey. Words are not enough to express my gratitude to all those who have given me tremendous help on this journey. Here I will simply list some of them, to whom considerable thanks are due.

I would like to firstly thank my supervisor Heather Viles for granting me the opportunity to be her student on this project. She has always been there understanding and supporting my ambitions and passions, and directing me and leading me to becoming an academic and a better person.

Without a fully funded China Scholarship Council (CSC) studentship I would not have been able to have spent the last four years working on such an exciting project. In addition, I am grateful to Green Templeton College for a college travel grant and to School of Interdisciplinary Area Studies for the Au Ping-Reyes Graduate Research and Travel Grant.

I would like to thank the following companies and collaborators for their assistance with the collection of my data: the Department of Culture, Radio, Film, TV, Press and Publication of Zhenjiang, Cultural Relics Office, especially Zheng Xu for all his help in the field and the inspiring discussions; Dong Wei Studio, Department of Urban Planning, School of Architecture, Southeast University; Zhenjiang Xi Jin Du Culture and Tourism Co Ltd; and the World Cultural Heritage Joint Bidding Office (Yangzhou).

I wish to acknowledge the help provided by Anna Lora-Wainwright in my first two important examinations during this DPhil programme. Thanks to Mona Edwards and Hong Zhang for guidance and help in the lab, Lorraine Wild and Matthew Burn for helping to improve our workspace within the department. Advice given by Elizabeth Howard and Rachael Tily has been a great help in proofreading and improving my chapters. And thanks to Dana Arnold and David Banister for kindly agreeing to be my examiners.

Thanks to everyone in the department, and particularly fellow members of the Oxford Rock Breakdown Laboratory, including Troy Sternberg, Vanessa Winchester, Martin Coombes, and Anna Arizzi. A special mention must go to Jennifer Booth, Samin Ahmad, Cristina Cabello-Briones, Katrin Wilhelm, Lisa Mol, and Szilvia Bajkan.

I would like to express my very great appreciation to my very understanding and supportive parents and grandparents. I have the deepest gratitude to my dearest friends Noreen Zaman, Xiaou Yi, Harriet Rawson, Rocio Urrutia Jalabert, Saher Hasnain, Diego Muñoz Carpintero, Yulia Stange, Doñah Sabbagh, Meng Jiang, Qi Chen, Danni Zhu, and Ramon Boghazian. My special thanks are extended to more friends who are there when I need distraction and entertainment which have been of great help too: Dan, Michael, Sylvester, Malek, Abe, and Ilaf.



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## CHAPTER 1

### INTRODUCTION

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In China, the earliest known recognition and practice of heritage conservation was the listing of “heritage conservation” as a good deed and autonomous affair in the Local Autonomous Regulation of Cities and Towns; this was issued in 1908 (He, 2004). Having gradually recovered from the war years, opened to the West (1978) and joined the World Trade Organization (2001), and been undergoing reform, China has since become one of the fastest growing powers in the world. However, the ever-changing world economy has placed contemporary China under great pressure; unbalanced development across different regions of the country is increasingly marked. At the same time, although technological development has been rapid in China, heritage conservation has not been a strong focus. With a long and rich history, and thus exceptionally rich heritage, China is now facing pressing challenges to conserve the nation’s legacy while, simultaneously, finding ways to maintain momentum for growth.

Over the past sixty years high-speed industrialization and large-scale urbanization have occurred in most areas of China. Rapid development is expected to continue in the remaining decades of the 21st century, in order to meet the needs of the already large and fast growing population. Thus, while a large amount of historic heritage in Chinese cities demands conservation, this has been, and will continue to be, threatened by development.

Having practiced as an assistant urban planner, and having carried out historical preservation and urban renewal research as a postgraduate student in a number of

projects in China, the author of this DPhil thesis has first-hand experience of the issues associated with heritage conservation; for example, the impact of heritage on its host city, the potential role of heritage conservation as a principle fuel for urban redevelopment, and the struggles involved in attempts to protect heritage from development. Therefore, following completion of a master's degree in Urban Planning and Design, this DPhil project was commenced in order to conduct a structured examination of heritage conservation, engage with urban revitalization practice, and extend theoretical research in China through an empirical focus on the Grand Canal.

The regions and areas along the Grand Canal are jointly applying for World Heritage List nomination, focused on the Grand Canal. This is a concentrated heritage conservation activity and also provides a unique opportunity for urban revitalization in these cities and regions of China.

The Grand Canal is of immense size and significance: firstly, it runs through six provinces and two municipalities; as such the nomination work has constituted the largest ever heritage conservation activity not only in China, but globally; secondly, dating back to 486 BC, and remaining partially in use, the Grand Canal encompasses an exceptional wealth of heritage covering diverse historical periods and numerous types; thirdly, many of the cities along the canal, though once prosperous, are now in decline, their degeneration having followed that of the canal itself. Such cities are therefore seeking opportunities for revitalization.

The official start of the nomination process may be dated to 28 March 2008, when the Grand Canal was submitted to the World Heritage Centre, as a Tentative List site, by the People's Republic of China. Other key dates include the submission of the final nomination file to UNESCO World Heritage Centre in January 2013, the field

investigation, by a team of experts appointed by the World Heritage Centre, in September 2013, and the successful addition of the Grand Canal to the World Heritage List following the World Heritage Centre committee meeting in summer 2014. The nomination process has provided the DPhil project with a focus and opportunity for data collection.

## 1.1 Aims

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The World Heritage Site nomination for the Grand Canal has entailed an exceptionally large and complex heritage conservation activity; the diverse layers of this work have included a large-scale heritage property, a range of heritage categories, the involvement of multiple administrative and jurisdiction levels, and numerous experts and practitioners. This DPhil research aims to further existing understandings of developing relations between heritage conservation and urban revitalization; this is accomplished through a study of the on-going World Heritage List nomination process for the Grand Canal in China.

The overall aim of the DPhil project breaks down into four specific research objectives; the study seeks to:

- examine whether systematic heritage conservation has been established as a concentrated and nationwide heritage conservation activity in China, drawing on a critique of the World Heritage List nomination for the Grand Canal (Paper 1)
- identify flaws in current, urban-level, practice in China, drawing on a critique of one city's performance in a large-scale heritage conservation activity: Zhenjiang's quest for World Heritage List nomination in the Zhenjiang section of the Grand Canal (Paper 2)

- explore the relationship between heritage and its host city, and the interaction between heritage conservation and urban development, through a case study of the Xi Jin Ferry (Zhenjiang) historic preservation and urban renewal project (Paper 3)
- draw up a ‘Heritage System’ framework, based on the empirical research discussed in Papers 1-3, providing a new methodology and philosophy for the systematic conservation of heritage in dynamic urban environments (Paper 4).

## 1.2 Thesis structure

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The four objectives of this DPhil project are explored in a thesis structured according to a ‘paper-route’; this involves the submission of at least four submitted papers to a range of peer-reviewed journals.

Chapters 4-7 incorporate the four journal-submitted papers into the thesis; the articles were co-authored with the project’s supervisor: Professor Heather Viles. There is a degree of repetition through the course of the chapters; this is unavoidable since, read in isolation, the papers each require the exposition of similar background material.

Chapter 1 provides an introduction stating the aims and objectives of the research. Chapter 2 describes the status of current theoretical research and practice in (i) global and (ii) Chinese heritage conservation and urban revitalization. This chapter also includes a brief introduction to the Grand Canal and the main city studied: Zhenjiang.

Chapter 3 describes the methodologies employed in this thesis, with particular focus on research methods used in fieldwork, for data collection and analysis, as well as in the development of a framework for future research and practice. This provides scope for a level of detail that is not possible in the individual journal-submitted papers.

Chapters 4-7, which as seen above incorporate the four journal-submitted papers into the thesis, describe field and theoretical investigations that address the research aims. The World Heritage List nomination process for the Grand Canal overall, and for the Canal Zhenjiang Section in particular, are presented in Chapters 4 and 5 respectively. Chapter 6 consists of a case study centred on the city of Zhenjiang. It provides a description and explanation of past, recent, and present-day heritage conservation and urban revitalization research and practice in Zhenjiang. This is achieved using a range of archives, as well as drawing on the author's experiences participating in urban planning activities. Chapter 7 further explores key theoretical and methodological gaps, responding to issues raised in the three empirical research papers.

The research presented in Chapter 4 (Paper 1, submitted to *Studies in Conservation*) investigates the overall World Heritage List nomination process for the Grand Canal. Based on data collected during all fieldwork periods, it draws on time spent closely following and actively participating in the nomination process; in this way it helps contextualise the thesis as a whole. Fulfilling the first objective of the DPhil project, it provides an assessment of the largest, and most recent, heritage conservation research and practice activity undertaken in China, and worldwide, and initiates discussions on theoretical and practical research in heritage conservation in China.

Chapter 5 (Paper 2, submitted to *Studies in Conservation*) takes a middle sized and typical historical Chinese city, with a medium-level of development, as a case study. Drawing on data collected during all fieldwork periods it examines the city's (i) heritage conservation practice and (ii) day-to-day nomination process. In this way it fulfils the second objective of the DPhil project.

In Chapter 6 (Paper 3, submitted to *Environment and Planning D: Society and Space*) the role of heritage in urban revitalization is assessed. This chapter discusses the contribution of heritage conservation to the host cities, reveals the underlying connection between culture and heritage, as well as heritage and the built environment, and argues that heritage conservation is a viable approach to the achievement of urban revitalization. The 'Xi Jin Ferry Model' successfully established a dynamic relation between heritage conservation and urban revitalization. The model provided a response to practical issues in Zhenjiang and the chapter advocates the applicability of this approach in other similar sites. The author started working on the Xi Jin Ferry project in early 2006 and has continued working on it throughout all fieldwork periods. This has provided material for a detailed empirical case study, thereby improving existing theoretical understandings, and addressing objective three of the thesis.

Building on the findings of earlier chapters, Chapter 7 (Paper 4, submitted to *International Journal of Heritage Studies*) examines the implications of this project for the interpretation of current interactions between heritage and the built environment in China. Drawing on additional exploration of key practical and theoretical issues, it argues that there has been a lack of systematic heritage conservation theories and methods suitable for application to large and complex heritage systems, such as the Grand Canal. Finally, the chapter proposes a 'Heritage System' framework, an applicable and original philosophy for the systematic conservation of heritage in dynamic urban environments. In this way it offers a practical response to the issues identified in Chapters 4, 5 and 6, and addresses the fourth objective of the doctorate.

The principle conclusions of the thesis are presented in Chapter 8, which also examines the wider implications of the thesis for research in heritage conservation and urban

revitalization. In this way the closing sections of the thesis restate key findings, summarize the contribution of the study to the literature, describe the local and global ramifications of the research, indicate limitations, address trans-boundary issues, and finally, put forward suggestions for future research.

## CHAPTER 2

### LITERATURE REVIEW

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#### 2.1 Heritage and heritage conservation

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##### 2.1.1 Heritage and culture

Whilst the term ‘heritage’ became internationally popular only in the last decade or so, concepts and ideas of valuing the past have existed for a long time (Lowenthal, 1975, 1985). For example, the use of the term ‘monument’ dates to 1703 when it was used by François-Roger de Gaignières (Brown, 1988). Additional terms include ‘inheritance’, and ‘cultural property’. According to Marilena Vecco (2010), understandings of heritage are more refined in French than in English; thus the French word *patrimoine* seems to provide greater nuance, more accurately representing the dynamism of the concept, than the equivalent English term ‘heritage’ (Vecco, 2007). André Desvallées identifies five distinctive periods in the development of the generalized concept of *patrimoine*: 1790–1791, 1930–1945, 1959, 1968–1969 and 1978–1980 (Desvallées, 1996). Following the French Revolution (which began on 14th July 1789), the term began to shift from its origins in the concept of family inheritance; during the course of its first period of development (1790–1791) it therefore referred to a broader concept relating to public and national entities. In the second period (1930–1945) the concept expanded to include cultural and artistic dimensions, in the context of international institutions (for example, in 1931 at the IIC Athens Conference). The year 1959 saw the birth of *patrimoine culturel*, referred to in English as ‘cultural heritage’. On 24<sup>th</sup> July 1959, André Malraux, French Minister of Culture used the term *patrimoine culturel* in the decree 59-889. This was followed by a period (1968–1969) during

which the term transited from a solely cultural concept to a recognized term in political and administrative domains; however, unfortunately use of the term remained separated into two mutually exclusive categories: 'national property' or 'artistic property'. Finally in the last period (1978-1980), *patrimoine* became a generalized concept, respected and revered by the French administration and public (Vecco, 2010). Today, *patrimoine* and 'heritage' can be regarded as almost identical terms, and are both widely used in international discourse.

The concept of 'heritage' has evolved further over recent decades; this is demonstrated, for example, in the initiation and development of 'World Heritage' as a concept. At first, a dichotomous conception of heritage predominated; for example, the first two articles of the 1972 World Heritage Convention mirrored the codified separation of humankind and nature typifying Western Enlightenment philosophy. Such a museum-like attitude to cultural objects, and a conception of nature as 'untouched', can be seen as Eurocentric or Anglo-American, and imperialist (Pocock, 1997). However, this dichotomous understanding has gradually broken down and a more dynamic view of heritage has been adopted at the international level. For example, cultural landscapes were added to the heritage family by UNESCO and other bodies in the 1990s (UNESCO World Heritage Centre 1992-2014, 2014g; UNESCO, 2008), followed by the recognition of industrial archaeology (Palmer, 1998; Stratton & Trinder, 2000), technological heritage (Jiménez Pérez, Cuenca López, & Mario Ferreras Listán, 2010; Pocock, 1997; Spennemann & Murphy, 2007), or industrial heritage (Alfrey, Nfa, & Putnam, 2003; Edwards & i Coit, 1996; Hospers, 2002; Kerstetter, Confer, & Bricker, 1998). Then followed the acknowledgement of modern architecture (Loew, 1998) and contemporary towns (Malik, 2001; Orbasli, 2002; Roders & Oers, 2011), as well as the involvement of local, indigenous peoples in heritage recognition and management (Butler & Hinch,

2007; Castro & Nielsen, 2001; de Merode, Smeets, & Westrik, 2004; Pocock, 1997; Posey & Dutfield, 1996; Stevens, 1997). More recently, the scope of heritage has continued to broaden; for example, the concept of Cultural Route has been introduced (ICOMOS, 2005; Masson, 2005; Orbasli & Woodward, 2008; Owen, Buhalis, & Pletinckx, 2004). Further developments include the recognition of diverse cultural values, representing a move away from Western philosophy in recent years; for example, there has been an increased appreciation of Islamic heritage (Bakar, 2007) and diverse religious heritage (Kim, Lee, & Klenosky, 2003; Olupona & Nyang, 1993; Rowan & Baram, 2004; Sharma & Sharma, 2004).

### 2.1.2 Heritage conservation

The notion of heritage conservation dates from the 19th Century, but its development was limited to European countries until 1931, when *The Athens Charter for the Restoration of Historic Monuments* (ICOMOS, 1931) was adopted at the First International Congress of Architects and Technicians of Historic Monuments in Athens. This was the first international code of cultural heritage conservation. Following this, the 1960s saw the publication of a UNESCO *Recommendation concerning the Safeguarding of the Beauty and Character of Landscapes and Sites* (UNESCO, 1962); this document was the first to state the possible harmful effects of economic growth, industrialization, urbanization and urban renewal on cultural heritage. Again in the 1960s, *The Venice Charter: International Charter for the Conservation and Restoration of Monuments and Sites* (ICOMOS, 1964) justified, for the first time, the relations between heritage conservation and utilization; it argued that: ‘The conservation of monuments is always facilitated by making use of them for some socially useful purpose. Such use is therefore desirable but it must not change the lay-out or

decoration of the building’ (ICOMOS, 1964, Article 5). Finally, in the 1990s *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (ICOMOS, 1999) argued that ‘where the use of a place is of cultural significance it should be retained’ (ICOMOS, 1999, p. 4) and ‘a place should have a compatible use’ (ICOMOS, 1999, p. 5). Thus, from the 1930s to the end of the twentieth century, the progress in international heritage conservation charters illustrates a move from a focus purely on objects to a concern with objects and their use.

There has been a gradual shift in the literature on heritage conservation, from a concern with the the preservation of the past, to an increased emphasis on the role of heritage in the future. Writing in 2003, Bernard Feilden argued that:

Conservation is the action taken to prevent decay and manage change dynamically. It embraces all acts that prolong the life of our cultural and natural heritage, the object being to present to those who use and look at historic buildings with wonder the artistic and human messages that such buildings possess (Feilden, 2003, p. 3).

A year later, Bradley et al.’s significant paper, the ‘Change and Creation Discussion Document’ (2004), pointed to the future of heritage management in the ‘West’. It integrated diverse approaches from a range of disciplines, furthered understandings of the late 20<sup>th</sup>-Century landscape, and assessed processes of change and creation in urban and rural landscapes (Bradley et al., 2004). By 2008, when *The ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites* was issued, a complex and rich series of conventions and conservation approaches had developed at the international level, in which heritage was ‘no longer about the past’ but dr[ew] on the power of the past to produce the present and shape the future” (Fairclough, Schofield,

Harrison, & Jameson, 2008, p. 5; ICOMOS, 2008). As an heirloom of the past, then, heritage was to be protected and preserved along with its immediate environment (Ahmed & Alam, 1990). Similarly a new understanding of the aims and purposes of conservation emerged; scholars argued that heritage should function as an asset, providing cultural and economic benefits for both the present and the future of cities (Florian, 1996).

‘Heritage conservation’ is a general idea and the term used in this DPhil thesis and also widely used now in the field referring to researching and managing heritage. When practicing heritage conservation, different strategies include reconstruction, restoration, and conservation, on a spectrum of decreasing intervention; a decision not to take any action may constitute a legitimate strategy too. Reconstruction involves the fabrication of a new replica from old (or new) materials, in order to restore a historic scene. When applied, it should be carefully executed following surviving traces (Ahmed & Alam, 1990). The definition of ‘restoration’ in heritage conservation is not very far from its meaning in ecological conservation: ‘the act of restoring to a former state or position or to an unimpaired or perfect condition’ (Urbanska, Webb, & Edwards, 1997, p. 8). Restoration should only be applied if the stability of the monument requires it, or if a demolition-and-reconstruction is essential to enable maintenance. There can be strictly no tolerance for clumsy attempts to recreate scenes, drawing on fanciful conceptions informed by limited historical knowledge (Marshall, 1996, Taylor, 1998). The basic principles of restoration are to minimize change, retain location and historic configuration, while simultaneously working to maximize the retention of features, components and materials, and to repair materials for longevity and long-term preservation (Turner, 2012). Finally, as a key conservation heritage document makes clear:

Appropriate aesthetic criteria should be observed. The aesthetic value of a site derives from its historic authenticity. Alterations to the historic condition may not be made for cosmetic purposes or to attain completeness (China ICOMOS, SACH, & the GCI, 2004, p. 63).

Currently it is widely accepted that ‘the minimum effective action is always the best; if possible, the action should be reversible and not prejudice possible future interventions’ (Feilden, 2003, p. 3). Unlike rebuilding or restoration, conservation aims to protect the heritage from further damage, not to reproduce what has been damaged. There are different approaches when carrying out conservation; for example, execution of repairs with new or old materials; consolidation of old and decayed materials; preventive conservation using shelters, and environmental modification. Any action should be documented in detail (Marshall, 1996).

The preservation of existing urban patterns and context is of crucial importance, and detailed design guidelines should be developed. ‘Adaptive re-use’, such as the allowance of commercially viable activities, help the heritage and its surrounding areas realize revitalization – primarily, and most visibly, in economic development (Florian, 1996). These two parts move beyond conservation of the ‘monument’, as generally understood, to considerations of conserving ‘context’ and ‘use’. The successful conservation of ‘context’ protects and ensures the integrity of heritage. Similarly, conservation of the ‘use’, or ‘ritual’ of heritage ensures not only the protection of heritage, but also the maintenance of the latter’s meaning, which has significant implications for authenticity.

Legislation is the basis of heritage conservation. The first step is normally designation: recognizing and granting heritage its legal status (Prott & O’Keefe, 1989). This

establishing stage of legislation includes listing and scheduling monuments and sites. Following this, appropriate legal requirements are drawn up to protect the heritage. Regular inspections and documentation, as well as urban planning and conservation action, also form part of the legal requirements (Carter & Grimwade, 1997). Heritage designation systems vary from country to country (Carment, 1991; Ndoro & Pwiti, 2001). Currently, 'World Heritage Site' is the ultimate international status; holding this designation ensures protection by the United Nations Education, Scientific and Cultural Organization (UNESCO). Authorities and functional offices, responsible for reinforcing heritage protection laws and regulations, also vary in their composition across different parts of the world. In the UK, the government, English Heritage and the heritage sector work together on the system of 'Heritage Protection' (English Heritage, 2013). In other countries, systems of protection may derive from either heritage or planning legislation (Pickard, 2001). In general, however, the protection of heritage is the subject of national legislation and international agreements, conventions and charters (Smith, 2006).

Since the scope of conservation ranges from the preservation, or consolidation, of a crumbling artefact to urban planning, the required expertise also ranges widely. It includes that of the craftsman associated with each material, archaeologist, art historian, antiquary, quantity surveyor, valuation surveyor, building contractor, conservation architect, engineers of several specializations, landscape architect, urban designer and urban planner; additional support is provided by the biologist, chemist, physicist, geologist and seismologist. As this list shows, conservation involves many disciplines. Everyone involved should understand the shared principles and objectives; only in this way is it possible to work together to achieve productive conservative action (Feilden, 2003).

### 2.1.3 World Heritage, World Heritage List nomination, monitoring and management

The *Convention Concerning the Protection of the World Cultural and Natural Heritage* (UNESCO WHC, 1972) provided definitions of cultural and natural heritage respectively. In 1978, the first twelve World Heritage Sites were listed. These sites included Quito (San Francisco de Quito to give it its full name), the capital city of Ecuador in South America, which was the first city to be declared a UNESCO World Cultural Heritage Site along with Krakow in Poland (Sinha, 2012). In 1992 the World Heritage Convention became the first international legal instrument to recognize and protect cultural landscapes.

As of 2013 the World Heritage List includes 981 properties; these represent the finest examples of the world's cultural and natural heritage. The World Heritage Convention refers to properties as constituting component parts of cultural and/or natural heritage. The term 'property' is used interchangeably with 'site' in the Operational Guidelines (UNESCO, 1996, v. P). The list breaks down into 759 cultural, 193 natural and 29 mixed properties; these are found in 160 State Parties (UNESCO World Heritage Centre 1992-2014, 2014f).

A State Party is a signatory to the World Heritage Convention. As the UNESCO World Heritage Centre website (<http://whc.unesco.org/>) explains: 'Only countries that have signed the World Heritage Convention, pledging to protect their natural and cultural heritage, can submit nomination proposals for properties on their territory to be considered for inclusion in UNESCO's World Heritage List. As of September 2012, 190 States Parties have ratified the World Heritage Convention' (UNESCO World Heritage Centre 1992-2014, 2014f).

In order to be included on the World Heritage List, a heritage site must be of Outstanding Universal Value as identified by the *World Heritage Convention Concerning the Protection of the World Cultural and Natural Heritage* (UNESCO World Heritage Centre, 1972). In addition it must meet at least one of ten selection criteria (Jokilehto, Cameron, & Petzet, 2008; United Nations, 2014). Outstanding Universal value (OUV) is formally defined by UNESCO as ‘cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity’ (UNESCO World Heritage Centre, 2013, para. 49). The World Heritage Centre also emphasises the importance of the concepts of integrity and authenticity: ‘To be deemed of Outstanding Universal Value, a property must also meet the conditions of integrity and/or authenticity and must have an adequate protection and management system to ensure its safeguarding’ (UNESCO World Heritage Centre, 2013, para. 78). ‘Integrity’ refers to ‘material wholeness, completeness, and unimpaired condition’ (Saouma-Forero, 2000, sec. 2). Authenticity, a more complex concept, ‘can be understood as the requirement to be genuine, i.e., the nominated resource should be truly what it is claimed to be’ (Saouma-Forero, 2000, sec. 2). The aspect of ‘genuineness’ could have many parameters including ‘form and design, materials and substance, use and function, traditions and techniques, location and setting, spirit and feeling, and other internal and external factors’ (UNESCO, ICCROM, & ICOMOS, 1994, v. 13).

The World Heritage listing process includes four steps: the State Party prepares the Tentative List (Step One) and the Nomination File (Step Two), the Advisory Bodies evaluate the property (Step Three), and the World Heritage Committee decides on the inscription (Step Four).

The Tentative List is an 'inventory' that each State Party makes of important natural and cultural heritage sites located within its boundaries. It provides a forecast of the properties that this country may decide to submit for inscription in the next five to ten years and this forecast may be updated at any time. The World Heritage Committee can only consider a nomination for inscription on the World Heritage List when the property has already been included on the State Party's Tentative List. The State Party can then select sites from its Tentative List and plan when to present nomination files for them. The World Heritage Centre advises and assists the State Party in preparing nomination files. The latter need to be as exhaustive as possible and include all the necessary documentation and maps. Nominations are submitted to the World Heritage Centre for review and for checks to ensure applications are complete. Finally, the World Heritage Centre sends complete nomination files to appropriate Advisory Bodies for evaluation (UNESCO World Heritage Centre 1992-2014, 2014d).

Evaluation is performed independently by two advisory bodies mandated by the World Heritage Convention: the International Council on Monuments and Sites (ICOMOS) carries out assessments relating to cultural sites, while the International Union for Conservation of Nature (IUCN) considers nominations relating to natural sites. A third, intergovernmental, Advisory Body, the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), provides the Committee with expert advice on the conservation of cultural sites and training activities (UNESCO World Heritage Centre 1992-2014, 2014b).

After nomination and evaluation, the intergovernmental World Heritage Committee makes a final decision on a property's inscription. This generally occurs at the committee's annual meeting in June; however, the committee may defer a decision and

request further information, from a State Party, regarding a nominated site; this can result in delays of many years before some sites are successfully inscribed on the World Heritage List (UNESCO World Heritage Centre 1992-2014, 2014b).

The ten selection criteria mentioned above are explained in the *Operational Guidelines for the Implementation of the World Heritage Convention* (UNESCO WHC, 2011). Together with the text of the Convention, these criteria constitute the principal working tools for World Heritage; they are used to assess the conditions of integrity or authenticity, and to consider whether a property has Outstanding Universal Value. The criteria are regularly revised by the Committee to reflect the evolution of the World Heritage concept. Prior to the end of 2004, the selection of World Heritage sites was decided in relation to six cultural and four natural criteria. However, following the adoption of revised *Operational Guidelines* (2005), a single set of ten criteria has been established, bringing together cultural and natural criteria (see Table 2.1).

Following successful inscription of a property on the World Heritage List, World Heritage properties require continuous management, monitoring and conservation work (UNESCO World Heritage Centre 1992-2014, 2014c) in order to retain their listing. A key task is the provision of periodic reports on the state of conservation and the implementation of the World Heritage Convention. Such reports, which are prepared and submitted by State Parties, ensure the efficient implementation of the World Heritage Convention. They also provide all involved actors with up-to-date knowledge on the application of the Convention and on the state of conservation of World Heritage properties. In addition, these reports assist the World Heritage Committee in assessing the condition of sites, enabling the identification of specific measures required to resolve recurrent problems; for example, the inscription of a property on the List of

World Heritage in Danger. This periodic reporting process also provides an assessment of the application of the World Heritage Convention by the State Parties. Finally, the reports provide an opportunity to update information held by the World Heritage Committee; this makes it possible to record any changes in the state of conservation of sites. Submitted reports are collected on a regional basis; in this way the World Heritage Committee reviews reports from each region according to a pre-established schedule based on a six-year cycle. The review results are recorded in the report of the World Heritage Committee to the General Conference of UNESCO.

**Table 2.1: The Criteria for Selection**

(UNESCO World Heritage Centre 1992-2014, 2014e)

(i)	to represent a masterpiece of human creative genius;
(ii)	to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
(iii)	to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
(iv)	to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
(v)	to be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
(vi)	to be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria);
(vii)	to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;
(viii)	to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;
(ix)	to be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;
(x)	to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.
The protection, management, authenticity and integrity of properties are also important considerations.	
Since 1992 significant interactions between people and the natural environment have been recognized as <b>cultural landscapes</b> .	

## 2.2 Urban revitalization

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Urban revitalization is a complex and dynamic concept. As Palen and London argue:

The terms used by different scholars reflect different perceptions of the phenomenon and its significance... Urban literature uses, often without definition, terms such as urban regeneration, urban revitalization, gentrification, neighbourhood renewal, rehabilitation, and renovation (Palen & London, 1984, p. 6).

In this D.Phil. research, the term 'urban revitalization' refers to the process of transforming the urban environment to improve it and to generate vitality for urban development. The term 'urban renewal' is used as a broader 'umbrella' term; it describes three main phases in the management of western cities - culminating in the concept of 'urban revitalization' in the 1970s.

The first of three main phases of urban renewal in western cities occurred following the industrial revolution (*c.*1750-*c.*1800). Prior to this time, cities were small, urban functions were basic, and urban development was slow. However, after the industrial revolution urbanization accelerated; at the same time mass-production brought about transformations in urban function and structure. In order to help cities meet the needs of industrialization, 'urban renewal' emerged. Prior to the end of the nineteenth century, this first phase of urban renewal was principally concerned with the improvement of physical spaces in inner cities; significant large-scale demolition and construction took place (Jingxiang Zhang, 2005). The first state involvement in urban renewal occurred in Britain in the mid-nineteenth century; slum clearances were undertaken in an attempt to tackle unsanitary conditions in working-class neighbourhoods

(Broudehoux, 1994). Other important examples occurring during this phase included the transformation of Paris, led by Georges Haussmann from 1853 to 1868 (Giedion, 1997; Pinkney, 1955), and the 'City Beautiful Movement', in the US, from 1893 to 1910 (Bluestone, 1988; Hall, 1988; Robert, 2000; Wilson, 1980).

The second phase of urban renewal was associated with 'peri-urbanization' (Hoggart, 2012; McGregor, Simon, & Thompson, 2006). The *State of World Population 2007* explains that:

This process of urban growth, largely in non-contiguous transitional zones between countryside and city, is increasingly being referred to as "peri-urbanization". Peri-urban areas often lack clear regulations and administrative authority over land use. They suffer some of the worst consequences of urban growth, including pollution, rapid social change, poverty, and land use changes (UNFPA, 2007).

In order to tackle these urban problems, Ebenezer Howard developed the 'Garden City' theory (Howard, 1902) and practical experiments included Letchworth Garden City (1904) and Welwyn Garden City (1920) in England. In 1917 Eliel Saarinen proposed the Greater Helsinki Plans and his 1943 book, *The City: Its Growth, Its Decay and Its Future* (Eliel Saarinen, 1943), systematically summarized the theory of 'Organic Decentralization' (Eero Saarinen, Pelkonen, Albrecht, & Taidehalli, 2006). As urban sprawl continued to develop, the 1950s saw the formation of 'suburbanization' (Antoni, 2002; Jackson, 1985; Mieszkowski & Mills, 1993; Paddison, 2000), 'urban agglomerations' (Batten, 1995), and 'city clusters' (Asheim, 2006; Krakover, 1987) in western countries; such phenomena were later identified as causes of increasing urban sprawl. In the mid-twentieth century the focus of urban renewal shifted towards a larger

scale: the region. The first International Seminar on Urban Renewal (Aiken & Alford, 1970; Alonso, 1964; Anderson, 1964; Hawley, 1963) was held in Den Haag in August 1958 (Van der Hoff and Duggar 1958). During the 1950s and 1960s, there was widespread acceptance of the need to restore cities' vitality, fighting the decay of urban society and economy (Jingxiang Zhang, 2005), instead of allowing continuous urban sprawl to occur. In pursuit of this goal, academic research explored several directions; for example, Lewis Mumford proposed closely connecting city and region (Mumford, 1961); Jane Jacobs looked into 'Urban Diversity' (Jacobs, 1961); and E F Schumacher (1973), Peter Hall (1973), and Christopher Alexander (1987) all paid close attention to systematic and integrated urban renewal. Throughout this second phase, the urban renewal process continued to occur in a top-down fashion.

In the 1960s the concept of 'urban rehabilitation' emerged (Clout, 1987; Roth, 2004; Wagner, 1977), marking the beginning of the third phase of urban renewal. 'Urban rehabilitation' aims to creatively use and re-use older quarters of the city. Old buildings are repaired and modernized to facilitate their continued use where possible; this often includes the upgrade of infrastructure services (on a modest scale). The existing urban pattern and fabric are preserved though functions may be changed on a small scale where necessary. Demolition is generally considered only in the case of structurally unsound buildings; however, it may also be used to provide space for essential social services, infrastructure or open space. The core objective of 'urban rehabilitation' is to minimize the displacement of existing residents: providing sufficient modernization of a neighbourhood's physical fabric allows the life of the community to go on - buildings and social systems evolve and adapt to new conditions (Florian, 1996). This idea was put into practice in Berlin (Balfour, 1990), Sydney (Wagner, 1977), and other cities.

Following these two phases of development, the concept of ‘urban revitalization’ emerged in the 1970s as the dominant approach to urban renewal. Similarly in the 1970s, the concept of sustainable development emerged. After the 1970s, urbanization in western countries was complete, relations between cities and regions were stable, and post-urbanization began. However, as the result of 1950s urban sprawl, large cities in western countries were facing difficulties caused by declining inner cities, thus the third phase of urban renewal – ‘urban revitalization’ – has returned to a focus on inner cities (Jingxiang Zhang, 2005). The pattern of urban renewal has gradually evolved from a demolition and reconstruction approach to a softer, small-scale, iterative, and socially-oriented approach which concentrates on the renovation of existing structures (Broudehoux 1994). Urban renewal has switched to bottom-up mode; simultaneously, respect for city features and historic contexts has been increasingly emphasized. Important practices in this phase have included the ‘Community Development Project’ of the UK in 1977 (Duncan, 1982; McKay & Cox, 1978) and ‘Neighbourhood Revitalization’ in the US (Palen & London, 1984).

Developments that have occurred more recently include: investigation of the views of citizens towards urban revitalization (Orr & West, 2002), studies in the roles urban policy and investment in infrastructure play (Moulaert, Rodriguez, & Swyngedouw, 2003), growing emphasis on the role of cultural elements in urban redevelopment (Grodach & Loukaitou-Sideris, 2007), and spatial analysis of urban revitalization (Perkins, Larsen, & Brown, 2009). In summary, after more than 100 years’ development, urban revitalization has gradually become an idea that increasingly demonstrates respect for the culture and history of cities, as well for context, people, and the connection between them.

### 2.3 Heritage conservation in China

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In China, heritage conservation began to gain momentum in the early twentieth century. In 1922 the first archaeology institute was founded in Peking University; this represented the first academic organization related to heritage conservation. From the 1920s onwards, the renowned architect Sicheng Liang carried out research on the protection of historic architecture (Zhu, 2012) and advocated the employment of planning methods to conserve historic cities and regions (Liang, 1932). Since 1949, the heritage conservation system in China has progressively emerged. It has undergone three stages: (a) the preservation of relics only (before 1982), (b) the preservation of relics and historic cities (1982 - 1986), and (c) multi-level conservation including the conservation of historic districts (from 1986 onwards) (Ruan & Yuan, 2010; Jun Wang, 2004). A series of laws and regulations have been formulated (1982, 1992, 1994, 2003, 2008) and China has gradually achieved a level of research and practice in heritage conservation similar to that experienced in the West; indeed, both the diversity and integrity of heritage have begun to command close attention. In 2006 the State Administration of Cultural Heritage (SACH) chose Wuxi (Jiangsu Province) to host an annual forum on the protection of China cultural heritage. This forum has achieved several notable milestones: in 2007 the forum focused on a discussion of autochthonous culture and its diversity; in 2008 the theme was ‘conservation of 20<sup>th</sup>-Century heritage’, this acknowledged for the first time the value of modern heritage. The concept of Cultural Route, and its scientific conservation, formed the subject of the keynote in 2009. Finally, the 2013 forum focused on ‘the conservation and utilization of cultural heritage – the balance achieved in development’. These forum topics illustrate the role China is now playing in the development of heritage conservation theory and practice.

In particular, links between heritage and both its surroundings and users are being discussed and developed.

Legally, 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. In 1982, an important policy shift occurred; the designation of 'Historically and Cultural Famous Cities' (Jinghui Wang, Ruan, & Wang, 1999a) marked a shift from the protection of individual buildings and sites towards a more comprehensive approach. Since this reorientation of policy, 119 settlements around the country have been designated, by the central government, as historic cities or towns (Wang, 2000). The final two decades of the twentieth century saw the active pursuit of heritage conservation across China. However, given the focus on urban economic growth, these activities did not command sufficient attention. It was not until the end of the twentieth century that the value of 'tradition' fully registered for urban administrators. However, this fresh awareness remains inevitably accompanied by a range of complex factors including: concerns over citizens' daily living needs, modern urban planning trends, economic development, and preoccupations with political legacies (Song, 2011).

Overall, the role of heritage conservation in China is changing and it is becoming increasingly important. As seen above, China has also gradually caught up with worldwide developments in heritage conservation. In 1985, China ratified the World Heritage Convention, and in 1987 the first six Chinese properties were inscribed on the World Heritage List (UNESCO World Heritage Centre 1992-2014, 2014a). However, there are many differences between Eastern and Western conceptions of heritage; for example, recognized meanings, values, and preservation priorities vary widely between

the hemispheres. Western standards have dominated the heritage conservation field for many years; this means that Chinese heritage often struggles to gain recognition and understanding from international heritage conservation organizations and research institutions (Alanen & Melnick, 2000). As a result, it is almost impossible for China to adopt widely accepted Western theories or methods in heritage conservation. The Nara Document (UNESCO et al., 1994) and the Beijing Document (International Conference on Urban Culture & the 2nd International Forum on City Planning, UNESCO, ICCROM, & ICOMOS, 2007) are two significant international documents focusing on 'Asian values'. The Nara Document redefined the concept of 'authenticity' and, more importantly, explored the meaning and applicability of the concept in different cultures. In particular, it highlighted that the tradition of ritual rebuilding of certain heritage properties, which is widely practised in Asian countries, should be respected; such properties should be recognized as authentic where their genuine cultural value remains intact. The Beijing Document discussed guidelines for heritage conservation and management in the East Asian area. It addressed issues such as cultural diversity; the process of protecting such diversity; the importance of documentation and archiving; understandings of authenticity and integrity; practices of maintenance, repair, partial reconstruction, and conservation of the painted surfaces of wooden structure; as well as management, presentation, tourism promotion, and training in heritage conservation.

China has seen remarkable progress, in recent years, in relation to heritage conservation research and practice. However, systematic conservation concepts or strategies have not been discussed at any level within China. As a country with vast territory, heritage properties such as the Silk Road and the Grand Canal (which is the focus of this DPhil thesis) are not merely heritage sites, but large and complex heritage systems set within a wider context of rapid economic development and population growth. The search for

effective heritage conservation research and practice, suitable for such large and complex properties, continues to present a puzzle.

## 2.4 Urban revitalization in China

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Urban revitalization is a relatively new concept in China. From 1949 to 1978, the policy for the redevelopment of old towns was to utilize space fully and gradually transform it. Efforts were made to renovate deteriorated buildings, add infrastructure, and meet residents' basic living demands (Yang & Wu, 1999). In the late 1970s, in response to the acute housing shortage, the Chinese government launched many residential buildings construction projects (Office of Shanghai Chronicles, 1992).

Since 1978, and particularly since the 1990s, urban revitalization has been developed widely and rapidly in China. Important research, practice and publications include Liangyong Wu's 'organic renewal' theory and Ju'er Hutong Projects (1987), Jianqiang Yang and Mingwei Wu's concern for comprehensive urban development (1999), Mingqian Xu's research on 'integrated conservation and regeneration development' (2004), Xiaohua Zhou's 'City's Regulation' (2007), and Youtao Bai and Zanchang Chen's 'China-pub.com' (2008).

In recent years, some scholars have conducted research in specific areas of urban revitalization in China. Jianbo Li and Jingxiang Zhang (2003), Feng Gao (2007), Yao Fang and Yousong Ge (2008), and others have looked into the origins and development of urban renewal; Qi Dong and Xiaoling Dai (2007), Taofang Yu and Zhenjing Chen (2000), and others have published books on worldwide urban renewal practice; whilst Lihong Yan (2007), Ming Cui (2006), Qin Xu (2002), and others have focused on heritage conservation during the urban renewal process. Existing attempts to link

heritage conservation and urban redevelopment are limited to discussion of the tourism value of heritage (Ma & Wu, 2005; Min, Sun, Chen, & Wang, 2007); this is because economic benefit is widely seen as the sole potential benefit, to urban revitalization, from heritage conservation. Very few studies have focused on the role of heritage in urban revitalization; one exception is Wei Dong's research in 2000, which reflected on the potential for urban planning practice to bring historic preservation and urban renewal together (Dong, 2000). Dong's work has also shaped the initial ideas of the present author's work.

## 2.5 The Grand Canal and Zhenjiang

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In order to further investigate heritage conservation and urban revitalization, as well as the developing relations between these themes, this thesis examines the Grand Canal and the city of Zhenjiang on the Grand Canal in Jiangsu Province, China. These in-depth case studies are examined in relation to the World Heritage List nomination for the Grand Canal (Chapter 4) – the latter providing an overall focus for the thesis. The nomination activities in the Grand Canal Zhenjiang Section (Chapter 5) and the port of the Grand Canal (and the Yangtze River) in Zhenjiang, the Xi Jin Ferry (Chapter 6) provide additional detailed case studies.

### 2.5.1 The Grand Canal

The earliest construction of the Grand Canal system dates to 486 BC. At this time, two waterways were dug: one connected Suzhou, Wuxi, North Changzhou, Yangtze River, and Yangzhou while the other connected Yangzhou and Huai'an (Ruan & Wang, 2009). The official construction of the canal started at the beginning of the seventh century when, on the 4th of April 605, Emperor Yang of the Sui dynasty (581-618 AD) decreed

the launch of the project (Tang et al., 636). The construction continued over many years, and between 1291 and 1293, the shape of the contemporary canal was finally formed (Zhong, 2010).

The Grand Canal is complex; it consists of many different sections. The main body of the Grand Canal is the Beijing-Hangzhou Grand Canal which flows through Beijing, Tianjin, Hebei, Shandong, Jiangsu, Anhui, and Zhejiang. In June 2007, the waterways in Luoyang (i. e. Chang'an – the capital city of the Sui and Tang dynasties), which were only used in the Sui and Tang dynasties, were added to the World Heritage List nomination. Similarly, sections in Henan and Anhui provinces were included in the nomination in order to portray a wide diversity of heritage within the umbrella of the 'Grand Canal'. Unless otherwise indicated, this thesis focuses only on the main body of the Grand Canal: the Beijing-Hangzhou Grand Canal.

Since the establishment of the People's Republic of China in 1949, numerous improvement projects have been carried out along the Grand Canal, especially in the north canal which had previously been drained. Navigation resumed in parts of the north canal, however, after the 1960s a lack of water resources became increasingly severe. In the early 1980s, most parts of the north canal were drained again. Since 2002, sections of the canal's waterways have been utilized in the South-to-North Water Diversion Project East Route to alleviate water shortages (X. Fang, Hao, & Sun, 2005). Today the overall length of the canal is 1,794 km, with navigable channels of 1,442 km. The total length of all-year-round navigable channels is 877 km; the latter are situated primarily in the south of the Yellow River and in Shandong, Jiangsu, and Zhejiang Provinces (Bei, 2012).

### 2.5.2 The World Heritage List nomination for the Grand Canal

On September 25th 2007, the State Administration of Cultural Heritage (SACH) issued a document identifying Yangzhou as the lead city in the World Heritage List nomination for the Grand Canal. Cities and regions along the Canal agreed to work together towards successful inscription. In 2008, the Grand Canal was listed by SACH, as a tentative site, in the category of Cultural Heritage; it was deemed to have met criteria (i), (ii), (iii), (iv), (v), (vi) (see Table 2.1). In 2010, at the third Development Strategy Forum of Chinese Canal Cities (June 25th 2010, Suzhou, Jiangsu, China), the Joint Declaration on Chinese Canal Cities Development Strategy was signed. This declaration proposed that the nomination file should be officially submitted to the UNESCO World Heritage Centre in 2013 with the aim of achieving successful inscription in 2014.

In order to conserve the Grand Canal, and its related heritage, multi-level conservation plans were made - this being a requirement of the World Heritage Centre for any nominated property. By the end of June 2009, municipal-level conservation plans for the Grand Canal were ready and by the end of 2009, provincial plans had been drawn up. By the end of 2010, all regional-level plans had been presented and were in the process of being implemented; similarly the overall Conservation and Management Plan for the Grand Canal had commenced (2010-2030).

At the Grand Canal Conservation and World Heritage List Nomination Work Conference on 12th April 2011, the tentative list of the Grand Canal heritage sites, which were to be included in the nomination file, was announced. In June 2012, the list of selected sites was finalized. In January 2013, the final nomination file was submitted to the World Heritage Centre for review. In September 2013, the Advisory Bodies

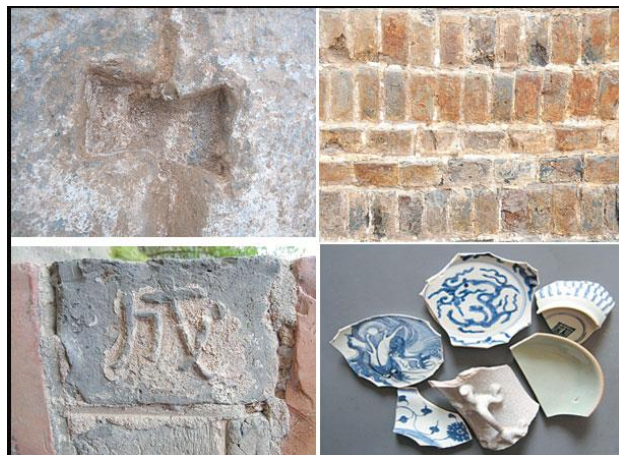
conducted site visits and field inspections to evaluate the nominated property. Prior to this, additional protection, preservation, and improvement projects continued to be carried out on the canal heritage sites and their surrounding environment.

### 2.5.3 Work for heritage conservation for the Grand Canal during the nomination

During the nomination process, many archaeological excavations have been carried out; this has resulted in the investigation and reconnaissance of numerous canal-related ancient remains. Some of the better preserved sites have been excavated, and a number of important discoveries have been made. For instance in 2011, at Tian Fei Dam archaeological site, a two-month excavation revealed distinguishing dikes with brickwork dating to the Ming

**Figure 2.1: Relics discovered at Tian Fei Dam archaeological site**

(Source: ccrnews. Image by Unknown)



dynasty (1368-1644) and stonework dating to the Qing dynasty (1616-1912) (see Figure 2.1); this was the first discovery of Ming dynasty brickworks. In addition, the site provides useful information for the research on canal waterway changes in the Ming and Qing dynasties (Museum of Huai'an, 2012).

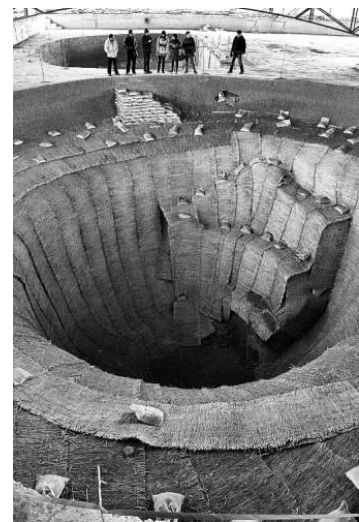
In July 2012, a large-scale archaeological excavation in Hebi, Henan Province, was telecasted live by CCTV (the major media network of China). The site had been the largest state-owned grain store along the canal in the Sui dynasty (581-618) (see Figure

2.2 top). In addition, a short distance from this site, in Luoyang, Henan Province, four large, state-owned grain stores have been excavated (see Figure 2.2 bottom). The successful excavation led to the stores' immediate inclusion in the nomination. More importantly, as the excavation and research continue, conservation and presentation plans have developed. Using the large storage area, an exhibition hall will be constructed to provide an open space for the public to view the revealed archaeological site. Exhibition rooms are planned nearby to display the newly discovered items, and a featured archaeological site park will be built (Deng, Xiaoke, & Wang, 2012).

During the nomination process, a Geographic Information System (GIS) database was widely used for information organization and management. Experience and practice in the nomination process demonstrated that a conservation planning support system, based on spatial information technology, would be helpful at every stage of the Grand Canal protection process. Such a system would introduce scientific analysis tools and improve the efficiency of planning processes (W. Zhou, Wang, Mao, & Jiang, 2010). Therefore, a digital management platform has been developed for the Yangzhou section, and commenced trial operation in February 2012. Taking advantage of the spatial overlay and analysis functions of GIS (W. Zhou et al., 2010), database was set up within this platform. This allowed a number of advantages: the system collects together survey maps, air photos, and satellite images of the canal and its host city; information on heritage resources has been organized and managed

**Figure 2.2: Barns in Hebi and Luoyang**

(Source: xx0392. Image by Wang)



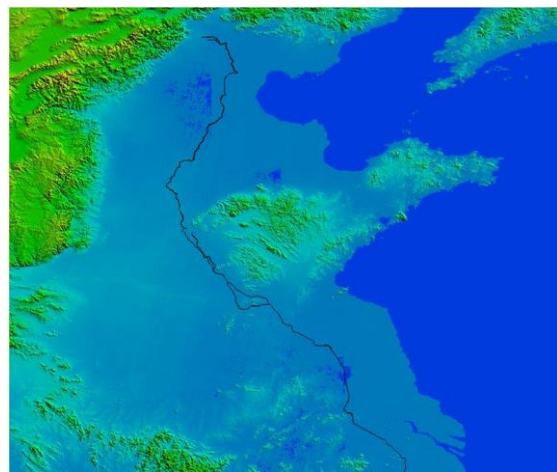
within the platform (Xi, Chen, & Xu, 2011); historical geographical information on heritage sites has been symbolized and recorded in the database; interactive update, inquiry, searching, and symbolization to the database have been made available (Hu & Dong, 2003; Xi et al., 2011); and finally, the database can also function as a platform on which different departments' data, information and management systems can dock with other datasets (Yao, 2010b).

Another example of projects related to the World Heritage List nomination process for

the Grand Canal focuses on developing new technologies: 'Application of Spatial Information Techniques in Preservation of Sites: A Case Study in the Grand Canal of China' (2010). This is a research project jointly carried out by several leading research institutes in the country<sup>1</sup>. The project uses old aerial photographs, historical maps, multi-source remote sensing images, and other data (see Figure 2.3 as a sample

**Figure 2.3: The Grand Canal river basin digital elevation model**

(Institute of Remote Sensing Nominations Chinese Academy of Sciences 2010)



of the set of data generated and used in this research project) to systematically analyse the canal watercourses and nearby archaeological sites over hundreds of years from a macroscopic view. It has mapped archaeological sites of old towns, river channels, and

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1. Tsinghua University, Chinese Academy of Cultural Heritage, Chinese Academy of Sciences' Institute of Remote Sensing Applications, and China Institute of Water Resources and Hydropower Research. A number of other institutes and organizations also participated partially in the research, including one of the author's collaborators - Southeast University.

lakes along the canal; undertaken a preliminary summary of the canal's spatial changes through its history; and supported a number of archaeological excavation practices. Two sets of software developed in the project have been registered, and the project has facilitated the process of locating and recognising canal heritage (Institute of Remote Sensing Applications Chinese Academy of Sciences, 2010).

Various departments have worked together towards heritage conservation during the nomination process in the canal cities. For example, during one key project, whose objective was to improve the historical canal's environment and transform the old town, various departments in the city of Zhenjiang took charge of the canal's different sections: Zhenjiang City Construction and Investment Group undertook work in the area from Ying Jiang Bridge to Xi Men Bridge and from Xi Men Bridge to New Xi Men Bridge (east side); Zhenjiang Bureau of Gardens and Landscapes undertook work between New Xi Men Bridge and Zhong Shan Bridge; and Jiangsu University of Science and Technology worked between Nan Shui Bridge and Ta Shan Bridge east side. The Cultural Relics Office, in the Department of Culture, Radio, Film, TV, Press and Publication of Zhenjiang, provides instructions and suggestions, and coordinates the departments and institutions. In summary, the World Heritage List nomination process for the Grand Canal is a concentrated and large-scale heritage conservation activity that has brought to the property, as well as the regions and cities within the property, various benefits. However, this process, which is critically discussed in the main body of this thesis, also has significant flaws.

#### 2.5.4 The need for heritage conservation and urban revitalization in Zhenjiang

Zhenjiang (Jiangsu Province) is a city situated in eastern China at the junction of the Grand Canal and the Yangzi River; it therefore served as one of the principal ports

connecting the north and south of China in the period from the Three Kingdoms (AD 220-280) to 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 (the regional centre of administration has now moved to Nanjing) (The Zhenjiang Institute for Historical and Cultural Cities Research, 2010). Following 1949, Zhenjiang rapidly developed its transportation, manufacture, commerce, and tourism industries. Now Zhenjiang is a city with an area of 3,847 km<sup>2</sup> (Prefecture-level city; 1,082 km<sup>2</sup>, Urban) and a population of 2,687,700 (Prefecture-level city; 749,000, Urban. 2008). According to statistics from the Zhenjiang government website, in 2009 the Gross Domestic Product (GDP) of the city was ¥167.2 billion and GDP per capita was ¥54,732 (£1= ¥10.4122).

The Grand Canal is an artery along which products were historically transported; this was particularly true during the Ming and the Qing Dynasties. Accordingly, cities and towns along the canal had advantageous opportunities for development. From the Ming Dynasty to the early Qing Dynasty, the ban on maritime voyages was rigorous. Thus, the Yangzi River and the Canal were the two most important transportation routes in Chinese history; since Zhenjiang is at the intersection of the two (see Figure 2.4), it once was a “world-renowned” and prosperous city.

**Figure 2.4: Map of showing the relations of Zhenjiang with the Grand Canal, the Yangzi River, the railway, and surrounding cities**

(Source: cedzsearch. Image by Unknown)



The Grand Canal Zhenjiang Section is one of the oldest sections of the entire 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 of change, the canal now has three estuaries to the Yangtze River in Zhenjiang. From west to east they are Jingkou Zha (‘Zha’ means 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 located in the south of the Yangtze 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 watercourse. It no longer has a navigation function, and 5.17km of its 16.69km length passes through the historic downtown area of Zhenjiang (Architecture Design and Research Institute of Southeast University & Zhenjiang Administration of Cultural Heritage, 2009).

Having a Canal section of an overall length of nearly 60 km, Zhenjiang is a place with outstanding scenic beauty, long term and prominent strategic significance, predominant commercial value, and combined cultural features of the north and the south. Various canal-generated functional spaces remain in the city; for example, wharfs, warehouses, sluice gates, bridges, pikes, relay stations, canal administration offices, residential buildings, and guildhalls. Moreover, there still exist relatively centralized and intact historic districts here. These historic architectural styles, constructions, and blocks represent the past of the city and the canal, and the fusion of diverse cultures. After 1949, large-scale excavation of watercourses and trenches took place; this brought big changes to the canal. In addition, rapid urban development in modern times has resulted in a serious threat to heritage. However, currently, there is insufficient attention to, or appreciation of, the great value of Zhenjiang's heritage; as such its conservation is not yet guaranteed.

In the meantime, for a combination of reasons, Zhenjiang has gradually been left behind by neighbouring cities such as Changzhou, Wuxi, and other south Jiangsu municipalities. Older housing, especially that which is concentrated in the inner parts of the city, has physically deteriorated, become overcrowded, and lacks services. These areas continue to experience general decline, with their physical, social, and economic functions disrupted (Steinberg, 1996). Zhenjiang is eagerly seeking to catch up, and at the same time to achieve revitalization. Problems are more likely to be generated in the absence of carefully made plans to revitalize the city and conserve its heritage, and to attentively manage relations between these twin concerns of past and present.

## 2.6 Developing relations between heritage conservation and urban revitalization

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This review of heritage conservation and urban revitalization literatures demonstrates that there remain gaps in the literature to fill, and questions to answer, in order to understand developing relations between these twin fields of research and practice. The introduction to the two linked Chinese case studies has demonstrated the urgent need for answers to these questions, and the existence of an opportunity to build upon, and enhance the knowledge generated through, the Grand Canal World Heritage List nomination process. In particular, three questions have emerged: Is contemporary theory and practice sufficiently developed to equip heritage conservation activities for large-scale, complex heritage as the Grand Canal? What new ideas and approaches can the field of heritage conservation bring to urban revitalization theory and practice? What role can heritage play in the process of revitalizing a city? What lessons can we learn from China – the World Heritage List nomination process for the Grand Canal and the heritage conservation and urban revitalization activities in Zhenjiang?

China is rich in heritage resources; this is demonstrated by the Grand Canal and canal-related sites in Zhenjiang. There is a well established tradition of recognizing and appreciating heritage, however, Chinese approaches to heritage are not yet sufficiently understood and accepted internationally. In order to ensure alignment, China has adopted various concepts and ideas from ‘the West’. However, it remains to be seen whether these concepts and ideas have worked in a Chinese context. While such debates are ongoing, following decades’ of rapid development in the late 20<sup>th</sup> Century, Chinese cities are facing complicated societal and economic problems. Simultaneously, they are struggling to identify paths towards steady and sustainable development. This presents a challenge, but also an opportunity, for Chinese cities. Following considerable efforts in

recent decades, heritage conservation schemes have been established for the majority of individual heritage sites; for example, monuments. However, large, complex, and ancient heritage systems, such as the Grand Canal, are yet to be systematically tackled; they increasingly demand attention.

The heritage of the Grand Canal is a comprehensive entity not limited to watercourse systems; it also consists of hydraulic structures, shipping facilities, administration and service organizations or institutions, documents, and archives. Similarly, building clusters, streets, and communities that have formed because of, or interacted with, the canal are important components of canal heritage. Intangible cultural aspects must also be considered. In addition, the bio-ecological environment; the landscape associated with the canal; and elements of the built environment that, although located outside the immediate vicinity of the watercourse, may be associated with changes in the urban landscape caused by the evolving canal are all important components of canal heritage (Architecture Design and Research Institute of Southeast University & Zhenjiang Administration of Cultural Heritage, 2009).

There are various spatial and temporal dimensions of the Grand Canal heritage and its multiple subsystems of heritage, ecology, environment, society, and economy. The Grand Canal system and its subsystems all comprise a number of layers, structures, and elements. For instance, within the canal heritage system there are many different components including hydraulic and related heritage, canal settlement heritage, and other tangible and intangible heritage. Each of these categories has sub-components (see Table 4.2). There are complicated interactions between these layers, and these change dynamically, over time, as historical development proceeds (Yao, 2010a; G. Zhou, 2002).

In summary, although considerable achievements have occurred in both heritage conservation and urban revitalization, the field of systematic heritage conservation is still under-explored; similarly, the role of heritage in Chinese, and global, urban revitalization remains under-examined. This thesis provides a valuable investigation of developing relations between heritage conservation and urban revitalization, examined in relation to two topical, linked, and in-depth case studies: the Grand Canal and Zhenjiang; in addition the study discusses the potential for wider application of lessons learned from the examination of these cases.

## CHAPTER 3

### METHODOLOGY

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This DPhil project is built on a foundation of heritage conservation and urban planning theories and involves a series of empirical investigations. Both during and after the fieldwork (which included a series of in-depth case studies), a large amount of data review and interpretation was undertaken. The various methods used in this thesis, within that overall framework, are described below.

The review of heritage conservation and urban revitalization literatures, in Chapter 2, clearly indicates that key questions remain unanswered in the field:

- Is heritage conservation theory and practice sufficiently developed to tackle large-scale and complex heritage conservation activities such as the World Heritage List nomination preparation for the Grand Canal?
- What new ideas and approaches can heritage conservation theory and practice bring to conceptions of urban revitalization, and, relatedly, what role can heritage play in the process of revitalization?
- What lessons can be learned from China's experience of the World Heritage List nomination process for the Grand Canal, and the heritage conservation and urban revitalization activities in Zhenjiang?

This DPhil research responds directly to these questions; it offers an empirically rich, extensive examination of the practices and philosophies of heritage conservation and urban development. The thesis is primarily based on empirical research grounded in the tradition of urban planning research and practice. In the course of the study – the

researcher has contributed to planning and conservation activities; this has provided an opportunity to collect data that can be analysed within the framework of urban planning and heritage conservation. This body of empirical research, allied with wider reading, has then been used to develop some broader theoretical observations on heritage conservation. As discussed in the literature review chapter, the case studies locations are the Grand Canal and Zhenjiang. The specific data sets used, and the procedures adopted for analysing the data, are described in the following sections; this is followed by a short discussion of the theoretical approach adopted in the research.

### 3.1 Empirical studies

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In order to analyse developing relations between heritage conservation and urban revitalization, the research process began with the participation of the author in two projects. One is a local heritage conservation and urban revitalization project: the Xi Jin Ferry (a historical port on the Grand Canal) project in Zhenjiang (Chapter 6). The other is by far the largest and most concentrated heritage conservation activity in China (and possibly the largest in the world to date): the preparation for World Heritage List nomination of the Grand Canal (Chapter 4 and 5). The author participated in this process at two sites in particular: the cities of Zhenjiang and Yangzhou. During the author's participation, the relationships between heritage, the built environment, and urban development were observed and analysed. In this way, profiles were constructed of current heritage conservation research and practice in China, and of the interaction between heritage conservation and urban redevelopment. All information used in this DPhil research was collected by the author in the field unless otherwise acknowledged. The following sections set out the methodology adopted in the research: firstly, a brief introduction describes the locations and phases of fieldwork; secondly, the methods that

were used to collect data during the fieldwork phases are listed and explained; finally, in the third section, data analysis methods are presented.

### 3.1.1 Fieldwork locations and phases

The empirical components of this DPhil thesis are based on fieldwork. There are three main research foci: a) the overall World Heritage List nomination (Chapter 4), b) the nomination process in Zhenjiang (and the nomination process as led in Yangzhou) (Chapter 5), and c) the Xi Jin Ferry of the Grand Canal in Zhenjiang (Chapter 6). These studies took advantage of the opportunity to work alongside the on-going nomination process for the Grand Canal; they utilized mixed methods, ranging from reviews of historical documents in archives, to architectural, urban planning, and design methods and skills.

Zhenjiang was chosen as the principal study location for four reasons. Firstly, the city is at the confluence of the Yangtze River and the Grand Canal, as well as being the port connecting the southern and northern parts of the Canal; thus, it has been, historically, an exceptionally important waterfront city and port. Secondly, due to the city's renowned status in the past, many canal-related heritage sites in Zhenjiang are in urgent need of conservation. Thirdly, modern mass transportation infrastructures, such as the railway, have replaced many functions of the Grand Canal. Given that cross-country transportation no longer depends on the canal, cities adjacent to the waterway have lost their status as transport hubs; meanwhile, cities close to railways, national highways, and airports have gained ascendance. This process affected Zhenjiang seriously, and has directly resulted in the city's decline. Fourthly, the author of this report has participated in an historic preservation and urban redevelopment project for Xi Jin Ferry (a historical district also known, in the past, as Zhenjiang Port) since 2006, and in the

first round of field investigation along the Grand Canal Zhenjiang Section since 2009 for preparation for the Conservation Plan for the Grand Canal Jiangsu Section. This ensured the availability of both data-collection and collaboration opportunities for this DPhil project. Moreover, as a medium-size historical city, with an intermediate level of development, Zhenjiang is both a tractable case study for a DPhil, and a case study whose investigation is amenable to generalization; as such the results of this research have the potential to inform research and practice in other cities.

The entire route of the Grand Canal Zhenjiang Section was visited by the author in field visits carried out between 2008 and 2013. These visits were facilitated by the Department of Culture, Radio, Film, TV, Press and Publication of Zhenjiang; the Cultural Relics Office; Zhenjiang Xi Jin Du Culture and Tourism Co Ltd; and Dong Wei Studio, Department of Urban Planning, School of Architecture, Southeast University. The fieldwork included a survey of the condition of waterway structures and other historic buildings and archaeological sites in the area.

A pilot study was conducted from December 2010 to January 2011. During this pilot study, data collection was carried out on the canal waterway and two waterfront sites (including Xi Jin Ferry). Following this, the first main fieldwork phase took place between September and November 2011; in this ten week period the canal waterway and the two waterfront sites were revisited, and the research area of Xi Jin Ferry was extended; in addition four important canal nodes and one waterfront site were investigated and several visits were made to the canal city of Yangzhou - the home of the 'World Cultural Heritage Joint Bidding Office' for the Grand Canal listing bid. In the course of these visits, additional data on the overall nomination process was collected, and, most importantly, a new collaboration was established with the Cultural

Relics Office within Zhenjiang's Department of Culture, Radio, Film, TV, Press and Publication. Since then the World Heritage List nomination activities in Zhenjiang have been closely followed and recorded by the author; in particular, these endeavours were examined during the second main fieldwork phase - between April and October 2012.

In addition to its consideration of nomination work carried out in Zhenjiang, the second main fieldwork phase provided the author with an opportunity to participate in a detailed historic preservation and urban redevelopment project; this work focused on part of the Xi Jin Ferry historical district and the author's role included the production of a book - the *Atlas of Xi Jin* (In Press) – completed in mid-December 2012. Also during this second fieldwork phase, the author undertook an internship, from August to September 2012, at the World Cultural Heritage Joint Bidding Office (Yangzhou). A further round of field investigation was completed in order to update data on the canal waterway, Xi Jin Ferry, and the two other waterfront sites. New data was also collected in Danyang (a county-level city managed by Zhenjiang); this focused on the extended waterway of Zhenjiang Section and a number of important canal nodes in Danyang. A concluding phase of fieldwork, between August and October 2013, provided an opportunity for final site visits and information updates; similarly, the internship in the Joint Bidding Office (Yangzhou) continued during this time.

### 3.1.2 Field data collection

The field methods adopted in the study were predominately developed as part of collaborations the author established with the Cultural Relics Office (Zhenjiang), School of Architecture at Southeast University, Zhenjiang Xi Jin Du Culture and Tourism Co Ltd, and the Joint Bidding Office (Yangzhou). These methods can be divided into distinct types: historic buildings transformation, heritage conservation

planning, and urban planning and design; in the course of each type a range of activities occurred; for example, daily field visits, archival research, discussions, meetings, informal interviews and conversations among colleagues. During the fieldwork phases (a total of ten months), vast quantities of data on heritage conservation and urban revitalization work were collected. This was achieved partially through direct participation in the World Heritage List nomination process for the Grand Canal in (i) Zhenjiang (as detailed above), (ii) Yangzhou (as a Visiting Researcher at Yangzhou Office), and (iii) the Xi Jin Ferry project (as Lead Assistant Urban Planner between February 2006 and July 2009, and then as Urban Planning and Heritage Conservation Consultant and Researcher from January 2011 to present). The data collection during the fieldwork phases also included examination of project reports (which were assigned or made accessible because of the collaborations). During these wide-ranging field activities data was collected in numerous formats; these included: historical information on heritage sites; archival materials; visual recordings; the World Heritage List nomination work plans, processes, and reports; government documents; historical research results; heritage conservation plans; waterway regulation plans; archaeological excavation reports; and urban redevelopment plans.

Historic buildings are vehicles for memories of the cities in which they are located. Landscapes witness the passing of time, and cities carry the stories of their many inhabitants. In the course of the collaborations described above, the author employed architectural and urban planning methods to renovate historic buildings, undertook work to conserve the characteristics of townscapes, and created conservation and revitalization plans (Chapter 6). Methods employed, in the course of these activities, included: survey and plotting of historical buildings; production of architecture renovation designs; planning for historic resource integration and function zoning;

execution of scenery system construction; and control planning for sequences, and extents, of development (K. Fang, 2000; Groat & Wang, 2002; Tyler, Ligibel, & Tyler, 2009; Jinghui Wang, Ruan, & Wang, 1999b; S. Zhang, 2001). Through the practice of these methods, the author acquired first-hand data on the heritage sites; for example, during the process of surveying and plotting historical buildings, information on the conditions of the sites prior to heritage conservation activities and/or urban planning practice was gathered. The opportunity to participate throughout the process proved invaluable; from architecture renovation design and historic resource integration planning, to sequence of development control planning - experiences and observations of how heritage is treated and positioned in urban development were gained.

During heritage conservation planning, the author employed a number of approaches (Chapter 4 and 6); these included: conservation decision-making (to evaluate the significance and condition of sites, to interpret the implications of heritage resources, and, finally, to assess options for preservation and conservation), heritage management (to document repair actions in detail (Marshall, 1996), to prepare presentation plans, to set up the stewardship of historic sites, and to foster and monitor commercial development), and legislative provisions review (Ahmed & Alam, 1990). These practical experiences enabled the collection of first-hand information, and direct observation of the state of heritage conservation research and practice in the field.

The predominant methods typically employed in urban planning and design are those of urban renewal. For example, structurally unsound buildings may be demolished to enable the introduction of essential social services, infrastructure, or open space. Similarly, old buildings may be repaired and modernized to facilitate their continued use. Such methods also include the preservation of existing urban pattern and fabric,

creatively using and adaptively re-using older quarters of a city, to allow commercially viable activities (Florian, 1996), and to upgrade infrastructure services (on a modest scale). In order to achieve urban revitalization through heritage conservation, the key method adopted involves promotion of the cultural values of a heritage site; in this way heritage is intended to ‘function’ as an attraction - promoting tourism and the local investment climate, and contributing to the ambience of a city. By participating in ongoing heritage conservation projects (Chapter 6), the author observed dynamic relations between heritage and built environment, the current status of heritage in urban development, the ways heritage conservation and urban planning work together, and the results of such attempts at coordination.

### 3.1.3 Data analysis

Database review, document analysis, institutional analysis, and literature review were used extensively during the data analysis phase. Since the World Heritage List nomination is a large and complex heritage conservation activity, stretching across East China, and since it is highly interdisciplinary, some of the data acquired during the fieldwork phases required further interpretation. The first step, when working with heritage, is to thoroughly understand it; this includes an appreciation of its history, unique significance and the characteristics that contribute to its importance. Additional factors for consideration include: identification of changes or modifications that the heritage has undergone over time, the type and condition of its physical materials, and the nature of the surrounding environment (Merlino, 2003; Shan, 2007; Turner, 2012). Large amounts of information on heritage sites along the Grand Canal were extracted from databases built for the nomination. Similarly, archival research enabled an

historical analysis of the impact of the Grand Canal, on the cities of Zhenjiang and Yangzhou, during its history (Chapter 5).

Secondary literature, such as archaeological analysis reports, work reports, conference and meeting minutes, publications, and media reports have been reviewed (Chapter 4, 5, and 6). Archaeological excavation is a fundamental step in the study of canal-related heritage; while some of the heritage is still in use, or can be easily observed, some of it remains buried. This part of the heritage conservation work has been carried out by professional excavation teams, however, this DPhil research includes the consultation of archaeological reports held in archives (Zhang et al., 2010).

The case study on Xi Jin Ferry in Zhenjiang (Chapter 6) employed an analysis of changing urban form based on urban morphology theories; this enabled an exploration of the interaction between the heritage and the city in the past, and provided an opportunity to inform future ‘heritage conservation - urban development’ decision making. In this case study, specific methods and tools such as development pattern analysis, Adobe Photoshop, and AutoCAD remapping have been adopted. Development pattern analysis is crucial to understanding a city’s form, and its relations with the development, since urban morphology has an important role “in studies on urban spatial development structures, forms and development rules” (Duan, 2003, p. 45). By summarizing what has happened in history, development pattern analysis assists in predicting the future direction of development. As discussed by Dong, remapping approaches provide an effective means “to establish a new methodology of spatial mapping for planning and design” (2009, p. 29). Examination of historical data relating to heritage sites, including old records, ancient maps, and literature from major historical epochs (Zhang et al., 2004), has enabled a highly visual analysis of

development patterns: the evolution of both the canal and the city have been documented in drawings. Such visual representations can be used as a basis for heritage identification. Similarly, they provide a valuable reference during later stages of the conservation and revitalization planning process.

The in-depth qualitative information acquired during the empirical studies included descriptive material, extracted from interviews, conversations, documents, and field notes. The analysis of this data primarily involved interpretation of the main objectives of heritage conservation work, examination of the evolution of events, and consideration of the results of implemented heritage conservation activities and urban planning practices. The author directly participated in this empirical research; this enabled the maintenance of collaborative relations. The analysis, interpretation, and critique set out in this thesis do not seek to evaluate the individual or collective performance the professionals the author worked alongside during the nomination process; the critical conclusions of this research are intended to inform a broad consideration of the current state of heritage conservation and urban redevelopment practice; however, it is important to note that such conclusions are academic in scope and should not be used as a basis for assessment of the performance of those involved in recent or existing work, or indeed of those who kindly participated in this research project.

### 3.2 Developing a framework for future research and practice

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In order to develop a systematic means to understand and treat heritage in the built environment, and to respond to a gap in the literature (Section 2.6), this DPhil project builds on empirical research, described above, to develop a conceptual framework for

future research into the relationship between heritage conservation and urban redevelopment (Chapter 7).

At present, it appears that cities along the Grand Canal are carrying out conservation work individually; there is currently no mechanism for dealing with differing responsibilities or ensuring conformity. This approach is reflected in Chan and Ma's comment that: 'final responsibility for the protection of a site rests with the corresponding county/city government where the site is located regardless of the level at which it is classified' (2003, p. 20). Furthermore, conservation planning for the Grand Canal includes additional, special planning measures related, for example, to themes of eco-environment planning, landscape planning, presentation planning, and archaeology planning. Since cities produce these plans separately, they are not adequately aligned; as such, the future coordination of canal heritage conservation, and canal cities' development, will present problems (Yao, 2010b).

In the light of these concerns, and building on the empirical data collected, a new framework has been developed; this considers the Grand Canal as a 'heritage system'. Such a system is composed of several 'issue clusters', and the proposed framework adapts ideas from concepts such as Heritage Corridor, Heritage Canal and Cultural Route. The 'heritage system' approach provides the possibility of 'preserving heritage sites as well as the associated knowledge and traditional culture' (Chan & Ma, 2003, p. 22); this has potential to drive revitalization of the cities along the canal.

The methods adopted in this DPhil project may usefully be considered as 'participant observation'. Such methods have some potential disadvantages: for example, the author has needed to exercise extreme sensitivity throughout both fieldwork and writing, to ensure the ethical integrity of the research. There have been additional difficulties

associated with maintaining records of the empirical research process. However, the author's direct participation in the empirical research has provided this DPhil thesis with first-hand data, as well as an 'insider' perspective. In addition, direct experience has enriched the research process; the author has benefited from day-to-day exposure to difficulties, debates, executive matters, logistical challenges, diverse modes of heritage conservation negotiation and practice, and hierarchies of decision-making regarding what counts as heritage. This in-depth, empirical understanding of existing processes underpins both the reflections on contemporary practice, and the proposed framework for future research and practice, articulated in this thesis.

## CHAPTER 4

### WORLD HERITAGE LIST NOMINATION FOR THE GRAND CANAL IN CHINA: A CRITIQUE OF THE PROCESS TO DATE

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#### 4.1 Introduction

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From the first use of the word “monument” by François-Roger de Gaignières in 1703 (Brown 1988), heritage conservation theories and practice have developed over three centuries. Today, the newest developments in the field include taking ecological (Dornieden, Gorbushina, and Krumbein 2000), economic (Hampton 2005; Bedate, Herrero, and Sanz 2004; Ruijgrok 2006) and social (Graham, Ashworth, and Tunbridge 2000; Cho 2000; Del Saz Salazar and Montagud Marques 2005; Waterton, Smith, and Campbell 2006) aspects into consideration, as well as extending the concepts of heritage and heritage conservation. At the same time, experience and theoretical research have benefited from increasing participation by countries such as China.

As a large and complex heritage conservation activity, the World Heritage List nomination for the Grand Canal is the first one in China, and even the world, to have brought together so many geographical regions as well as administrative departments. The opportunity to follow this on-going nomination process has allowed an intensive and close examination of the latest development in heritage conservation theory and practice.

The empirical research started with a question: ‘How well has heritage conservation been done on the Grand Canal?’ As the nomination process comes to a close, evidence led to the conclusion that, there have been a number of flaws and weaknesses of the

heritage conservation activities during the nomination process. Therefore, the aim of this article is to critique the nomination process with the purpose of contributing to heritage conservation research and literature on what is needed in conserving large and complex heritage, through lessons learnt from the China experience.

This task is done by firstly carefully combing through the World Heritage List nomination process for the Grand Canal (from 2007 to present). Information has been obtained from participant experiences during an internship at the World Cultural Heritage Joint Bidding Office (Yangzhou) and collaboration with the Cultural Relics Office within the Department of Culture, Radio, Film, TV, Press, and Publication of Zhenjiang. Information has also been obtained from analysis performed on documents, archives, reports, and so on. Access to these materials has been authorized within these working relationships<sup>1</sup>. The methods used in the research are field investigation, archival research, heritage conservation planning and practice, urban planning consulting, and participant observation among others.

The critique focuses on three key elements: the research underpinning heritage conservation for the Grand Canal, the heritage evaluation during the nomination process, and the legal and administrative systems. In all three aspects, the article identifies difficulties, acknowledges achievements, and evaluates the process and the results critically.

Before starting the analysis, it is essential to mention the Outstanding Universal Value required by the World Heritage Convention Concerning the Protection of the World

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1. Since the nomination is still pending, the final nomination file submitted to the World Heritage Centre has not been used in this research to avoid any ethical conflicts.

Cultural and Natural Heritage (1972) (UNESCO World Heritage Centre 1972) because in order to be included on the World Heritage List, heritage sites must be of outstanding universal value and meet at least one out of ten selection criteria (United Nations 2014; Jokilehto, Cameron, and Petzet 2008). Outstanding Universal Value (OUV) is defined as “cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity” (UNESCO World Heritage Centre 2013, para. 49). “To be deemed of Outstanding Universal Value, a property must also meet the conditions of integrity and/or authenticity and must have an adequate protection and management system to ensure its safeguarding” (UNESCO World Heritage Centre 2013, para. 78). The nomination process for the Grand Canal has had to demonstrate OUV through assessing authenticity and integrity of the site and has had to develop adequate management and protection plans. The difficulties faced by a site of such size and complexity are addressed in this paper.

This article starts with a brief introduction to the Grand Canal and its nomination process. It then records and critiques the World Heritage List nomination process in three parts. First, Section 4.4 reviews existing heritage conservation research on the Grand Canal and the nomination carried out by other experts, practitioners, specialists, and scientists, and indicates the need for further research to underpin conservation activity. Second, Section 4.5 focuses on the canal heritage identification, evaluation, and interpretation activities during the nomination. This part questions the effectiveness of the guidance on Outstanding Universal Value as applied to specific cases, and argues that the site selection process may cause the loss of full meanings and values of the heritage. Third, Section 4.6 takes advantage of the opportunity to follow the nomination

process, and investigates the legal and administrative system for canal heritage conservation and management. The research results of this part suggest that for large and complex heritage like the Grand Canal, it is particularly challenging to set up effective and efficient legal and administrative systems. But at the same time, these systems are the foundation of successful heritage conservation activities for large and complex heritage.

#### 4.2 A brief introduction to the Grand Canal of China

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The Grand Canal is a manmade canal thought to be the oldest and longest in the world. The earliest construction of a part of the canal system dates back to 486 BC (An 2001). The official construction project of the canal started in 605 AD (Tang et al. 636). The construction continued over the years, and between 1291 and 1293 AD, the shape and trend of the contemporary canal was finally formed (Zhong 2010). As shown in Figure 4.1, the Grand Canal now runs through Beijing, Tianjin, Hebei Province, Shandong Province, Jiangsu Province, and Zhejiang Province. It connects six major natural water systems across mainland China: Haihe River, the Yellow River, Huaihe River, the Yangtze River, Taihu Lake and Qiantang River (X. Zhu 2007).

**Figure 4.1: The Grand Canal and the six natural water systems**  
 (Source: Created by the author based on information and images from *Conservation and Management Plan for the Grand Canal (2010-2030)*)



Through a number of dynasties, the Grand Canal has been an important water transportation passage through Northern and Southern China. Moreover, it has played a crucial role in securing national unity, fueling economic prosperity, achieving cultural fusion, and fostering international communications. After the Sino-British Treaty of

Nanking was signed, Cao Yun<sup>2</sup> was blocked. In 1855, the north and south canal waterways were disconnected. In 1911, the completion and opening to traffic of the Tianjin-Pukou<sup>3</sup> Railway announced the end of the Grand Canal's era as the major south – north transportation passage (Wu and Wang 2010).

Since the establishment of the People's Republic of China in 1949, numerous improvement projects have been carried out along the Grand Canal. However, by the early 1980s, most parts of the north canal were closed. Since 2002, parts of the canal waterways have been utilized in the South-to-North Water Diversion Project East Route to alleviate water shortages in the north (Fang, Hao, and Sun 2005). Today the overall length of the canal is 1,794 km, with navigable channels stretching for 1,442 km. The total length of all year round navigable channels is 877 km, mostly to the south of the Yellow River and in Shandong, Jiangsu, and Zhejiang Provinces (Bei 2012).

The Grand Canal is an icon for the Chinese civilization and is known globally for its technological and historic value. In 2006, the Beijing-Hangzhou Canal as a whole was designated as a national-level cultural relics unit (Chinese Academy of Cultural Heritage 2012). In December of the same year, it was included in the China World Heritage Tentative List (including the waterways that flow through Beijing, Tianjin, Hebei Province, Shandong Province, Jiangsu Province, Zhejiang Province, Anhui Province, and Henan Province<sup>4</sup>, as shown in Figure 4.2).

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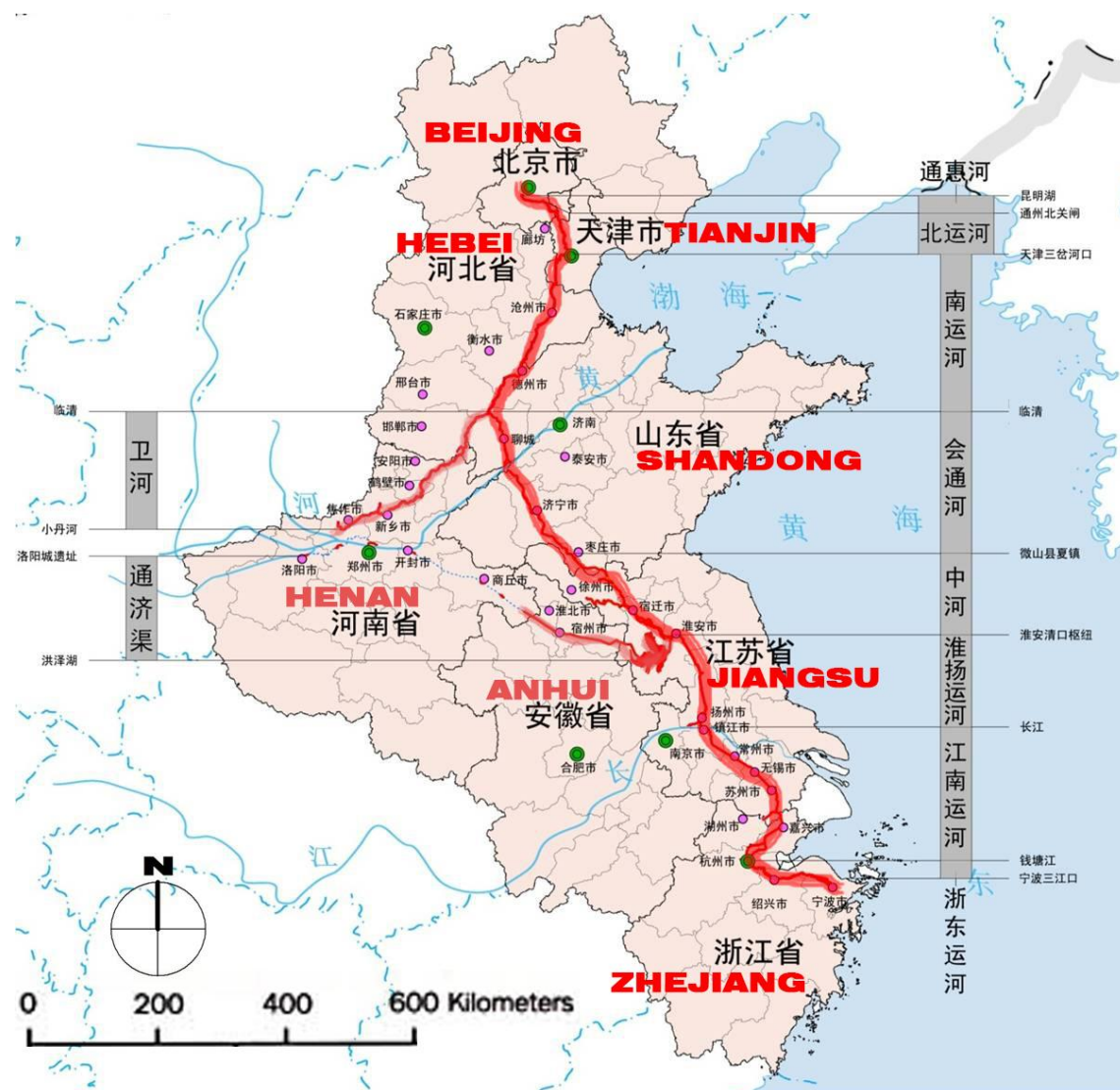
2. Cao Yun (漕运) – water transportation (grain, goods, army etc.) along the Grand Canal between south and north China

3. A district in Nanjing – the capital of the Republic of China, now the capital city of Jiangsu Province.

4. The main body of the Grand Canal is the Beijing-Hangzhou Grand Canal which flows through Beijing, Tianjin, Hebei, Shandong, Jiangsu, Anhui, and Zhejiang. From June 2007, the waterways in Luoyang (i. e. Chang'an – the capital city in the Sui and Tang dynasties) which was only used in the Sui and Tang dynasties have been included in the nomination. Thus, some sections in Henan

**Figure 4.2: The Grand Canal - the Beijing-Hangzhou Canal + sections in Henan and Anhui provinces**

(Source: Created by the author based on information and images from *Conservation and Management Plan for the Grand Canal (2010-2030)*)



and Anhui provinces were added. The main body of the Grand Canal, i. e. the Beijing-Hangzhou Grand Canal is discussed in this paper, unless indicated explicitly.

### 4.3 General introduction to the nomination process

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From 26th to 28th September 2007, the 1st World Canal Cities Expo & Mayors' Forum was held in Yangzhou. During the conference, the State Administration of Cultural Heritage<sup>5</sup> (SACH) announced Yangzhou (Jiangsu Province) as the lead city in the World Heritage List nomination for the Grand Canal. This marked the official launch of the nomination activities. From 25th to 26th of March 2008, a joint World Heritage listing nomination meeting was held in Yangzhou. The meeting was chaired by SACH and involved 35 cities from 8 provinces. The meeting issued the Yangzhou Agreement, which determined the nomination plan and schedule.

According to the Yangzhou Agreement, the first stage of the nomination was to draw up municipal level canal heritage conservation plans, the second was to make provincial plans, and the third to prepare the overall conservation plan and management regulations. The municipal plans aimed to identify the heritage, evaluate the heritage, designate protection areas, and formulate safeguarding and management measures. Provincial plans summarized results from municipal plans then evaluated and graded the heritage on the provincial level. In addition, they advised overall solutions integrating related plans in other industries and departments within the provincial area. The Conservation and Management Plan for the Grand Canal (2010-2030) again summarized results from provincial plans, and evaluated heritage along the whole canal based on World Heritage standards. At the same time, the plan aimed to protect, manage, and monitor the heritage to satisfy World Heritage requirements.

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5. SACH, composed of 28 offices, is the encompassing agency for conservation of Chinese culture and heritage under the Ministry of Culture. (<http://www.sach.gov.cn/>)

In order to reinforce the normalization of conservation plans for the Grand Canal, as well as to guide all municipal level planning work, SACH (the State Administration of Cultural Heritage) authorized CACH (the Chinese Academy of Cultural Heritage<sup>6</sup>) Research Group and the School of Architecture Southeast University to draft the ‘Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal - the First Stage’ (2008). For similar reasons, ‘Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal - the Second Stage’ was drafted in 2009.

Throughout the preparation for these plans of different levels, as well as the nomination process, site selection was carried out continuously. This is because a) identifying the heritage is the first and fundamental step of any conservation activities, and b) selecting the most representative sites is important for the best presentation of the property to the World Heritage Centre to establish Outstanding Universal Value, as well as for the feasibility of the nomination work, especially on a large and complex site like the Grand Canal.

From the start of 2011, a large amount of work commenced, including conservation of the selected heritage sites (at their respective levels), improving their surrounding environments, and sorting archives and documents. A few major steps were taken in 2012. In June of that year, the list of selected sites to be included in the nomination file was finalized; legislation planning finished before the end of September, including enacting the Administrative Measures on Protecting and Managing the Grand Canal Heritage (Ministry of Culture of the People’s Republic of China 2012); on September

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6. CACH – the leading institution in heritage conservation in China - is based in Beijing. It is composed of 11 functional and professional departments and institutes. By the end of 2012, CACH had 144 employed professionals. (<http://english.cach.org.cn/col/col1574/>)

26 the Grand Canal Heritage Protection Joint Provisions (2012 China Yangzhou World Canal Cities Expo & World Canals Conference 2012) was signed by mayors or representatives of all the canal cities.

While preparing the Conservation and Management Plan for the Grand Canal (2010-2030) under the commission of SACH, CACH also undertook the drafting of the World Heritage List nomination file for the Grand Canal (Chinese Academy of Cultural Heritage 2012). In January 2013, the final nomination file was submitted to the World Heritage Centre for review. In September 2013, the Advisory Bodies conducted site visits and field inspections to evaluate the nominated property. If the decision is not deferred for any reason, the final decision will be made in June 2014 when the World Heritage Committee next meets. The timeline of the whole nomination process is summarized in Table 4.1.

**Table 4.1: Timeline of the nomination process**

(Source: Created by the author from information gathered during fieldwork)

<b>2007</b>	
<b>September</b>	Yangzhou became the lead city for the nomination
<b>2008</b>	
<b>March</b>	<i>Yangzhou Agreement</i> - outlined the nomination plan and schedule
<b>28<sup>th</sup> March</b>	Included on China's Tentative List (an 'inventory' of the properties to submit for inscription on the World Heritage List)
<b>25<sup>th</sup> September</b>	<i>Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal – First Stage</i> issued
<b>2009</b>	
<b>April</b>	The Grand Canal Conservation and World Heritage Site Listing Nomination Inter-Ministerial Consultation Team formed
<b>End of June</b>	Municipal level conservation plans ready
<b>6<sup>th</sup> November</b>	<i>Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal – Second Stage</i> issued
<b>End of the year</b>	Provincial level conservation plans ready
<b>2010</b>	
<b>November</b>	List of recommended sites for the nomination drawn
<b>2011</b>	
<b>March</b>	<i>Conservation and Management Plan for the Grand Canal (2010-2030)</i> passed
<b>2012</b>	
<b>15<sup>th</sup> June</b>	List of selected sites for the nomination set
<b>End of July</b>	Enacted and started the implementation of provincial conservation plans for the Grand Canal; finished the implementation of municipal conservation plans for the Grand Canal
<b>14<sup>th</sup> August</b>	<i>Administrative Measures on Protecting and Managing the Grand Canal Heritage</i> issued
<b>24<sup>th</sup> September</b>	Preliminary nomination file submitted to the World Heritage Centre
<b>2013</b>	
<b>End of January</b>	Completion of the nomination file confirmed; submitted to the Advisory Bodies for evaluation
<b>September</b>	Advisory Bodies site visits
<b>2014</b>	
<b>June</b>	The 38 <sup>th</sup> World Heritage Committee Meeting decide whether inscribe on the World Heritage List

#### 4.4 Challenges to the nomination process: lack of research for the Grand Canal

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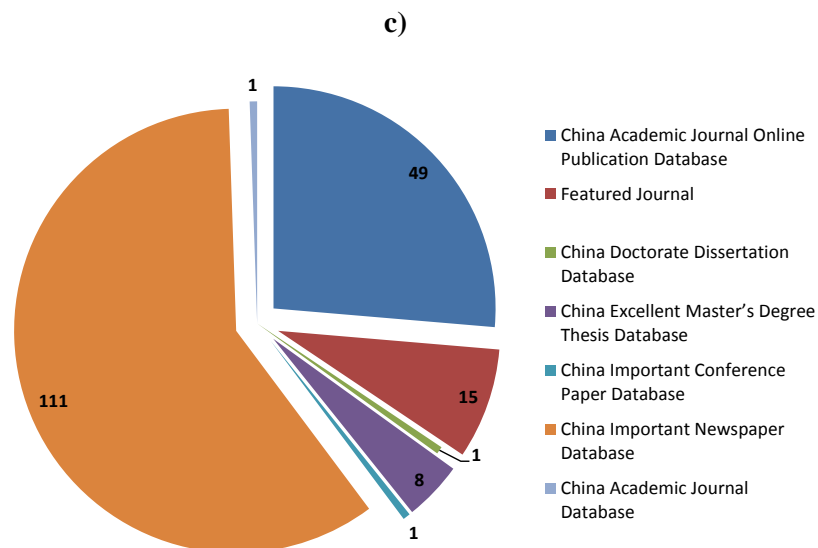
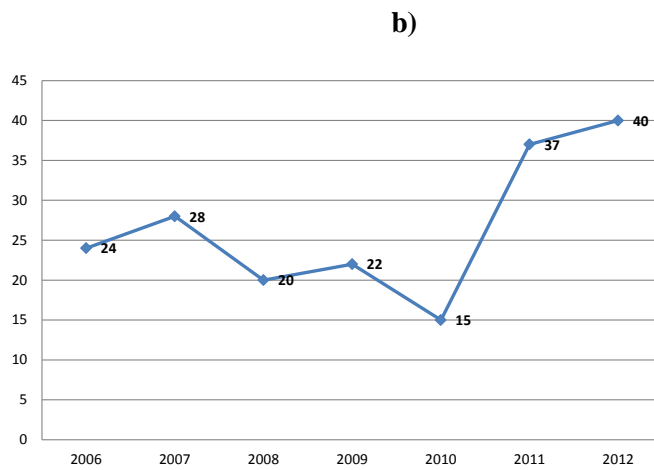
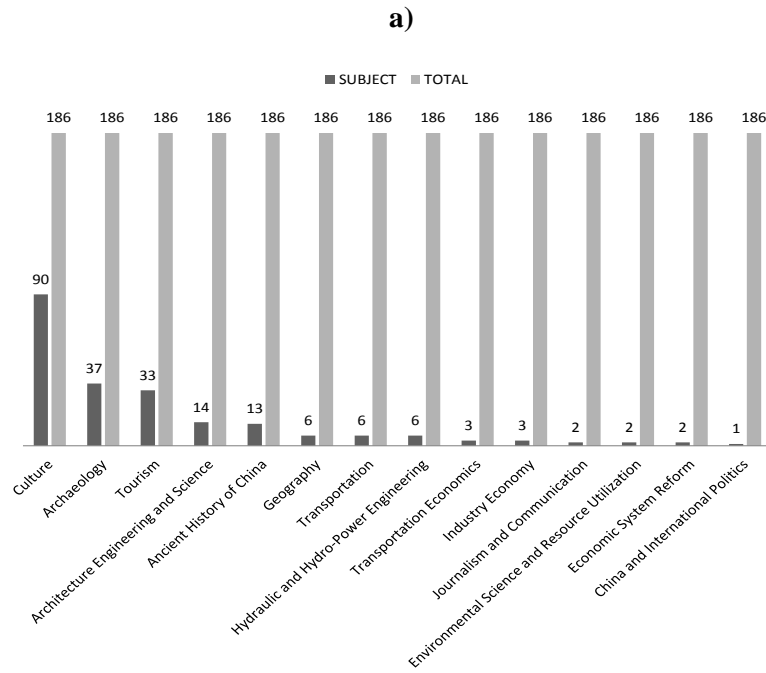
Other nomination exercises and large scale heritage conservation processes have had at their disposal a number of clear concepts and, importantly, much relevant background research. This, however, has not been the case for the Grand Canal.

In order to inspect relevant research done in China for the Grand Canal, and the heritage conservation required for it, a brief literature review was conducted using the major China online publishing platform and knowledge gateway - China Knowledge Resource Integrated Database (“cnki.net”<sup>7</sup>). When searching in this database using the theme “the Grand Canal” + “heritage conservation”, 186 items were found. Among these, 90 are in the field of Culture, 37 are in Archaeology, 33 are in Tourism, 14 are in Architecture Engineering and Science, 13 are in Ancient History of China, six are in Geography, six are in Transportation, six are in Hydraulic and Hydro-Power Engineering, three are in Transportation Economics, three are in Industry Economy, two are in Journalism and Communication, two are in Environmental Science and Resource Utilization, two are in Economic System Reform, and one is in China and International Politics (see Figure 4.3 a)). They were published in 2012(40), 2011(37), 2010(15), 2009(22), 2008(20), 2007(28), and 2006(24) (see Figure 4.3 b)) and feature in the following databases: China Academic Journal Online Publication Database (49), Featured Journal (15), China Doctorate Dissertation Database (1), China Excellent Master’s Degree Thesis Database (8), China Important Conference Paper Database (1), China Important Newspaper Database (111), and China Academic Journal Database (1) (see Figure 4.3 c)).

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7. <http://oversea.cnki.net/kns55/>

**Figure 4.3: Literature indexing**  
 (Source: Created by the author – see text for further details)



It is noticeable that most publications are news reports. Among the research papers, the main research foci include the value of heritage (Fu 2009), the relation between waterways and settlements (Li 2010; Niu 2012; Wang 2012; Wei 2010; T. Wu 2011), heritage corridor (J. Wu 2011; W. Zhou 2008), greenway (Yang 2011), and tourism (Yin 2008). Among them, very limited research has been done on the overall conservation of the Grand Canal towards the nomination. When searching using “the World Heritage List nomination for the Grand Canal,” the results are very similar.

It is now generally recognized in the field of heritage conservation in China, and also stated by the former director general of SACH, Jixiang Shan, that heritage conservation in China has become a more dynamic and complex activity, in which more and more large scale heritage sites or heritage site clusters, such as linear heritage, are involved. Moreover, heritage has become closer to everyday life and increasingly functional in the built environment (Shan 2012). Because of these developments, more and more heated and tangled issues have been encountered in heritage conservation in China. The World Heritage List nomination for the Grand Canal as a large and complex heritage conservation activity has been directly facing all these issues. However, from the literature search results it can be seen that rarely has there been any systematic research trying to tackle this by individual researchers.

Fellow participants in the nomination work have written about the experience and research results (Wan and Wang 2011; X. Wu et al. 2011; G. Zhu 2012). There is one particular issue addressed in these writings, i.e. that the Grand Canal cultural heritage is

an Open Complex Giant System<sup>8</sup> (G. Zhou 2002). But by far the biggest and most forceful response that addressed the issue of treating the Grand Canal as an open, complex, and giant system has been the speech that Shuguang Liu (the head of CACH) gave on September 26, 2012 at the 2012 World Canal Cities Expo & World Canals Conference in Yangzhou. He firstly gave descriptions and historical facts and restated that the Grand Canal possesses authenticity and integrity. Then he admitted the complication that comes together with diverse heritage resources: heritage that is still in use and that has been abandoned, heritage that is visible and that is still buried or undiscovered, and heritage that is static and dynamic. To answer the question of how to systematically conserve and manage the Grand Canal, as well as how to present the Canal to the World Heritage Centre and the world, Liu says “we advocate selecting the representative sections (of the river) to form a serial heritage while making declaration. This is a preferred declaration strategy meeting the authenticity and integrity requirements of world heritage” (Liu 2012). This answer does not seem to have fully met the need. Geographically, the scope unquestionably aims to cover the whole canal. However, whether regarding the categories of heritage included in the nomination, or viewing the canal heritage as a culture system, it is not exactly a complete answer.

The World Canal Cities Expos (held annually since 2007 in Yangzhou) and the World Canals Conference (held from September 25 to 27 2012 also in Yangzhou) have provided venues for further discussion of heritage conservation for the Grand Canal. During the 2012 World Canals Conference, 115 delegates from 38 overseas canal cities,

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8 Xuesen Qian (1911-2009, “founder of China’s missile and space programme” <http://www.nature.com/nature/journal/v462/n7274/full/462735a.html>): “If there is a large variety of subsystems with hierarchical structure and complex interrelations, then the aggregate is called a complex giant system” and “openness denote energy, information, or material exchange with the outside world” (Qian, Yu, and Dai 1993, 3).

23 countries, and ten international organizations (including the International Council on Monuments and Sites (ICOMOS) and Inland Waterways International (IWI)) gathered together. Discussions were held under the theme of “Grand Canal, Living Heritage”, and participants contribute to 5 themed forums (including “Promoting Sustainable Economic Development of Canal Cities”, “Strengthening Canal Conservation and Cultural Inheritance” and “Design Upgrades Canal Cities”). The delegates also addressed the differences of the Grand Canal from other canals that have already been listed as World Heritage sites in France, Belgium, Canada, and the UK. The major points noted were the enormous complexity, challenges, and difficulties in the nomination process; and the amount of time and number of top experts needed to prepare the nomination and protect and manage the canal (Cotte 2012). On the one hand, the conference showed the world the existing achievements in utilizing and protecting the Grand Canal, and on the other hand gathered knowledge and experiences from all over the world to facilitate the on-going nomination. However, the preliminary draft of the nomination file was submitted to the World Heritage Centre on the 24th of September 2012 (feedback received on November 17, 2012, and final nomination file submitted in the end of January 2013) (Chinese Academy of Cultural Heritage 2013). Therefore, although the outcomes of the conference will be helpful for the continuous heritage conservation activities for the Grand Canal, unfortunately they were not reflected in the nomination file as the conference opened the day after the nomination file had been submitted.

Because of the nomination scheme, numerous experts and conservationists joined in the process in provinces and cities along the Canal. Surveys, literature, and archaeological studies and excavations were widely carried out. Many new tools (e.g. “Digital

Management Platform”, see Chapter 2 Literature Review – 2.5.3) for conserving heritage for the Grand Canal were developed. The academic community as well as professionals have contributed to deepening the understanding of the Canal, developing new technologies, and researching how to scientifically conserve and manage the canal heritage. Events such as the Canal Expos and conferences also have drawn more and more foreign experts and scholars’ attention to the Grand Canal. However, there still is far too little published academic research. Also, the timing was not always right to include research results, for example ones from the Canal conference, to the nomination process.

#### 4.5 Challenges to the nomination process – site selection at municipal, provincial, and national levels

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As mentioned in Section 3, site selection has been a fundamental and crucial part of the nomination throughout the process. In the first stage of developing the municipal level conservation plans, all the canal cities had to recommend and present their sites to their respective provinces and then the nation, as well as start the database building for the nomination. In the last stage, the final decisions on which sites from which cities to be included in the nomination file and thus recommended and presented to the World Heritage Centre and the world had to be made. This whole process of site selection has involved firstly a relatively comprehensive survey of canal heritage in 35 cities along the Grand Canal. It is also a concentrated demonstration of how canal heritage as well as canal culture has been understood during this large and complex heritage conservation activity. The result of the selection process has to a great extent indicated at the stage of running for the nomination what is the “theme” set for this property, i.e. which sites have been judged to best demonstrate Outstanding Universal Value.

In order to record and analyse the overall site selection process, multiple conservation plans of various levels, which contain the results of the selection in respective cities/provinces, have been reviewed. With the purpose of systematically summarizing the major changes in the process, and also because all the municipal and provincial conservation plans were made directly under the ‘Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal - the First Stage’ (First Stage Plan 2008) and the ‘Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal - the Second Stage’ (Second Stage Plan 2009), in this article, analysis is made of the changes among the two stages’ requirements and the final, overall *Conservation and Management Plan for the Grand Canal (2010-2030)* (Final Stage Plan 2010). First Stage Plan 2008 states requirements on preparing municipal level conservation plans for the Grand Canal, in particular, how the plans should identify heritage, evaluate its value and current conditions, designate protection areas, and draw up protection and management measures and regulations. Second Stage Plan 2009 has requirements on making provincial level conservation plans for the Canal: how to put municipal level plans together in respective provinces, evaluate heritage on provincial level, and plan provincial level conservation. Final Stage Plan 2010 finally evaluates the conservation results of the previous two stages, as well as the heritage across the entire property using World Heritage List criteria. It also prepares plans to protect, manage, and monitor selected heritage sites following World Heritage Site standards. In the following two sections, comparisons will be made between the three stages’ plans in order to examine the fundamental step of heritage conservation – heritage identification and evaluation in this nomination process. Since in the three plans categorization was done before the evaluation, in this paper, the examination of these two aspects follows the same sequence.

#### 4.5.1 The categories of selected sites at the different steps of the nomination process

In the First Stage Plan 2008, canal heritage is defined as the water system of the Grand Canal, as well as along the canal, all the archaeological sites and relics that a) represent the importance of this hydraulic engineering project on a national level, b) have archaeological evidence, physical existence, scientific data, or precise literature references, c) directly connect with the development of the canal, and d) have outstanding universal values. The main body of the canal heritage is immovable tangible cultural heritage, which is the major focus of the nomination activities. The heritage focused upon in the nomination process should be a collection of historical remains representing the core value of the Grand Canal.

From the above description, it is evident that canal heritage consists of a vast number of heritage types which are highly diverse. However, through the multiple levels of conservation planning practice and research, what should be included in canal heritage and how it should be categorized has changed considerably. In the end, “over 1,000km of watercourse and 58 heritage points, distributed in 31 heritage zones, are determined as the declaration elements” in the final nomination file (Liu 2012). Instead of going into details of specific sites here, Table 4.2 shows the changes of heritage categories, their scopes, and their contents from the municipal level, to provincial, and to national level conservation plans. Each section of the table has been created from close reading of a different management plan or report. The very different structure of each section of the table reveals the different approaches taken by each plan to categorize and organize the heritage assets.

From Table 4.2, it can be seen clearly that the categories of canal heritage have become more and more specific (more columns) from 2008 to 2010. The scope has also been narrowed down significantly (less text), and there is a growing emphasis on waterway and hydraulic heritage (2a, 2b, & 2c). In the provincial level plans (2b), it can be seen as a highlight that “hydraulic and navigation engineering heritage” is divided into three types including, “in use.” This is a memorable step during the whole nomination process that the canal’s “still in use” nature is directly acknowledged. However, when it comes to the national level (2c), not only is “in use” nowhere to be found, but there is also a general focus on “remains.” This indicates that when running for the World Heritage List nomination, it is highly possible that only historical (especially ancient) and physically existing (or to be specific, visible) sites are taken into account. This is also supported by the fact that on the national level (2c), intangible heritage is not mentioned at all. In addition, neither the “canal ecological and landscape heritage” (2a), nor the “Grand Canal surrounding environment” (2b), is included in the national level plan (2c). Instead, the “Canal affiliated remains” and its subtypes, together with the “waterways” (2c), all provide the information that the Grand Canal is in practice running as mainly a transportation heritage site. Thus, over the evaluation of plans from 2008 to 2010, the diversity of heritage assets has been reduced and important facets of the heritage (‘in use’ nature; intangible; more modern; landscape; environment) have become neglected.

**Table 4.2: The evolving canal heritage categories**

(Source: Created by repeatedly reading and comparing the three key documents and highly but carefully condensed by the author)

REQUIREMENTS REGARDING THE PREPARATION OF THE CONSERVATION PLAN FOR THE GRAND CANAL - FIRST STAGE PLAN (2008)									
2 a MUNICIPAL	Canal hydraulic engineering heritage & related heritage		Canal settlements heritage		Other tangible canal heritage		Intangible canal heritage	Canal ecological & landscape heritage	
	Ancient & modern times waterways, water sources, hydraulic engineering facilities, navigation engineering facilities		<i>Formed, developed, transformed because of the construction, navigation, &amp; commercial or productive activities of/along the canal</i>		<i>Witnessed the development of the canal, major historical events, important social cultural development</i>		Old place names, boatman's chants, local traditional operas, slangs, folk stories, tales, customs, cuisines, special local products, handicrafts	Countryside ecological environment: Farmland, timberland, wetland, lakes, rivers & other natural scenery and indigenous country architectures	
Ancient canal facilities & administrative institution remains, canal archives, canal related religious culture remains		Urban nodes, waterfront historic & cultural streets/districts, building clusters		Historical remains, ancient tombs, historical buildings, stone inscriptions & tablets			Urban landscape environment: Artificial townscape		
REQUIREMENTS REGARDING THE PREPARATION OF THE CONSERVATION PLAN FOR THE GRAND CANAL - SECOND STAGE PLAN (2009)									
2 b PROVINCIAL	The Grand Canal heritage							The Grand Canal surrounding environment	
	Hydraulic & navigation engineering heritage			Canal cities, towns & villages	Other related cultural heritage		Intangible cultural heritage	Built environment & natural environment	
	In use	Out of use	Archaeological sites	Same as in 2a	Same as in 2a		Same as in 2a	Same as in 2a	
Navigation, irrigation, drainage facilities & waterways	Cao Yun channel, ancient waterway, facilities, & administrative institutions		+ city walls, city gates, historical districts						
CONSERVATION AND MANAGEMENT PLAN FOR THE GRAND CANAL (2010-2030) – FINAL STAGE PLAN (2010)									
2c NATIONAL	Canal hydraulic remains		Canal related heritage		Canal affiliated remains				
	Waterway	Lakes/reservoirs, springs & other water remains	Hydraulic facilities remains	Related historic & cultural district	Related heritage unit		Canal affiliated remains	Canal administrative facilities remains	Other affiliate remains
Mainline, complex line/branch line/side waterway	Lakes/reservoirs, springs	Water transportation, hydraulic engineering facilities: sluice gates, dams, dikes, bridges, track roads, docks etc.	Historic cultural districts in historic cities & towns	Transportation/hydraulic religious remains, stone inscriptions recording the canal's history, other related historical buildings, remains, tombs, historical sites		Warehouses, courier stations, etc.	Waterway administrations, Cao Yun administrations, salt trade & transportation administrations, etc.	Hydrological monitoring facilities, shipwreck, etc.	

#### 4.5.2 The criteria adopted in the selection process

In the previous section, the site selection, which is the first and foremost step of heritage conservation activities and the nomination process, has been discussed from the aspect of how the canal heritage categories have been changed. When the categories are decided, heritage sites can be grouped accordingly. For the World Heritage List nomination, only the most representative sites in each category have been selected and presented to the World Heritage Centre. In this section, a further discussion on site selection based on the information in Section 4.5.1 is opened to look at the changes of the specific criteria for heritage sites that fall into various categories. For the same reasons, instead of details of any municipal or provincial level conservation plans, the First Stage Plan 2008 (municipal level), the Second Stage Plan 2009 (provincial level), and the Final Stage Plan 2010 (final and overall) are carefully reviewed and compared.

In order to select sites for the World Heritage List nomination for the Grand Canal, the conservation and management planning and the nomination process have been following a system to evaluate canal heritage from the following two main aspects: the significance of the heritage and the overall condition of the heritage. In the following text the evaluation process will firstly be reviewed and analysed, then its relation with the OUV will be examined.

In municipal level conservation plans for the Grand Canal, examinations of both significance and conditions were carried out together, but on each canal heritage category separately (see Table 4.2 – 2a): canal hydraulic engineering heritage and related heritage (Table 4.3), canal settlements heritage, other tangible canal heritage (Table 4.4), intangible canal heritage, and canal ecological and landscape heritage. At

the provincial level, the examinations were carried out separately on significance (Table 4.5) and conditions (Table 4.6), but respectively grouped together according to the heritage categories (see Table 4.2 – 2b).

It is encouraging to see that the provincial level evaluation criteria have been improved significantly from the municipal level – they are clearer, more systematic, and coherent. Thus integrating tables 4.5 and 4.6 is possible, which can summarize as well as contain the main content of evaluation criteria on the provincial level. This contrasts with tables 4.3 and 4.4 which can only stand for their respective heritage types and cannot be put together.

However, from municipal to provincial levels, ancient hydraulic engineering technology innovations (see highlighted areas in Table 4.3 and Table 4.5) have become less emphasised. This is probably due to the fact that most of the ancient hydraulic engineering technologies and constructions do not have any physical evidence to prove their existence. Different from other heritage canals already listed as World Heritage Sites, the Grand Canal as a testimony of the great technological innovations in ancient history should be of major outstanding significance, but it appears that this is not recognized or emphasized in the nomination.

**Table 4.3: Municipal level evaluation criteria for canal hydraulic engineering heritage**  
(Source: Created by the author to summarize the evaluation criteria described in First Stage Plan 2008)

<b>SIGNIFICANCE</b>	Historical		How long the history is; the amount of historical information it carries; how well known; how rare
	Cultural		Literature and image information that could testimony the historical context, i.e. social development, political ground, cultural orientation, military strength, etc.; impact on current society, i.e. educational, spiritual, tourism, and other value
	Scientific		Technical advancement, including layout, scale, cost, natural resource utilization, navigation and water resources problem solved, etc. Evaluated from design, construction, material selection, and overall engineering and technological impact
<b>OVERALL CONDITION</b>	Preservation	Integrity	Of materials, form, structure, and other exterior features; and of function
		Authenticity	Of location, materials, structure, style, timeline (if there has been any maintenance, and the time of the last one)
		Continuity	Of the function
	Function & impact		In local canal system; in navigation region; on local development; on the overall canal transformation
	Administration (in history and currently)		Administrative and maintenance mechanisms, institutional structure, regulations and laws
	Research		

**Table 4.4: Municipal level evaluation criteria for other tangible canal heritage**  
(Source: Created by the author to summarize the evaluation criteria described in First Stage Plan 2008)

<b>SIGNIFICANCE</b>	As cultural relics	Historical	Witness the construction and development history; reflect production, life style, custom, social trends; characteristic and representative
		Artistic	Fine art; townscape and landscape; cultural scape
		Scientific	Planning and design; environmental awareness; structure, technique, and materials; scientific archives
	To the society		Reflect social life; carry traditional culture; educational values
<b>OVERALL CONDITION</b>	Preservation	Current condition	integrity
			authenticity
			continuity
		Natural environment	integrity
			authenticity
			continuity
	Landscape	integrity	
		authenticity	
		continuity	
	Presentation & utilization		Form, content, facilities, activities, etc.
Administration		Administrative and maintenance mechanisms, institutional structure, regulations and laws	
Research		Archaeology, art, architecture, environment, religion, conservation, literature and publish	

**Table 4.5: Provincial level evaluation criteria – significance**

(Source: Created by the author to summarize the evaluation criteria described in Second Stage Plan 2009)

<b>THE GRAND CANAL HERITAGE:</b>			
<i>Hydraulic and navigation engineering heritage</i>			
Hydraulic and navigation engineering heritage in history	Hydraulic and navigation engineering heritage of modern times		Remains of the canal
Innovation; impact on social and economic development; cultural exchange and religious development; scientific values	Scientific and innovational values; functional and sustainable values; impact on social and economic development		Historical values
<i>Canal cities, towns and villages</i>			
How long the history is and how long its canal related history is; the connection between the canal and the settlements' formation, development, and transformation; spatial, social, and cultural uniqueness shaped because of the canal; testimony of the canal's construction and development; canal related planning, architectural, hydraulic, and other features and values; how rare, and its importance to the overall value			
<i>Other related cultural heritage</i>			
Historical	Artistic	Scientific	Social
Witness the construction and development history; reflect production, life style, custom, social trends; characteristic and representative	Fine art; townscape and landscape; cultural scape	Planning and design; environmental awareness; structure, technique, and materials; scientific archives	Reflect social life; carry traditional culture; educational values
<b>THE GRAND CANAL SURROUNDING ENVIRONMENT:</b>			
Biodiversity and eco-system protection and maintenance; connection with important canal related historical events, local belief, literature and art work; reflect typical canal features			

**Table 4.6: Provincial level evaluation criteria – current condition**

(Source: Created by the author to summarize the evaluation criteria described in Second Stage Plan 2009)

<b>THE GRAND CANAL HERITAGE:</b>		
<b>Authenticity &amp; integrity</b>		
<b>Hydraulic and navigation engineering heritage</b>	In use hydraulic and navigation engineering heritage	The water body; the navigation channels' form, facilities, rank, etc.
	Abandoned hydraulic and navigation engineering heritage	Preservation condition;
	Remains of the canal	
<b>Canal cities, towns and villages</b>	Authenticity	Spatial pattern and relation with the canal; canal historical districts' features and texture
	Integrity	Spatial pattern and relation with the canal; original function, feature, texture, etc.
	Continuity	Whether authenticity and integrity are harmed or threatened, the reason, the pace; any policy, regulation etc. to cope with the situation
<b>Other related cultural heritage</b>	Authenticity	Currently any project disturbing the site
	Integrity	Preservation condition;
	Continuity	Any factor harming or threatening the site and impact
<b>Presentation &amp; utilization</b>		
<b>Hydraulic and navigation engineering heritage</b>	Function and impact in/on local canal system; in navigation region; on local development; on the overall canal transformation	
<b>Canal cities, towns and villages</b>	Presentation form, content, facilities, activities, etc. esp. historical districts, historical buildings, all level cultural heritage units, important buildings, constructions and facilities, etc.	
<b>Other related cultural heritage</b>	Presentation form, content, facilities, activities, etc.; whether in use, and whether the function is reasonable	
<b>Administration</b>		
<b>Hydraulic and navigation engineering heritage</b>	In history	Administrative and maintenance mechanisms, institutional structure
	Modern times	Administrative and maintenance mechanisms, institutional structure, regulations and laws
<b>Canal cities, towns and villages</b>	Administrative mechanisms, institutional structure, conservation archives, security and safety, infrastructure; regulations and laws, and their effectiveness	
<b>Other related cultural heritage</b>	Law enforcement authority, land use, institutional structure, administrative personnel, conservation archives, security and safety, infrastructure, regulations and laws, financial capacity	
<b>THE GRAND CANAL SURROUNDING ENVIRONMENT:</b>		
<b>Of hydraulic and navigation engineering heritage</b>	<b>Of canal cities, towns and villages</b>	<b>Of other related cultural heritage</b>
Landform, species, sustainability, water quality, vegetation, conservation and administration		

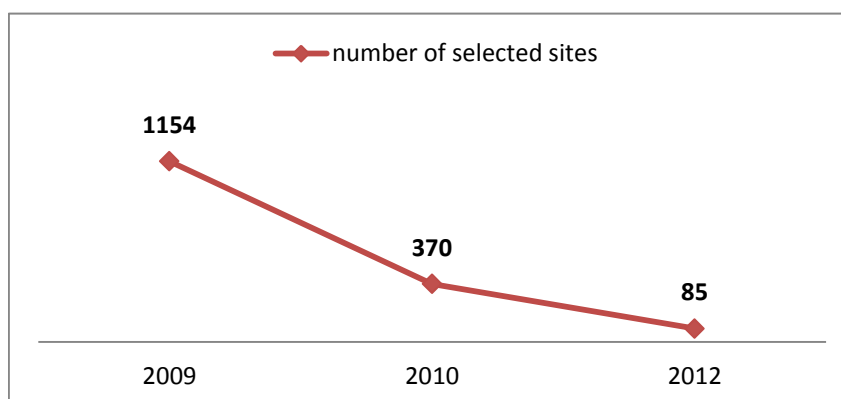
It is clearly stated in the Second Stage Plan 2009 that “hydraulic and navigation engineering heritage and related tangible heritage should be given higher priorities; not in use hydraulic and related heritage should have visible physical existence; ... intangible heritage is not included in the nomination list; ... preferably, candidate sites should have linear spread” (Chinese Academy of Cultural Heritage and Southeast University 2009, 31). This is, again, an emphasis on visible heritage sites, and at the same time, also an emphasis on transportation heritage. The section stating, “preferably, candidate sites should have linear spread” is also interesting; there has not yet been any systematic theory or method to treat the Grand Canal as a linear heritage site in this nomination process, but there is this emphasis that the layout should readily be linear. These all shows that although there have been ideas to recognize and appreciate diverse and complex extent of heritage, the heritage conservation work during the nomination process is still lingering on the surface and has not really put the ideas into action.

Overall, the evaluation criteria are set up mainly according to the International Canal Monuments List (1996), in which canal heritage is examined from aspects such as technology, economy, society, and landscape (Chinese Academy of Cultural Heritage and Southeast University 2009, 26). It does not conflict with the Operational Guidelines for the Implementation of the World Heritage Convention (2012). In the Operational Guidelines for the Implementation of the World Heritage Convention (2012), “Heritage Canal” is included as one of the "specific types of cultural and natural properties.” There are “specific guidelines to facilitate the evaluation of such properties when nominated for inscription on the World Heritage List.” According to this, “the significance of canals can be examined under technological, economic, social, and landscape factors” (UNESCO World Heritage Centre 2013).

Elements added include historical, social, and scientific values for hydraulic and navigation engineering heritage; cultural relics and socio-cultural values for other related canal heritage; historical, artistic, scientific, social, and other values for canal settlement heritage; and scientific, historical, cultural, spiritual, and other values for intangible heritage (when applicable). It has been acknowledged (at least clearly indicated in the Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal - the Second Stage) that existing international documents may not be able to have concluded all heritage values that the Grand Canal possesses. In addition, relative to time the Grand Canal's technological values diverge largely from their Western counterparts. As a large-scale system, the canal has played a prominent role in the country's hydraulic engineering history and its economic development and establishment of civilization, as well as political stability, town and landscape formation, and many other important aspects (Chinese Academy of Cultural Heritage and Southeast University 2009, 29). However, these have not been reflected in site selection.

At the national level evaluation – the Final Stage Plan 2010 things changed further. The evaluation criteria are described as: supporting the overall canal framework, carrying the core value, and having significant value and meaning on a national level. Accordingly, the Grand Canal heritage in practice now consists of two major parts: the waterways that together show the layout of the overall canal, and related heritage along the waterways (Chinese Academy of Cultural Heritage et al. 2011). The sites nomination has finished on the municipal level. Both provincial and national levels work to shorten the list, i. e. the sifting, and the sifting continued until the submission of the final nomination files. The final constitution of the Grand Canal heritage is a list of

**Figure 4.4: Number of selected sites in total to be included in the World Heritage List nomination file (2009, 2010, 2012)**  
(Source: Created by the author – see text for further details)



85 items (1154 in all municipal levels plans, 370 in the national level plan (Chinese Academy of Cultural Heritage et al. 2011), see as shown in Figure 4.4). As the nomination activities progress, the national level site selection is in practice also partially based on the performance of respective local authorities. The performance determines whether the significance of the sites could be understood and recognized, as well as whether the conditions of the sites could be improved and well presented. Therefore, the sites that are not included in the final nomination files are not necessarily less important or representative than those that are included. This is an unfortunate and frustrating fact however, in the nomination process.

The review of the criteria that were followed in practice during the site selection process indicates that the Grand Canal as a property carries cultural significance that is exceptional and universally important both at present and for the future. The concern has in fact not been whether the property has the necessary values for a World Heritage Site. The difficulty, which to date is still not satisfactorily solved, is how to fully understand and present the value that the Grand Canal carries. Another intriguing point the review suggests is that the emphasis on the physical and visible existence of

heritage sites is likely a result of eager efforts to meet the conditions of integrity and/or authenticity. This unfortunately has more or less undermined the possibility of appreciating the dynamic nature of the Grand Canal property because only very well conserved sites are listed. The intention of making sure that the selected sites have adequate protection and management schemes as required by the OUV is likely to be the main reason why the respective local executive authorities' performance has weighed heavily in the final site selection stage.

#### 4.6 Lessons from the nomination process to date – legal and administrative systems

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##### 4.6.1 Legislation

As articulated by the World Heritage Centre: “to ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage situated on its territory, each State Party shall endeavour to take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage” (UNESCO World Heritage Centre 1972, sec. 5d), thus a review of the legislation process for the Grand Canal is an indispensable component when recording and critiquing the nomination.

The Yangzhou Agreement (introduced in Section 3) started the stage of legal canal protection. It then progressed with the preparation of conservation plans at all levels. By June 2009, all municipal level canal heritage conservation plans were developed by the respective cultural heritage departments under the supervision of their municipal governments, with assistance from urban planning, development and construction, transportation, water resources, land management and other departments. By December

2009, all provincial level canal heritage conservation plans were devised. Based on these, SACH developed the overall national level plan – the Conservation and Management Plan for the Grand Canal (2010-2030).

Municipal level canal heritage conservation plans are inferior to provincial level canal heritage conservation plans, and superior to detailed conservation plans for canal waterways and adjacent districts in respective administrative regions. Municipal level canal heritage conservation plans are specialized plans that are a component of their respective urban master plans. They are the fundamental documental basis for their respective cities to enter the nomination (Chinese Academy of Cultural Heritage and School of Architecture, Southeast University 2008). Provincial level canal heritage conservation plans are guidelines on canal heritage conservation and management within respective administrative regions. They provide the national level plan with a foundation for legislation, and further the preparation for the national level canal heritage database (Chinese Academy of Cultural Heritage and School of Architecture, Southeast University 2009). Each level of canal heritage conservation plans together with the same level of water regulation, development and construction, hydraulic engineering, and other plans, as well as any relevant technical documents, constitute each respective level integrated system of the Grand Canal plans.

On August 14, 2012, the Administrative Measures on Protecting and Managing the Grand Canal Heritage was issued to enact on October 1, 2012 (Ministry of Culture of the People's Republic of China 2012). This is the first national law on overall canal conservation and management. Compared with the final overall canal conservation and management plan, the nature of a law being of longer standing allows the Measures to be significantly more ground breaking. The scope and categories of canal heritage are

broader and more diverse; widely cross-regional, interdisciplinary, and cross-departmental collaboration has been strongly emphasized; and a “Warning List” that will include any heritage that is harmed because of inappropriate conservation and/or management has been set up, and any responsible institution and/or government office will be investigated for legal responsibility. The Measures also reaffirmed the coordinating role of the Grand Canal Conservation and World Heritage Site Listing Nomination Inter-Ministerial Consultation Team, and ensured the conservation and management planning system’s legal status.

Under the umbrella of the Measures, each level of regional laws and regulations concerning the Grand Canal heritage are made accordingly. Yangzhou has already enacted its local administrative measures, and has been the first among the canal cities and regions to complete this process.

In the practical nomination work for the Grand Canal, there are a few legal and related issues remaining. For example, the first legally requested and foundational work after the designation as a national-level cultural relics unit is to designate protection areas, set up signs and descriptions, build up archives, and establish administrative institutions or personnel for the unit (State Administration of Cultural Heritage 2004). However, although the Grand Canal as a whole was designated as a national-level cultural relics unit in 2006, it is such a large and complex heritage system involving so many cities and heritage sites, that the foundational work as mentioned has not been fully finished in most of the canal cities. But despite these issues, the legislation work throughout the nomination process has been fruitful. So far the implementation of all canal heritage conservation plans at all levels has proceeded smoothly. Since the Administrative Measures on Protecting and Managing the Grand Canal Heritage has only been enacted

very recently, and lower level laws and regulations are mostly under preparation, it is still too early to evaluate the law enforcement and the laws and regulations themselves. Guided by the plans and governed by the Measures, the nomination activities were carried on at full momentum before the Advisory Bodies' field visits this summer, including making final preparations, and finishing the foundational work mentioned in the beginning of the paragraph.

#### 4.6.2 Lessons from the nomination process: inter-regional, interdisciplinary, and interdepartmental cooperation

The enormous geographical and spatial scale, the rich and long history, and the diverse practical functions of the Grand Canal all mean that whether during the nomination process or in day-to-day conservation and management research and practice, cross-regional, interdisciplinary, and cross-departmental cooperation is inevitable.

The Grand Canal serves functions such as navigation, irrigation, flood control, waterlogging drainage, and water diversion. Its related conservation and management issues involve transportation, agriculture, water resources, environment, urban planning, housing and urban-rural development, land administration, cultural relics, culture, and many other departments. How to set up coordination mechanisms between these departments, what extent of coordination is necessary, what office/department/institution can act as co-ordinator, or what new office/department/institution needs to be set up to be the coordinator are all key questions that urgently need to be answered.

Since the World Heritage List nomination for the Grand Canal is currently a nationwide pressing mission, in practice, SACH and its various inferior bureaus, departments,

and offices have all been playing crucial roles. This leads to the positive outcome that many decisions have been made from the perspective of heritage conservation. However, it is sometimes considered mostly the cultural heritage departments' job to conserve the Grand Canal and prepare for the nomination, which results in some shortcomings. Conservation planning and nomination preparations are largely limited to historical research, field investigation, heritage evaluation, protected area designation, and other cultural heritage methodologies and practice. Also, other functional departments in the cities or on provincial levels mostly only respond to the call from respective governments to cooperate in the conservation, management and nomination activities. Thus, there is no assigned liability, no agreement on how far the cooperation should go, and not surprisingly, no initiative.

Lastly, in one project or one section of the canal, multiple departments/offices often share the authority. For instance, the cultural heritage departments decide whether to approve a project within a certain heritage conservation area, while in the construction control area of the same heritage site/unit, the urban planning departments have the right to make the decision. Sometimes, cultural heritage departments' monitoring and supervisory role is bluntly ignored or bypassed, because other departments are not always obliged to acquire permissions from them and it compounds and complicates procedures. There are cases in many places, for example Jiangsu Province (Yao 2010), that testify to this. Also, even within the same functional department system, the authority distribution varies. For instance, because the navigation channels of the Grand Canal have various ranks, sometimes the higher level offices such as provincial bureaus or even the Ministry of Water Resources of the People's Republic of China instead of the local water resources departments directly carry out the administration. This makes

it almost impossible for the respective local cultural heritage departments to participate in or monitor the management.

In order to push forward the cooperation, a series of measures has been introduced. In order to protect heritage from construction or development, in the Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal - the First Stage (2008), it is suggested that before the heritage conservation area planning has been approved, urban planning and land administration departments at all levels should reinforce related area land control (Chinese Academy of Cultural Heritage and School of Architecture, Southeast University 2008, 14). In order to effectively involve other departments in the conservation and nomination process, the Requirements (2008) requests that during the process, SACH should organize or commission an institution to organize periodic discussion meetings, so that any emerging questions or problems can be faced together. The Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal - the Second Stage (2009) proposed that the conservation and management planning team should be made up of professional organizations and experts from all canal related industries/fields (Chinese Academy of Cultural Heritage and Southeast University 2009, 2). It affirmed the importance of having a considerable number of macro and medium-level planning and management specialists on the team to conduct research on coordination mechanisms, multiple-authority management, and inter-database integration. One seemingly small detail, but a major step in forming a more comprehensive conservation and management idea, is that the Requirements (2009) acknowledged that because of the special properties of intangible cultural heritage, its ownership could be shared between multiple regions.

The above approaches have admittedly ensured and markedly improved cooperation. However, there is still a long way to go both in theory and in practice. For the nomination, and more importantly, for the Grand Canal's current and future conservation and management work, under the umbrella of the Conservation Plan for the Grand Canal (2010-2030), various functional and administrative departments at various levels should effectively communicate, and integrate the requirements for the conservation achievements. The conservation and management plans should fit in with urban plans and other specialized plans, and they should be able to be coordinated with each other on all respective levels. The superior offices should pay close attention to, and draw on experiences from, any cases that are encountered in local administrative practice, and the inferior plans/regulations/policies should be adjusted accordingly when the superior ones are developed.

In conclusion, as a large and complex heritage conservation activity, the World Heritage List nomination for the Grand Canal is the first one in China, and probably the world, to have brought together so many geographical regions as well as so many administrative departments. Led by SACH, the cultural heritage departments of the cities and provinces have made enormous efforts towards the success of the nomination, with the aid of other involved functional departments in their respective cities and provinces. Actively or more passively, the cooperation has been happening, which can be considered a major achievement in heritage conservation in China and one which has been enlarged by the nomination process. Certainly, more initiatives need to be taken, which requires increased awareness of the importance of heritage conservation across the whole society. Also, better approaches to encourage and ensure cooperation are

needed, which, to begin with, asks for in depth research into the current heritage conservation practice, which in this research focuses on the nomination process.

#### 4.7 Implications and conclusions

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The nomination has provided abundant opportunities for heritage conservation in general. SACH has authorized many more archaeological excavations in comparison to before 2006<sup>9</sup>. Because of thorough archaeological excavations, historical research has been facilitated, which is a necessary foundation for any conservation work. Before the end of June 2013, national, provincial, and municipal level monitoring systems for the Grand Canal heritage were set up (The Grand Canal Conservation and World Heritage Site Listing Application Inter-Ministerial Consultation Team 2012). Furthermore, all levels of government financial budgets, as well as all national special funds, are planned to support the conservation and nomination activities. In these ways, heritage conservation in China is taking a steady step forward.

The World Heritage List nomination for the Grand Canal has no doubt been a prodigious opportunity for a large number of canal heritage sites, on which concentrated conservation work has been carried out. Research on theories, practice, and technologies for conserving this heritage has been conducted. It is a new beginning for large and complex heritage conservation activities in China as well as the rest of the world. However, because of this, there are no existing experiences to learn from, nor

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9. SACH is very strict with carrying out proactive archaeological excavations due to current very limited technology. Archaeological excavations are more encouraged to be carried out when heritage is discovered (Chan and Ma 2003; Zhang 2005).

theories or methods to apply. Through following, recording, and examining the nomination, as reported in this article, several key findings emerge.

First, from a theoretical perspective as shown in Section 4, there is a long way to go for research on systematically conserving large and complex heritage systems like the Grand Canal. Second, the World Heritage List nomination is only the start of conservation activities. There are limits to what can be included in the World Heritage List nomination, and in this case, the actual extent of canal heritage is far greater than that which has been included in the nomination. At the moment, only a very small proportion of canal heritage sites are included in the nomination file. The included sites are certainly very representative, especially as hydraulic/transportation heritage. However, there are significant numbers of sites that are not included but are also equally fully representative because the Grand Canal heritage system consists of more profound meanings and values than just a waterway and its related hydraulic and transportation facilities and constructions. Therefore, the current categories set for the nomination should only be a starting point for future canal heritage identification work.

Most of the included heritage sites are in relatively good condition (for presentation purposes and also because better conservation work has been carried out on them during the nomination process). A much larger number of heritage sites are in urgent need of conservation actions. Thus, the criteria used to select sites for the nomination should not be the criteria used to select sites upon which conservation work should be carried out in future. The emphasis on physically existing/visible sites and those which directly relate to waterway sites should also be stopped so that the cultural extent of the Grand Canal can be fully appreciated. Another issue that is worth looking into is the dynamic nature of the Grand Canal, especially its trait as still being in-use in daily

urban and rural activities. However, during the nomination, there still have mainly been static visions for recognizing, conserving, and presenting the Grand Canal.

Third, strong legal and interactive administrative systems are the keys to ensure successful implementation of heritage conservation, especially for large and complex heritage sites. Because of the lack of these in canal heritage conservation, there are currently still gaps between legal requirements and their enforcement. The cooperation across regions, administrative offices, and disciplines has not been very effective or active. These factors are all potentially causing specific difficulties of getting a canal listed as a World Heritage Site and the situation needs to be improved in future heritage conservation practice.

## CHAPTER 5

### ZHENJIANG'S LOSS AND GAIN IN THE WORLD HERITAGE LIST NOMINATION FOR THE GRAND CANAL: A REVIEW OF A CITY'S HERITAGE CONSERVATION PRACTICE.

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#### 5.1 Introduction

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The World Heritage List nomination process for the Grand Canal started in 2007 and the result will be revealed at the 28<sup>th</sup> session of the World Heritage Committee in June 2014. The main city discussed in this article – Zhenjiang – is the starting point of the southern part of the Canal<sup>1</sup>. Yangzhou – the city which is used as a comparator with Zhenjiang in Section 5.4 is the ending point of the northern part of the Canal.

In January 2013 the nomination files for the whole canal were submitted to the World Heritage Centre, marking the end of the nomination preparation process. Up to this point heritage conservation and nomination preparation activities carried out in Zhenjiang for the Grand Canal Zhenjiang Section had very mixed results. The Zhenjiang section of the Grand Canal is very important – it is on the intersection of the Yangtze River and the Grand Canal, and it connects the north canal to the south. The city of Zhenjiang has a history closely linked with the rise and decline of the canal. There are a large number of canal heritage sites in Zhenjiang, and more are being discovered, excavated, and recognized. However, for various reasons, Zhenjiang has to a large extent failed to be recognized in the World Heritage List nomination. But

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1. The main body of the Grand Canal is the Beijing-Hangzhou Grand Canal which flows through Beijing, Tianjin, Hebei, Shandong, Jiangsu, Anhui, and Zhejiang. From June 2007, the waterways in Luoyang (i. e. Chang'an in history – the capital city in the Sui and Tang dynasties) which was only used in the Sui and Tang dynasties have been included in the nomination. Thus, some sections in Henan and Anhui provinces were added. The main body of the Grand Canal, i. e. the Beijing-Hangzhou Grand Canal is discussed in this thesis, unless indicated explicitly.

despite this, a fair amount of funding has been allocated, and a lot of work has been done to conserve the canal heritage in Zhenjiang so the city may benefit in the longer term from its involvement in the nomination process.

This article reports the results of a study which involved following, participating in, recording, and analysing the process to produce a World Heritage List nomination for the Grand Canal in Zhenjiang. Whilst each city is different, the observations from Zhenjiang can be used to inform future heritage conservation in medium sized, and intermediately developed, historical cities in China. The article starts with an introduction to the city of Zhenjiang and the Zhenjiang section of the Grand Canal. It then presents a body of empirical data on the work that has been done in Zhenjiang during the nomination process. It illustrates how site selection in Zhenjiang for the nomination has proceeded over time. It reviews the varied practical heritage conservation efforts that have been carried out in association with the nomination process. The following section compares Zhenjiang with Yangzhou based on a body of empirical data. Key differences between the two cities are found in terms of inputs, attention, and personnel allocation and administration systems. These two empirical research sections of the article are used to answer two questions ‘How has Zhenjiang performed in the World Heritage List nomination process?’ and ‘What could Zhenjiang learn from Yangzhou in this nomination process as well as in general heritage conservation practice?’ The article concludes by noting the fruitful work done in Zhenjiang during the nomination despite many disappointments, and reflects on how heritage conservation in Zhenjiang and other similar cities might be enhanced in future.

## 5.2 A Brief Introduction to Zhenjiang and the Zhenjiang section of the Grand Canal

### 5.2.1 Zhenjiang

Zhenjiang (Jiangsu province) is at the starting point of the Grand Canal's Jiang Nan Section<sup>2</sup>, where the canal meets the Yangtze River (see Figure 5.1). It is a historical city with more than 3,000 years of recorded history. It is the cradle of the Wu Culture. In the Six Dynasties Period (220-589 AD), a mass migration occurred from the north to the south of the country, which facilitated the full development of the Zhenjiang Area

(Zhenjiang Jing Kou District Government & Urban Planning and Design Institute of Southeast University, 2010).

During the Tang and Song Dynasties, aided by the Grand Canal, the city successfully transformed and developed into a nationally-renowned centre for industry and commerce as well as transportation. During the Song and Yuan Dynasties, 68% Cao Liang<sup>3</sup> of the entire country passed through Zhenjiang (Zhenjiang Xi Jin Du Culture

**Figure 5.1: The location of Zhenjiang (and Yangzhou) on the Grand Canal**  
(Source: yangzhou.gov.cn. Image by Unknown)



2. Jiang Nan (江南) – regions south of the Yangtze River

3. Cao Liang (漕粮) – grain transported to the capital by water; tribute grain

and Tourism Co Ltd, 2011, p. 2). In the Ming and Qing Dynasties, Zhenjiang and Zhenjiang Port had become so important that both Kangxi and Qianlong (two most important and successful emperors of China in the Qing Dynasty) stopped and stayed multiple times in Zhenjiang during their southern tours (Zhenjiang Jing Kou District Government & Urban Planning and Design Institute of Southeast University, 2010). In the Qing dynasty, its canal transportation function peaked, which led to the flourishing of trading in Zhenjiang.

Entering modern times, in Zhenjiang, as in many other traditional Chinese feudal cities, the traditional business model and modes of production were hit hard by burgeoning industrialization, modern technologies, and the capitalist economy. All this changed, however, through a disgrace which was the defeat Zhenjiang suffered in the Second Opium War (1856-1860), which resulted in Zhenjiang being forced to become a treaty port in 1861 (Zhenjiang Local Chronicles Committee, 1999). This fostered developments of the city in modern shipping industry, modern postal services, as well as match manufacture, silk reeling, bulb manufacture, and other modern industries (Zhenjiang Jing Kou District Government & Urban Planning and Design Institute of Southeast University, 2010). Today Zhenjiang has become a rising power of an innovative city which is seeking sustainable development based on not only industrial strength but also extensive and profound cultural potential. These developments have led to a diverse townscape (see Figure 5.2).

**Figure 5.2: Zhenjiang townscape – a) riverside** (Source: bbszol. Image by 20080516zz); **b) historical and green city** (Source: leakdeals. Image by Fengkuangzhu); **c) canal city** (Source: People. Image by Unknown); **offshore engineering vessel “SEALINK 179” built in Zhenjiang launching** (Source: shipol. Image by Unknown)



On 8<sup>th</sup> December 1986, Zhenjiang was included in the second batch of National Historical and Cultural Cities by the State Council (State Administration of Cultural Heritage, 1986). After two years, the first conservation plan of historic cities for Zhenjiang was finished (Zhenjiang Municipal Government, 1988). Then in 1999 and 2003 respectively, the plan was revised (Urban Planning and Design Institute of Southeast University & Urban Planning and Design Institute of Zhenjiang, 1998).

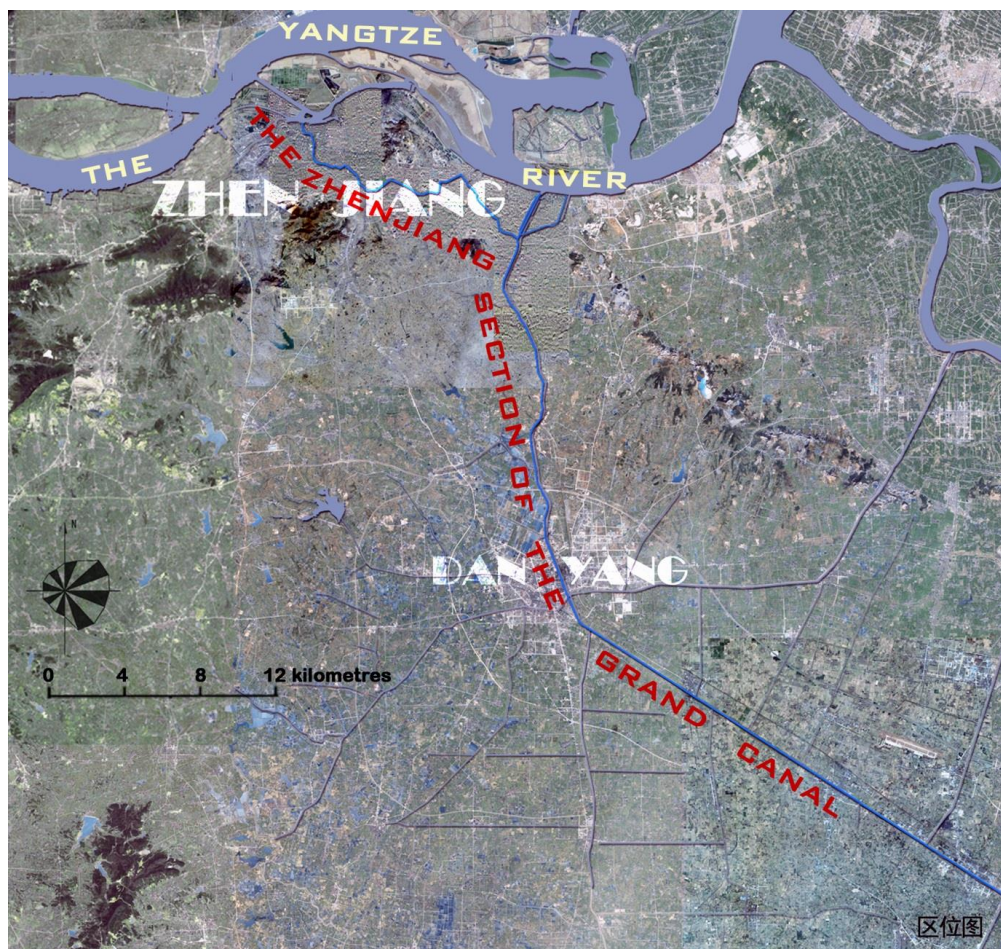
### 5.2.2 The Zhenjiang section of the Grand Canal

The construction of the historical canal section in Zhenjiang began during the Spring and Autumn period (476 – 770 BC). The broadening and deepening project was conducted in the Sui Dynasty (581 – 618 AD) (Chen, 1989). Since then this section (see Figure 5.3) has been the main waterway of Jiang Nan Canal leading to the Yangtze River and connecting with the canal section north of the Yangtze River.

From the Song Dynasty, throughout the Yuan, Ming, and Qing Dynasties, and until modern times, Zhenjiang Port (note: referring to Xi Jin Ferry; not the main modern port Jian Bi Port) was a traffic hub connecting Southern and Northern China, and a trading

**Figure 5.3: The Zhenjiang section of the Grand Canal**

(Source: created by the author based on information and image acquired from the Xi Jin Ferry historic preservation and urban renewal project (2006 - present))



centre which held the biggest markets of sugar, rice, timber and oil of downstream Yangtze River (Zhenjiang Xi Jin Du Culture and Tourism Co Ltd, 2011).

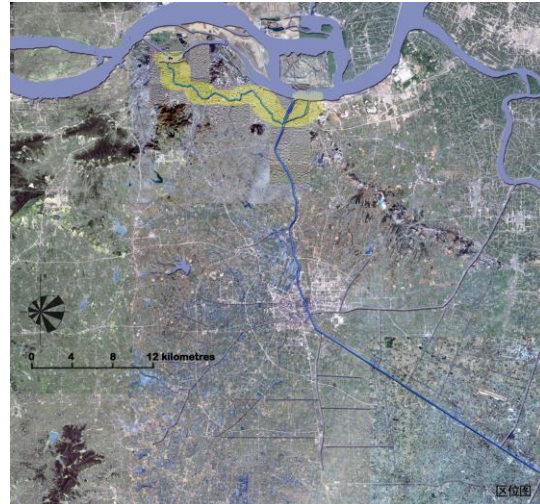
After the First Opium War (1840-1842), the whole line of Cao Yun<sup>4</sup> along the Grand Canal was forced to end in 1855 (Wang, 2003). However, the canal's Jiang Nan section still continued to function. On 10th May 1861, Zhenjiang became the first city along the middle

and downstream sections of the Yangtze River to be opened to foreign traders, as well as “the first commercial port” along the way from the sea into the river (Zhenjiang Jing Kou District Government & Urban Planning and Design Institute of Southeast University, 2010). Commercial services including both freight transport and passenger traffic on the new watercourse quickly flourished. Thus, a thriving market was formed by the river. At the end of the Qing Dynasty, the construction of railways connected Nanjing and Shanghai instead of Zhenjiang with important cities in northern China (Li, 2008). This directly caused the decline of the transportation function of the canal.

Today, the historical canal within the city region of Zhenjiang runs from Ping Zheng Bridge where it meets the Yangtze River to Jian Bi Trifurcate River Mouth (see Figure 5.4 a)). The waterway, with an overall length of 16.69 km, consists of three parts: upper, middle, and lower (see Figure 5.4 b)). From Ping Zheng Bridge to Zhou Jia River

**Figure 5.4 a): The urban area historical canal of the Zhenjiang section**

(Source: created by the author based on information and image acquired from the Xi Jin Ferry historic preservation and urban renewal project (2006 - present) and the World Heritage List nomination process for the Zhenjiang Section)

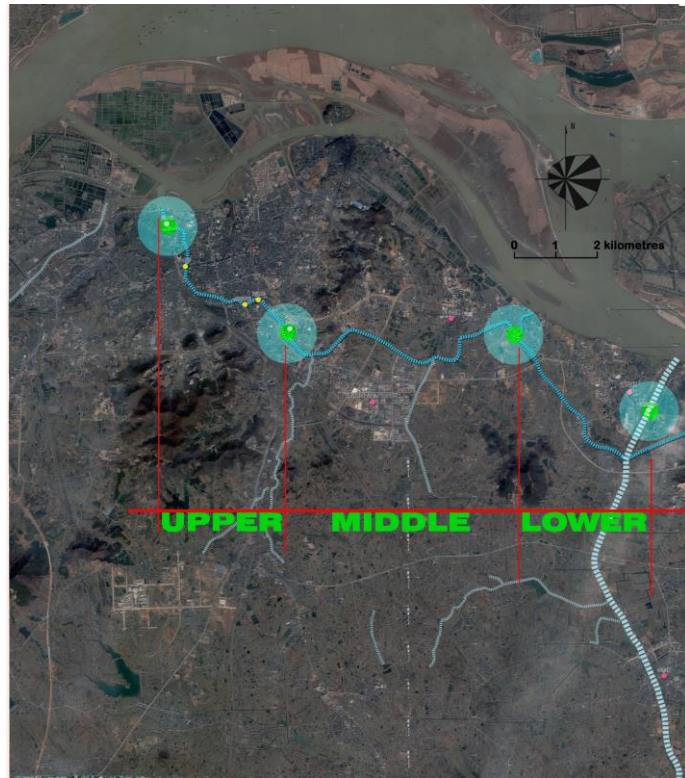


4. Cao Yun (漕运) – water transportation along the Grand Canal

Mouth is the upper part, also known as the old town part, which is 5.60 km in length; the middle part is from Zhou Jia River Mouth to Dan Tu Sluice Gate, with a length of 6.87 km; from Dan Tu Sluice Gate to Jian Bi Trifurcate River Mouth is the lower part, also called the east part, which stretches for 4.22 km. Tributaries which were dug from natural streams form the water network of the historical canal in Zhenjiang.

**Figure 5.4 b): The urban area historical canal of the Zhenjiang section**

(Source: created by the author based on information and image acquired from the Xi Jin Ferry historic preservation and urban renewal project (2006 - present) and the World Heritage List nomination process for the Zhenjiang Section)



These tributaries include Li Ming Trench, Zhou Jia River, Si Ming River, Tuan Jie River, and Yu Dai River (Shao, 2009).

In 1991, the Historical Canal Regulation Command was set up by the Zhenjiang Municipal Government, and in 1994, the Historical Management Office was established. This office was responsible for regulation of the canal and its adjacent landscape, and was subordinate to the Zhenjiang Construction Bureau. After nearly 20 years' regulation, the water channels' flood control capacity has now been significantly increased. Water quality has been improved from Category inferior V<sup>5</sup> in 2001 to

5. Water quality: drinking water (Category I: national nature reserves; Category II: drinking water after purification; Category III: general industrial use after purification and sewage; Category IV:

**Figure 5.5: Photos of the Canal Zhenjiang Section - a) watercourse and vegetation; b) landscape; c) open space by the Canal**  
(Source: taken by the author in 2012)



Category IV now. In addition, 200,000 m<sup>2</sup> of greening has transformed the canal into a major city landscape, through which a number of city parks and open spaces are connected (Shao, 2009). The total input into the regulation and protection projects has reached 50,000,000 Yuan (£1= ¥10.4122). The historical canal in Zhenjiang, as the only water landscape in the city, is being developed from an abandoned ditch into a scenery belt (see Figure 5.5) which functions as flood control, natural landscape, cultural scenery, as well as commercial and tourist attractions (Organizing Committee, 2012 China Yangzhou World Canal Cities Expo & World Canals Conference, 2012). This demonstrates how conserving the heritage canal can help revitalise the surrounding area through improving its scenic values.

### 5.3 Nomination process to date in Zhenjiang

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From 2008 to 2009, a conservation plan for the Grand Canal (Zhenjiang Section) was produced by the Architecture School of Southeast University, under the supervision of SACH (the State Administration of Cultural Heritage) and Jiangsu Province Cultural Relics Bureau. During this time, a thorough investigation was carried out of the heritage assets and values. In Table 5.1 and 5.2, two examples of the results from the investigation which have been logged into a GIS system illustrate the approach and




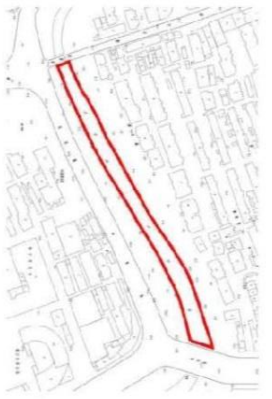
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general agricultural use; Category V: general sightseeing; Category inferior V: wastewater of no use)





results. These investigation results formed the collection of heritage sites and assets on which heritage conservation activities for the World Heritage List nomination preparation have been carried out.

Over the years of preparation for the World Heritage List nomination for the Grand Canal, in Zhenjiang, the Cultural Relics Office within the Department of Culture, Radio, Film, TV, Press and Publication of Zhenjiang (“the Cultural Relics Office of Zhenjiang” in the following text) has been mainly responsible for carrying out the nomination preparation work for the Canal Zhenjiang Section and responding to the requests from the overall nomination process. During this time, the Department has been working closely with Zhenjiang Water Resources Bureau and Zhenjiang City Construction and Investment Group. The Office (altogether four employees) has coordinated the different organizations, departments, divisions, and sections involved. It also has been in charge of collecting and sorting out data on the Grand Canal heritage sites that are running for the nomination, setting up administrative organizations to correlate different aspects of the work, putting up conservation signs, and other key tasks. In addition, the Office has carried out numerous publicity and educational activities to advocate the conservation of the Grand Canal as well as the World Heritage List nomination. These activities include involving the news media to disseminate the values of the Grand Canal heritage and the principles and elementary knowledge of heritage conservation to the general public in order to attain wider support. Various museum events and exhibitions have been held to serve the same purpose. There have also been several cyber platforms releasing the latest news on the application, as well as discussion forums, such as Zhenjiang Forum and Meng Xi BBS (Xu, 2012).

**Table 5.1: An example of “the Grand Canal Waterway Heritage” current condition investigation results log**  
(Architecture Design and Research Institute of Southeast University 2009)

No.	A2002	Site	The Historical Canal	Coverage	Hu Ju Bridge to Nan Shui Bridge	Jurisdiction	Water Resources Bureau	Current Function	Townscape
Service Condition	Fair	Protection Level	National	Waterway Type	Canal	Period	Ming and Qing dynasties	Waterfront Facade	Modern
Embankment Type	Artificial	Whether Navigable	Small boat only	Water Quality	Fair	Area (M <sup>2</sup> )	5469	Conservation Approach	Regulation and Development
History	Surrounding Environment				Existing Problems	Both water level and embankments are too low to be seen			
Historical Values	Period	Ming and Qing dynasties	Historical information carrying	Ordinary	Renown	Domestic	Representative	Typical	
Cultural Values	Testimony	Partial	Ideology reflection	Partial	Spiritual	Ordinary			
Scientific and Technological Values	Engineering and Planning	Fairly Reasonable	Design	Ordinary	Construction	Ordinary	Material selection	Fairly reasonable	Influence
Authenticity	Original Waterway	All	Maintaining original functions	No	Maintaining original environment	Yes			Great
Integrity	Function	Ordinary	Surrounding environment	Well preserved					
Continuity	Threats	None	Policy and Regulations	Adequate					
Conservation Possibility	Usability	Yes	Rationality	Fairly good	Continuity	Great			
Presentation Possibility	Presentable	Good	Rationality	Ordinary	Values	High	Condition	Ordinary	
Surrounding Environment Condition	Natural	Bad	Artificial environment	Ordinary	Cultural environment	Bad	Environmental influence	Ordinary	
Management Condition	Documentation	Ordinary	Organization	Ordinary	Facilities	Ordinary	Conditions	Ordinary	Safety
Site Photo 1	Site Photo 2		Site Aerial Photograph			Site Location			
   									

**Table 5.2: An example of “the Grand Canal Hydraulic Heritage” current condition investigation results log**  
(Architecture Design and Research Institute of Southeast University, 2009)

No.	B2002	Site	Hu Lu Bridge	location	Junction of Nan Men Street and Canal Road	Jurisdiction	Water Resources Bureau	Current Function	Bridge	
Service Condition	Fair	Protection Level	Municipal	Type	Hydraulic facility	Period	Ming and Qing dynasties	Material	Stone	
Scale	30×9.9	Conservation Approach	Preserve							
History	Was originally made from wood. In 1594 was rebuilt with stone. Was once called “Tai Yun Bridge”. In its west was one of Zhenjiang’s main roads. In 1961 was reconstruct – the two ends were raised, so as to flatten the slope. Also started using concrete for the bridge decks, but the original stone arch structure was kept.									
Surrounding Environment	Urban residential buildings				Existing Problems		None			
Historical Values	Period	Ming and Qing dynasties	Historical information carrying	Ample	Renown	None	Representative	Fairly good		
Cultural Values	Testimony	Ample	Ideology reflection	Ample	Spiritual	Great				
Scientific and Technological Values	Engineering and Planning	Fairly Reasonable	Design	Great	Construction	Advanced	Material selection	Fairly reasonable	Great	
Authenticity	Location	Yes	Material	Yes	Style	Yes				
Integrity	Material and structure	Fairly good	Function	Good						
Continuity	Function	Yes	Policy and Regulations	Ample						
Conservation Possibility	Usability	Yes	Rationality	High	Continuity	Great				
Presentation Possibility	Presentable	Ordinary	Rationality	Ordinary	Values	High	Condition	Ordinary		
Surrounding Environment Condition	Natural	Good	Artificial environment	Ordinary	Cultural environment	Bad	Environmental influence	Ordinary		
Management Condition	Documentation	Ordinary	Organization	Ordinary	Facilities	Ordinary	Conditions	Ordinary		
Site Photo 1	Site Photo 2		Site Aerial Photograph			Site Location				
										

### 5.3.1 Site selection – a ‘negative’ result

From 2008 when the World Heritage Site nomination preparation process in Zhenjiang was officially initiated, to June 2012 when the list of the Grand Canal heritage sites that are to be included in the nomination files was finalized, the number of sites in Zhenjiang was cut dramatically.

In the *Conservation Plan for the Grand Canal, Zhenjiang, China (2009)*, there were in total (not including the Grand Canal ecological and landscape heritage) 214 selected sites. They were divided into four categories: the Grand Canal hydraulic engineering heritage and related heritage including the Grand Canal waterway and water sources heritage (11 sites) and the Grand Canal hydraulic engineering heritage (30 sites), the Grand Canal settlements heritage (13 sites), other tangible canal heritage (160 sites), and the Grand Canal ecological and landscape heritage (two kilometres extent on both sides of the Grand Canal; one km extent on both sides of Danyang Moat, inner city rivers, Xiang Cao River, Dan Jin Li Canal, Jiu Qu River, and other tributaries; and all the hills within the stretch)(Architecture Design and Research Institute of Southeast University, 2009).

In April 2010, the second meeting of the Grand Canal Conservation and World Heritage Site Listing Application Inter-Ministerial Consultation Team was held. After this meeting, SACH authorized ICOMOS China to carry out the selection of sites to be included in the tentative list. After reviewing site lists submitted by each province and municipality along the Grand Canal, as well as researching important canal heritage sites that were newly discovered during the preparation of the *Conservation and Management Plan for the Grand Canal (2010-2030)*, ICOMOS China presented a foundational list. In the list, there were in total 315 items from all the canal cities,

provinces, and regions (Lu, 2011) (370 items in the Conservation and Management Plan for the Grand Canal (2010-2030)). Based on this list, application work progressed. From 28<sup>th</sup> to 30<sup>th</sup> June 2010, the first expert meeting was held in Beijing to compile the Grand Canal World Heritage Site nomination tentative list. During this meeting, a list of 239 sites awaiting field investigation was formed. At the Grand Canal Conservation and World Heritage Site Nomination Work Conference on 6<sup>th</sup> July 2010, the number of heritage sites selected to run for the nomination in Zhenjiang was 18 (see Table 5.3). There was a dramatic cut from the 214 sites proposed in 2009.

From 3<sup>rd</sup> August to 28<sup>th</sup> September 2010, field investigations were carried out by a SACH expert team, as well as discussions and meetings with local governments and relevant departments. 179 heritage sites and 52 canal sections remained on the list across all the sections of the Grand Canal. On 11<sup>th</sup> November 2010, the second expert meeting was held. During this meeting, 135 heritage sites (71 immediately enrolled, and 64 subsequently enrolled) and 51 canal sections (34 immediately enrolled, and 17 subsequently enrolled) were selected by secret ballot (Lu, 2011).

According to the report by Qiong Lu (the deputy director-general at the Department of Cultural Property Conservation and Archaeological Excavation in SACH) (2011), assessments were based on how closely the sites connected with the Grand Canal, their contribution towards the overall Outstanding Universal Value, as well as their preservation and administration status. The assessments decided which column each site would fall in: immediately enrolled, subsequently enrolled, and excluded for the time being. “Immediately enrolled” items referred to heritage sites whose values and preservation and administration conditions mostly met the requirements for World Heritage List nomination. They constituted the first batch of sites that would be

**Table 5.3: Heritage sites along the Jiang Nan Canal in Jiangsu Section that were selected for the nomination (2010) – Zhenjiang sites in bold**  
(Chinese Academy of Cultural Heritage 2010)

<i>Category</i>	<i>Item</i>	<i>Composition</i>
HYDRAULIC AND NAVIGATION ENGINEERING FACILITIES (5)	1. historical navigation channels	<b>Main navigation channels, historical channels</b> , Meng Du River, Di Pond, De Sheng New River, <b>Dantu River</b> , Lan Xi Pond, Xi Cheng Canal, <b>Jiu Qu River</b> , Wu Jiang Canal
	<b>2. ports</b>	<b>Small Jing Kou, Dantu Kou, Jian Bi Kou, Gan Lu Ferry historical site, Ding Mao Dai historical site</b>
	3. sluice gates	<b>Lian Lake Sluice Gate historical site, Nan Shui Guan historical site</b> , Lao Meng River Sluice Gate
	4. bridges	Lower Jin Bridge, Upper Jin Bridge, Wu Gate Bridge, Mie Du Bridge
	5. Wu River towpaths	Bao Dai Towpath Bridge, Gu Qian Dao, Chui Gong Towpath Bridge
CANAL ADMINISTRATIVE FACILITIES (4)	6. Mie Du Bridge Hydrologic Station	
	7. Heng Tang Post House	
	8. San Li Pavilion	
	9. Shi Li Pavilion (including the stone tablet)	
RELATED HERITAGE (7)	10. Royal Pavilion three stone tablets	
	11. Suzhou City Panel Gate	
	12. Han Shan Temple	
	13. Lu Mu Royal Cellar Site	
	14. Da Cheng Three Factory building blocks	
	15. Mao Xin Flour Factory old site	
	16. Su Lun Cotton Mill old site	
CANAL CITIES, TOWNS AND VILLAGES (2)	<b>17. Xin He Street</b>	<b>Ye Association, An Ren Tang, Jin Tai Association, Chen Mansion, Huang Mansion, Xu Mansion, Jing Rui Tang, the mosque</b>
	18. Qing Ming Bridge Historical District	Jiao Road Historical Cellar Area, Yong Tai Silk Mill historical site, Qing Ming Bridge, Ding Chang Silk Mill historical site, Da Jiao Road Cellar site and Cellar Association, Nan Shui Xian Temple

included in the nomination. “Subsequently enrolled” items were heritage sites that had significant values, but for which there was no adequate in-depth research and there were problems in their preservation and administration. These sites could be options for any successor application. Lu did not give an explanation on “excluded for the time being” items. In practice, these are sites that did not meet standards of either “immediately

enrolled” or “subsequently enrolled”, so were not considered in the nomination further and no more mandatory work was planned.

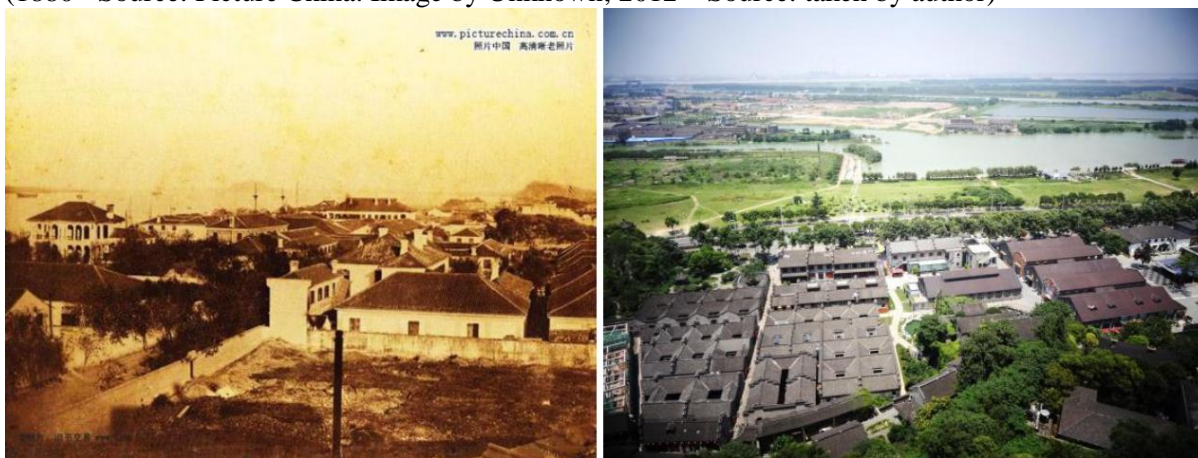
For all the listed sites, especially the immediately enrolled sites, heritage conservation, monitoring and research, improvement of the surrounding environment, establishment of archives, and other preparation work was carried out immediately to make sure their condition would eventually fulfil the demanding requirements for World Heritage Sites. The comprehensive inspection by SACH before the end of June 2012 was designed to finally select the sites that had Outstanding Universal Value, verified authenticity, high integrity, sound preservation and administration states, and solid and ample preparation work done to be included in the list for the World Heritage Site nomination. By the time of the inspection, if the work mentioned above for any sites was not completed, those sites would have to be removed from the list in order not to undermine the overall application (Lu, 2011).

At the Grand Canal Conservation and World Heritage Site Nomination Work Conference on 12<sup>th</sup> April 2011, the tentative list of the Grand Canal heritage sites was announced. On the list, all the sites fell into two categories: immediately enrolled and to be subsequently enrolled. Within the first category - immediately enrolled, Xi Jin Ferry Historical District (see Figure 5.6 a)) in Zhenjiang was included among 65 Type I (Heritage Sites) items, and Zhenjiang Urban Area Historical Canal was included among 31 Type II (Waterways) items; within the second category - subsequently enrolled, Hu Ju Bridge (see Figure 5.6 b)) was among 67 Type I (Heritage Sites) items, and Dantu River was among 12 Type II (Waterways) items. Thus, at this point, the number of heritage sites in Zhenjiang included in the nomination had decreased to four.

## Figure 5.6: Historical photos versus photos of today

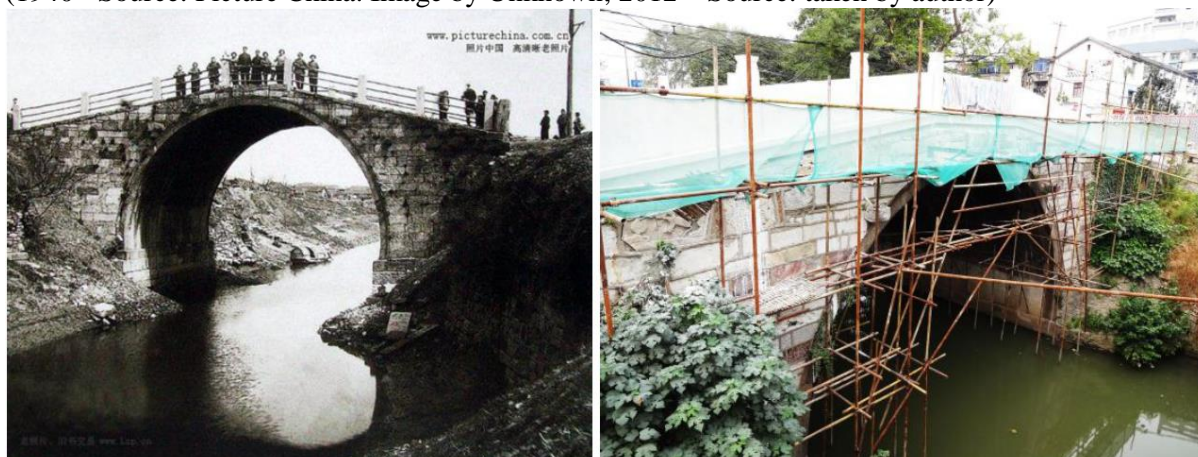
### a): Xi Jin Ferry (1880 vs 2012)

(1880 - Source: Picture China. Image by Unknown; 2012 – Source: taken by author)



### b): Hu Ju Bridge (1940s vs 2012)

(1940 - Source: Picture China. Image by Unknown; 2012 – Source: taken by author)



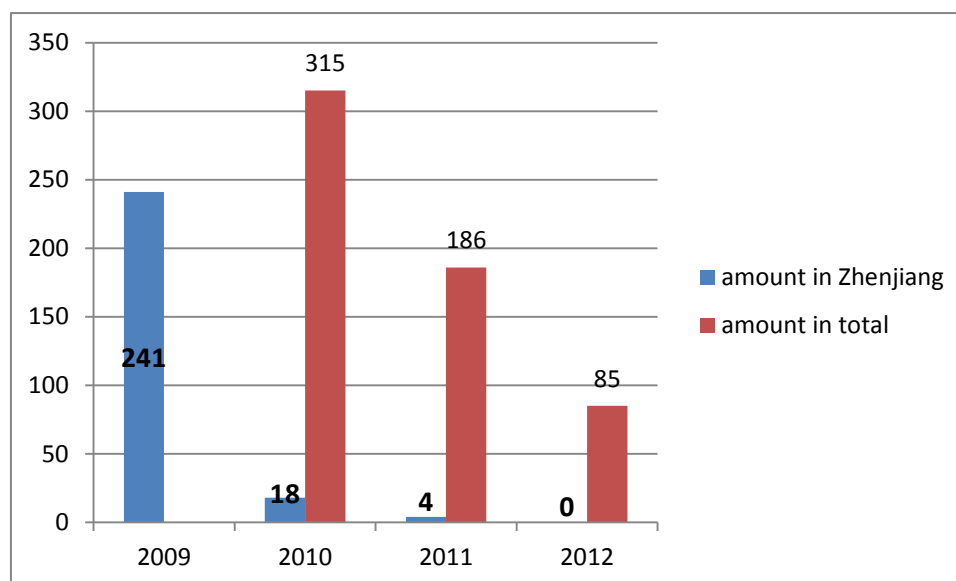
Both the two immediately enrolled sites selected in 2011 in Zhenjiang are unquestionably “closely connected with the Grand Canal” and “their contribution towards the overall outstanding universal values” (Lu, 2011, para. 3) is significant. Also, and very importantly, their preservation and administration status is considered by the expert advisory bodies to be the best among the Grand Canal heritage sites in Zhenjiang. Thus they were both listed as “immediately enrolled”. A considerable amount of conservation work has continued to be done on them after April 2011 to improve their state and preservation.

In October 2011, it was confirmed again by the deputy director (at the time) of the Department of Culture, Radio, Film, TV, Press and Publication of Zhenjiang, that the number of the sites in Zhenjiang to be included in the nomination was two (immediately enrolled) - Zhenjiang Urban Area Historical Canal and Xi Jin Ferry Historical District. These two sites, one the historical watercourse of the Canal, and the other the historical port of the Canal are both irreplaceable components of the Grand Canal. Thus, these two sites were eventually included in the “final list” (June 2012). As a result, by 2012, although Zhenjiang has rich canal heritage resources, only two sites in Zhenjiang were to be included in the final list of heritage sites within the World Heritage Site nomination.

However, in September 2012, it was decided within the central nomination preparation team, i.e. the Chinese Academy of Cultural Heritage (CACH) and the World Cultural Heritage Joint Bidding Office (Yangzhou), that no heritage site in Zhenjiang would be included in the final nomination file. But as an important historic canal city, they recognized that Zhenjiang should still be acknowledged. This was not mentioned in any official files at this stage, so neither the Zhenjiang Government nor the Cultural Relics Office of Zhenjiang was informed of this unanticipated and unwelcome change. Not until the end of January 2013, when the nomination file was submitted to UNESCO World Heritage Centre, did the news break to Zhenjiang. On 8<sup>th</sup> March 2013, the deputy mayor of Zhenjiang who is in charge of cultural affairs and the director-general of the Department of Culture, Radio, Film, TV, Press and Publication of Zhenjiang set off to Beijing to make the final proposals. Unfortunately, since the nomination file had already been submitted, no changes could be made. According to SACH (early March 2013), if the nomination is successful Zhenjiang may stand a strong chance of having multiple sites included in the extended Grand Canal World Heritage Site list. But after

**Figure 5.7: Changes in the amount of selected sites in Zhenjiang included in World Heritage List nomination from 2009 to 2012**

(Source: created by the author based on information from the World Heritage List nomination process for the Grand Canal Zhenjiang Section)



Note:

1. The number of sites across all the cities in total in 2009 is not available;
2. The numbers used in this figure are a different set. Thus they are different from the ones used in Chapter 4, re the numbers from ‘Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal - the First Stage’, ‘Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal - the Second Stage’, or the *Conservation and Management Plan for the Grand Canal (2010-2030)*.

Mingkang Tong (the deputy director of SACH)’s latest visit to Zhenjiang in late March 2013, there still has not been any official confirmation of this<sup>6</sup>.

To summarize, the selection of sites for the Grand Canal World Heritage Site nomination has finished with a largely unfavourable result for Zhenjiang (see Figure 5.7). Although Zhenjiang participated in the nomination process, signed the *Grand Canal Heritage Protection Joint Provisions*, and is still recognized as one of the canal cities, it has no canal heritage site included in the final nomination file despite having submitted 214 sites in the early stages of the process.

6. Information source: Zheng Xu – contact and collaborator at the Cultural Relics Office of Zhenjiang.

### 5.3.2 Archaeological findings, improvement projects, and regulations – the ‘positive’ gains

#### *5.3.2.1 Conservation activities*

From the beginning of the World Heritage Site nomination process, Zhenjiang, especially the Cultural Relics Office of Zhenjiang, has conducted much research and practical conservation work on the Canal and its heritage. The work has included collecting, sorting out, and providing data for the World Heritage List nomination. The data are basic pieces of information about the selected sites, archaeological information, hydraulic and navigation archives, preservation history, local annals, relevant maps, photos and images, all levels of relevant urban planning plans, and so on. The work also includes running and supporting improvement and regulation projects on the heritage sites that were included in the lists of respective nomination stages, setting up monitoring and patrol schemes along the Zhenjiang section of the Grand Canal, and other foundational heritage conservation and management work.

There have also been a number of other relevant activities in Zhenjiang during the nomination process, such as archaeological explorations and the conservation projects thereafter. For example, a large cluster of barns by the canal was discovered in Zhenjiang (see Figure 5.8). The Jiang Nan Canal, which starts from Zhenjiang and flows to Hangzhou, was the busiest waterway of the Grand Canal. The 13 barns that have been excavated have been proved to be grain storage facilities from the Song (960-1279 AD) and Yuan (1271-1369 AD) dynasties for mass transportation along the Grand Canal, especially the Jiang Nan Canal, and from it to the north. They are large scale, in orderly arrangement in a group. Also excavated are their ancillary buildings and

structures, such as bridges, post houses, historical government office buildings, and water channels among others (Tian, 2010).

In order to systematically and scientifically protect the barns, *Shuang Jing Road Grand Canal Archaeological Site Preservation Plan* was approved by Jiangsu Province Cultural Relics Bureau and SACH in February and March of 2011 respectively. Based on the approvals, Zhenjiang

Cultural Relics Bureau organized the preparation of three specialized conservation plans: the *Conservation Plan for the Barn Base Site*, the *Conservation Plan for the Architectural Sites*, and the *Conservation Plan for Stone Arch Bridge of Yuan Dynasty*.

Reburial is being used on the barn bases to secure the sites' authenticity and to preserve the historical information. The

conservation projects on the barn bases sites and architectural sites were launched in August 2011 (Zhang, 2011a). In October 2011, the barn bases conservation first phase project and the architectural sites conservation projects were finished and were examined and accepted by Zhenjiang Urban Planning Bureau and municipal government (Zhang, 2011b).

**Figure 5.8: Barns of the Song and Yuan dynasties**  
(Source:SACH. Image by Shen, Zhang; Source: taken by the author on site on 22<sup>nd</sup> May 2012)



Although like a lot of other sites these barns are not included in the World Heritage List nomination at this stage, the heritage conservation work on them will provide a good foundation for any possible future expanded World Heritage Site holistic conservation, interpretation, and presentation activities. The World Heritage List nomination has brought more attention to heritage conservation for an increased number of heritage sites in the city like these barns. At the same time, these heritage sites will eventually complete and strengthen the World Heritage status.

#### ***5.3.2.2 Waterway improvement and regulation activities***

Another achievement that is worth mentioning is the historical canal comprehensive improvement project which was launched in 2009. The project was conducted by Zhenjiang Water Resources Bureau, and stretched from Zhou Jia River Mouth to Jing 12 Road with a total length of 4.2km. The project aimed to improve hydraulic engineering along the canal, enhance the sewage damming pipe network, strengthen ecological management, construct landscape and greening, improve roads and bridges, automate monitoring, develop supporting commercial facilities, and regulate other relevant projects. The estimated total cost of the project was 1,500,000,000 Yuan (Zhenjiang Municipal Government, 2012). Through the construction of hydraulic and sewage system, waste water is no longer discharged directly into the canal. A number of urban open spaces such as parks, squares, landscape nodes, and waterfront environments have also been made. On 19<sup>th</sup> December 2012, the project was successfully completed.

As a project which enhances an irreplaceable part of the Grand Canal, the Zhenjiang Section historical canal improvement project is a direct contribution to the overall World Heritage List nomination process. It is also the foundation for any further

conservation for the canal waterway as well as the canal heritage along it. Moreover, as mentioned, the project largely improves the natural environment and the townscape of the city, which is one of the many indirect benefits the city enjoys from heritage conservation – aiding revitalization and economic growth.

To sum up, during the nomination process, a series of accomplishments in archaeological research and practice, hydraulic engineering, and heritage conservation were made for the Grand Canal heritage sites in Zhenjiang. Directly or indirectly contributing to the nomination, they are certainly important heritage conservation activities from which both the heritage and the city have benefited.

## 5.4 Comparisons between the nomination process in Yangzhou and Zhenjiang

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### 5.4.1 General comparisons

Yangzhou is the canal city to the north of the Yangtze River (see Figure 5.9). It is the end point of Huai Yang Canal – the part of the Grand Canal that is north of Jiang Nan Canal, which starts in Zhenjiang. Like Zhenjiang, it is also a crucial point connecting the north and the south of the canal.

The construction of the canal in Yangzhou began from the Spring and Autumn Period, when the king of the State of Wu (11<sup>th</sup> Century BC - 473 BC) gave orders to start digging Han Ditch in 486 BC. In the same way as Zhenjiang, the Grand Canal brought Yangzhou economic prosperity and diverse culture. As the transportation function of the Grand Canal declined, the canal waterways in Yangzhou continued to provide a wide range of services including water diversion, flood control, drainage, and some navigation (Organizing

Committee, 2012 China Yangzhou World Canal Cities Expo & World Canals Conference, 2012).

Zhenjiang and Yangzhou are two cities with many similarities especially historically as canal cities (made National Historical and Cultural Cities by SACH in 1986 and 1982 respectively (The Chinese

Cultural Heritage Protection Website Committee, 1994)). Although there are differences in their sizes: the populations of Zhenjiang and Yangzhou are 3.16 million and 4.60 million respectively; and urban areas of Zhenjiang and Yangzhou are 1082 km<sup>2</sup> and 2353 km<sup>2</sup>, they share the similar levels of economic development (Table 5.4).

**Figure 5.9: Zhenjiang, Yangzhou, the Grand Canal, and the Yangtze River**

(Source: created by the author based on information from the World Heritage List nomination process for the Grand Canal Zhenjiang Section and Yangzhou Section)



**Table 5.4: Economic development level comparison - Zhenjiang and Yangzhou**

(Source: Economic index 2009 (of municipal area) (Zhenjiang Xi Jin Du Culture and Tourism Co Ltd, 2011))

CITY	Zhenjiang	Yangzhou
GDP (billion CNY)	62.97	72.07
tertiary sector (billion CNY)	23.77	28.84
per capita GDP (CNY)	61244	60100
per capita disposable income (CNY)	19044	17398
per capita consumer spending (CNY)	12217	11562
per capita consumer spending (CNY) on recreation, education & culture	1769	2115
consumer price index (previous year=100)	105	104.8

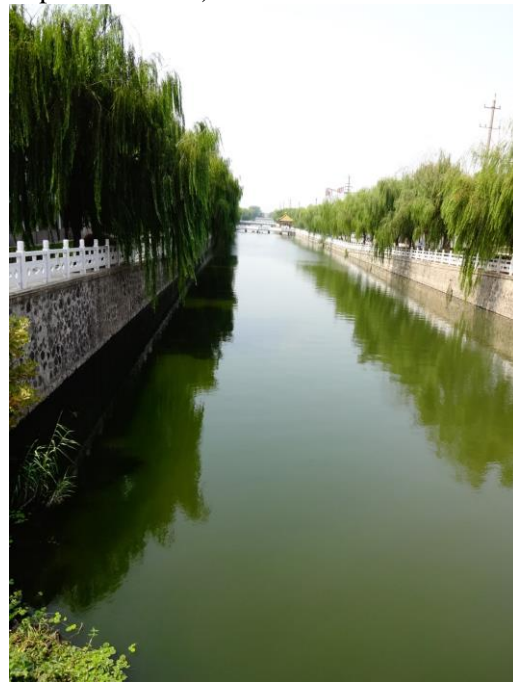
#### 5.4.2 Input

When making comparisons between the two cities in terms of their planning and financial investment in the Grand Canal, there are some big differences. Looking first at Zhenjiang, after the last canal regulation and improvement project completed in June 1997, there was no whole (Zhenjiang) detailed plan, key district plan, sewage damming plan, or watershed regulation plan. In 2003, the water resources bureau prepared a fairly high level plan for regulating the middle part of the canal, however it unfortunately was not approved or implemented (Shao, 2009). This resulted, on the one hand in many historic sites becoming neglected, damaged, destroyed, or taken over by buildings or other facilities that were neither well planned, nor legally approved. On the other hand, the cement and concrete revetments built in the 1990s made an impression on the field investigation experts in the summer of 2010 as “1980s authentic features” which they saw as “an advantage”. This made the Zhenjiang government very pleased with their achievements. But ironically this “achievement” is due to the fact that they failed to achieve anything for more than a decade between 1997 and 2010. Besides, in the 10 years of the regulation and improvement project (up until 1997), the total financial input was only 40,000,000 Yuan, on average 4,000,000 Yuan per year (Shao, 2009).

In comparison, Yangzhou Municipal Government has made much more effort than Zhenjiang. A large amount of work has been done to protect, regulate (see Figure 5.10 – the canal in Yangzhou after regulation), and utilize the canal. More importantly, Yangzhou has set itself the goal to develop into a canal city and highlight its tourism, leisure, commerce, and culture (Organizing Committee, 2012 China Yangzhou World Canal Cities Expo & World Canals Conference, 2012). Not

**Figure 5.10: The Yangzhou section of the Grand Canal**

(Source: Taken by the author on 26<sup>th</sup> September 2012)



only is the regulation and improvement project for the Grand Canal still on-going, but also the annual allocation of funds increased in the last 10 years to 80,000,000 Yuan. Moreover, the total spent is 10,000,000,000 Yuan (Shao, 2009). Even factoring in currency inflation, there is still a big gap between the respective financial inputs of Yangzhou and Zhenjiang to canal heritage conservation.

#### 5.4.3 Political commitment

In Zhenjiang, unlike Yangzhou, there has been no one person, office, or organization in charge of the day to day work during the Grand Canal World Heritage Site nomination. Although the Cultural Relics Office of Zhenjiang has been responsible for the main nomination work, that office is at the same time also responsible for all other heritage related work in the city. As has been discussed before, Zhenjiang is a historic city with a rich resource of heritage. Thus, the office can only devote a small amount of time to

the nomination process. Because the number of heritage sites included in the nomination was small, in practice there was not much work to do (12<sup>th</sup> October 2011, interview with Xiaomei Sun, at the time deputy director-general of Department of Culture, Radio, Film, TV, Press and Publication of Zhenjiang). Perhaps exactly because Zhenjiang did not enthusiastically express or demonstrate its strong intention to actively participate in the nomination, the number of its heritage sites in the tentative list decreased.

Eventually, the number of Zhenjiang sites dropped to zero. Probably this is related to the lack of attention given to the nomination process here, because of “the small number of sites Zhenjiang possesses”. The officers in the Cultural Relics Office of Zhenjiang have no doubt worked very hard and passionately. The new deputy mayor, who took office in 2012, thinks highly of the application and arranged the trip to Beijing in March 2013 with the purpose of making final efforts for heritage sites in Zhenjiang to be included in the tentative list. However, the World Heritage List nomination is such a huge project for every participating city, that it needs long-term attention and commitment from higher authorities so maybe her enthusiasm came too late.

In contrast to Zhenjiang, there was not only a special office in Yangzhou carrying out work on the application, it was also the joint bidding office (established on 26<sup>th</sup> September 2007) representing Yangzhou as the lead city for World Heritage Site nomination for the Grand Canal announced by SACH. As the lead city, there have been seven Grand Canal conservation and nomination work conferences held in Yangzhou since March 2007. In September 2012, the 2012 China Yangzhou World Canal Cities Expo & World Canals Conference was held in Yangzhou. Experts, specialists, and

authorities of other canal cities and organizations nationwide and worldwide were brought to Yangzhou. In the 27<sup>th</sup> March 2012 tentative list, there were ten immediately enrolled heritage sites, six immediately enrolled waterways; and five subsequently enrolled heritage sites, two subsequently enrolled waterways in Yangzhou. This is evidence of this city's success in the nomination process.

#### 5.4.4 Administrative systems

When comparing general administration systems of heritage related affairs, in Zhenjiang, the Department of Culture, Radio, Film, TV, Press and Publication of Zhenjiang is a first level administrative unit under Zhenjiang Municipal Government, and the Cultural Relics Office is a second level administrative unit. While in Yangzhou, the Department of Culture, Radio, Film, TV, Press and Publication of Yangzhou is a first level administrative unit under Yangzhou Municipal Government; and Yangzhou Cultural Relics Bureau together with Yangzhou World Heritage List Nomination Office (also currently the “World Cultural Heritage Joint Bidding Office” for the Grand Canal) are also first level administrative units. Yangzhou Cultural Relics Bureau (Yangzhou World Heritage List Nomination Office) consists of five second level administrative units: Human Resources and Administration Office, Planning and Financial Office, Heritage Conservation Office, Museum, and Research Office. The Heritage Conservation Office approves municipal level heritage conservation plans and projects, administrates cultural heritage sites, conserves and monitors historic towns and villages, conserves and renovates historic districts, designates conservation and development control areas, heritage resources general survey, manages cultural relics market, and cooperates with heritage related enforcement. The Museum Office manages archaeological excavation projects and plans, conducts construction projects’

archaeological excavation and heritage conservation, draws up museum affair development plans, administrates all museum affairs and activities, safeguards cultural relics, and cooperates with heritage related enforcement. The Research Office carries out research on values of cultural heritage in Yangzhou, organizes nomination files preparation, and coordinates conservation and management plans making (Yangzhou Municipal Government, 2012).

As demonstrated above, although Zhenjiang and Yangzhou are comparable in many aspects such as economic status, in the World Heritage List nomination and canal heritage conservation process, Zhenjiang has been in a weaker place in both financial inputs and administrative inputs. In addition, from the general settings of the heritage conservation and management systems of the two cities, it can be seen clearly how differently the two cities value heritage.

## 5.5 Implications and conclusions

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### 5.5.1 Has Zhenjiang ‘failed’ in the nomination?

Does Zhenjiang’s failure to have any sites included in the nomination imply that it has failed in heritage conservation? On the surface, the fact that no sites in Zhenjiang were selected to be included in the final nomination file may indicate failure for the city. However, looking at this in reverse the fact that such a key city along the Grand Canal has been excluded from the World Heritage List nomination suggests that the nomination itself has missed out. Also, because Zhenjiang’s sites are not in the World Heritage List nomination file, there will be fewer restraints on conservation for them in future. They can be further interpreted to a larger extent in their indigenous context. They can also be more dynamically integrated with the new elements in the city, which

means possibly easier and better interaction with citizens. In the light of these possibilities, is getting listed as a World Heritage Site a good way to conserve a heritage property? Or can being excluded actually lead to better heritage conservation with respect to context and people?

Although no heritage site in Zhenjiang is in the final World Heritage List nomination file submitted to the World Heritage Centre in January 2013, there have been many achievements in the Zhenjiang Section during the World Heritage List nomination process. Important foundational work on the recognition, documentation, evaluation, conservation, and management of heritage has been done on the Grand Canal heritage sites in Zhenjiang, the regulation and improvement project for the middle part of the canal waterway has been completed, and salvage, protection and renovation activities have been successfully undertaken on the key cultural relics along the canal. As a part of the requirements on any property that is running for the World Heritage List nomination, there should be conservation plans for the property to make sure there will be conservation schemes ready to protect the heritage. Because of this, in 2010, the *Conservation Plan for the Grand Canal, Zhenjiang, China* was announced. In 2012, data collection for the Grand Canal World Heritage List nomination was finished, archive building for the involved heritage sites was completed, and the Grand Canal World Heritage List nomination signs at the heritage sites were put up (see Figure 5.11). In addition, numerous archaeological excavation results exhibitions have been held, archaeological site field days have been organized, as well as heritage site visits and other outreach, dissemination, and publicity campaigns (Cao, 2012). Directly or indirectly, Zhenjiang and heritage conservation development in Zhenjiang has widely benefited from the World Heritage List nomination for the Grand Canal.

**Figure 5.11: The Grand Canal World Heritage Site nomination sign at Xi Jin Ferry, Zhenjiang**  
(Source: Taken by the author on 13<sup>th</sup> January 2011)



### 5.5.2 What does Yangzhou have that Zhenjiang doesn't?

The first and the central point Zhenjiang could learn from Yangzhou is how seriously it takes heritage conservation. From the comparison between the two cities, it is clear that financially Yangzhou has put more of its resources into the nomination/heritage conservation than Zhenjiang. Because Yangzhou aims to focus on furthering its development in tourism and culture, there is more political attention, and thus the financial allocation is made larger (since heritage conservation in China is mostly run by the state, financial input mostly comes from government financial allocation). More political attention and financial input ensure larger scale projects and better implementation. The political attention leads to a more sophisticated administrative system, which again will make larger scale projects and more adequate implementation happen, as well as better management. More importantly, stronger political support means enhanced priority for heritage conservation in urban development.

Yangzhou does not essentially possess more and better heritage than Zhenjiang, but because Yangzhou has done a better job than Zhenjiang, it now has 17 sites included in

the World Heritage List nomination - whilst Zhenjiang has none. Because of this, these sites and Yangzhou have more attention, and probably more favour too, from higher level heritage conservation authorities. Thus, apart from the continuous local efforts put into conserving these sites, outside recognition and aid will come Yangzhou's way. Not only more heritage sites are well conserved in Yangzhou, but its development goal of promoting the tourism and culture is well served too.

Zhenjiang should not necessarily set itself exactly the same goals as Yangzhou. But learning from the experience, if it wanted to play a more important role in the World Heritage List nomination, the Zhenjiang government should have put more effort and attention into the nomination, as well as general heritage conservation.

In Zhenjiang, many efforts were made during the nomination process to seek interdepartmental cooperation. The Cultural Relics Office of Zhenjiang was the main operating organization. Zhenjiang Water Resources Bureau, Zhenjiang City Construction and Investment Group, and other relevant departments have also participated. For instance, conferences and meetings were held among multiple departments in the city, such as the Zhenjiang Grand Canal World Heritage List nomination application work conference on 23<sup>rd</sup> October 2011, which was chaired by the secretary-general of Zhenjiang Municipal Government, and attended by the Department of Culture, Radio, Film, TV, Press and Publication of Zhenjiang, Zhenjiang Water Resources Bureau, Zhenjiang Transportation Bureau, Zhenjiang Urban Planning Bureau, Zhenjiang City Administration Enforcement, and other departments in the city (Xu, 2012); and the Grand Canal South Jiangsu Zhenjiang Section navigation channels improvement and regulation project promotion meeting on 27<sup>th</sup> October 2011 organized by Zhenjiang Municipal Government. The deputy mayor, the deputy secretary-general

of Zhenjiang Municipal Government, the director-general and deputy director-general of Zhenjiang Transportation Bureau, as well as heads of each relevant district authorities, Zhenjiang Development and Reform Commission, Zhenjiang Environmental Protection Bureau, Zhenjiang Agriculture Department, and nine other department and two infrastructural groups participated in the meeting. During the meeting, the project command with the deputy mayor as the commander was officially established (Publicity and Education Section, 2011).

However, the leading role of the Zhenjiang municipal government has been more or less merely symbolic, and the Cultural Relics Office could advocate but not really coordinate the various departments' activities and work. The water resources department is in charge of flood prevention and control, the culture department does historical preservation, and sewage treatment is the environmental protection department's job. At the same time, 42.55 km of the canal is administered by the transportation department, while the remaining 16.69 km is run by the water resources bureau (Xu, 2012). In addition, while the hydraulic projects and the application are overseen by the municipal government, some canal related heritage sites are administered by district authorities, such as Xin He Street by Jing Kou District (11<sup>th</sup> October 2011, interview with Jinwen Geng – head of Urban Planning and Design Institute of Zhenjiang). There has never been any authority, organization, or office taking the lead, and more importantly being empowered to effectively make the cooperation happen. This is probably the reason that although it is possible that the involved departments have been willing to participate, when it comes to the day-to-day work, hardly anyone or any office would have the extra time and energy to first consider the situation of the World Heritage List nomination application, and then actively work towards it hand in hand with other departments.

Due to the insufficiency of political attention and financial support, ineffective interdepartmental cooperation which is mainly caused by the lack of empowered heritage offices, as well as strong competition from Yangzhou, the final outcomes of the World Heritage List nomination for the Grand Canal have not favoured Zhenjiang. Here comes the question of the necessity of competition. Certainly, competition motivates actions. However, in the field of heritage conservation, which should be about embracing and appreciating diverse cultural, intellectual, aesthetic, and more heritage properties that all belong to the human race, competition is not necessarily suitable. On the contrary, conversations, communications, and collaborations should be widely encouraged and carried out. Another potential issue is that, because of the existence of the competition for sites to be entered onto the nomination list, the objectivity of the list of heritage sites selected to run for the World Heritage List nomination ought to be questioned. All sorts of situations might undermine the objectivity of the decision-making – closer or looser political relations, current appearances of heritage sites that could vary largely due to various reasons, periods of history that are understood and researched to different levels, and many more.

In China, there is rising awareness of heritage conservation, but it is still underprivileged. Thus, a strong political will is required to give a heavier focus on heritage conservation in city development, and to realize interdepartmental cooperation during complex heritage conservation activities. In order for politicians to have a strong will for heritage conservation, it is necessary for them to appreciate the history and culture that heritage carries and to recognize the potential that heritage conservation brings to development. This requires further academic research in heritage conservation, and more importantly, better communication between decision makers and researchers. Such improved communication would also aid progress in other political issues such as

balancing development between industries (i.e. cultural industry versus manufacturing industry and other secondary industries). Conflicts between historic preservation and the improvement of living conditions, and so on would also be tackled more effectively and reasonably.

To conclude, although Zhenjiang has an exceptionally rich resource of heritage, academic research and practical conservation effort on that heritage is far from adequate. Many heritage sites along the Grand Canal or related with the canal, as well as aspects of intangible heritage related to the canal that have not been listed as protected items are disappearing on a daily basis (Xu, 2012). Although having a renowned history as a canal city, Zhenjiang itself and its political leaders do not seem to really value this. Indeed industrial development is strong in Zhenjiang, but whether it is to realize sustainable development for the city, or to promote the sense of identity for its citizens, making more effort to conserve heritage such as the Grand Canal and its related heritage is necessary and more and more urgent. These are problems which also surround heritage conservation in many other cities in China. In order to encourage investment in heritage conservation, stronger political support, bigger financial input, more effective and active interdepartmental cooperation, and for all organizations to learn from each other, are much needed.

## CHAPTER 6

### **URBAN REVITALIZATION THROUGH HERITAGE CONSERVATION: LESSONS FROM XI JIN FERRY, ZHENJIANG, CHINA.**

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#### 6.1. Introduction

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The Historic Cultural Cities scheme (Ruan & Sun, 2001; Y. Zhao & Cui, 2004; Z. Zhao, 2001) was established in China in 1982. This scheme is based on the concept of holistically conserving cultural heritage in the built environment in which cities are the ‘container’ of various types of cultural heritage. It is a successful extension of cultural heritage definition in China, and a good combination of urban heritage ideas from the West and practical current conditions in China. After 30 years, there are now 99 cities (according to the State Administration of Cultural Heritage (SACH) website <http://www.sach.gov.cn/col/col1620/index.html>) in China included in this scheme, including Zhenjiang (listed in 1986) - the city discussed in this article.

In China, research on conserving and sustainably developing historic cities (Ruan & Wu, 2001; Wang, 2004; Yang, Leng, & Wang, 2001) is being carried out against a backdrop of rapid social and economic development. Because of the enormous pressure from urban development, as well as the gap between theoretical research and practical implementation, a focus on heritage conservation at the urban scale has not yet been attempted in China. Only recently has culture been seen as a valuable and sustainable ‘asset’ for urban development here (du Cros, Bauer, Lo, & Rui, 2005; Liu, He, Wu, & Webster, 2010; Wong, Tang, & van Horen, 2006). But a concern with culture has to be balanced with consideration of other complex factors such as day-to-day living conditions, social economic prosperity, political goals, and many more. Therefore, the

relations between heritage conservation and urban revitalization in China have not yet been fully explored at a ‘whole city’ scale.

This article explores the relationship between heritage and its host city, and the interaction between heritage conservation and urban development. This is done through consideration of what heritage conservation brings to a host city, revealing the underlying connection between culture and heritage, as well as heritage and the built environment, and arguing that heritage conservation is an approach to achieve urban revitalization. This article also reflects on how urban planning practice pushes forward theoretical research in urban planning (theory is developed through and during the process of practice), and how the research results can in turn inform future practice.

This article addresses these themes and proposes what we can learn from a case study carried out based on fieldwork on a heritage site (Xi Jin Ferry) in the built environment of Zhenjiang, China. Focusing on this site, the article introduces the historical and urban development research carried out by the author as part of urban planning projects on the interactions between the ferry, the waterways, and the city, and summarizes the successful preparation and implementation of urban planning for the site. Building on observations made by the author during these planning exercises, the paper analyses the underlying factors which aided success, and proposes a systematic approach for future studies (the ‘Xi Jin Ferry model’). The article concludes by proposing an organic relationship between conservation and development, within which in-depth and thorough research goes first, and planning and development are steadily paced to accommodate the research while active reflections are made throughout the process.

## 6.2. Research context

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### 6.2.1. The extended sense of heritage – urban and larger

Urban heritage includes monuments like religious buildings, institutional buildings, palaces, castles, fortresses, historic city walls and gates and so on; it also includes historic residential areas (Larkham, 1992; Lin & Ruan, 2006; Yeoh & Kong, 1997; Y. Zhao & Ruan, 2003) and historic city centres (Bromley & Jones, 1995; Bromley, 1998; Ennen, 2000; Middleton, 2003; Page & Hardyman, 1996). In addition, it includes intangible elements (Bie & Liang, 2008; Graham, 2002; Klosek-Kozłowska, 2002; Tweed & Sutherland, 2007), for example customs and beliefs, which “play a role for the articulation of space use and the built environment” (Steinberg, 1996, p. 463). Since the scale of urban heritage is as large as an entire historic city, and the sense of heritage is extended to cover a wide range of types, multiple functional departments in a city will be involved in making decisions affecting urban heritage

Today, most countries around the world have legislation for conserving their heritage. But the legislation offers little guidance on whose responsibility it is to conserve heritage. Globally, very few countries have methodologies to guide effective implementation of conservation practice (China ICOMOS, SACH, & the GCI, 2004).

As the field most closely dealing with urban activities, urban planning is in practice highly involved in various heritage conservation stages. However, because of the facts mentioned in the previous paragraph, although urban planning is directly handling heritage, heritage conservation does not fall within urban planning’s “job description”. In addition, when it comes to the approaches used towards heritage in urban planning preparation and implementation, mostly what happens is that heritage conservation approaches are merely consulted. Urban planners are not professionals in heritage

conservation. Systematic research has not been carried out on either how urban planning and heritage conservation approaches interfere with each other, or how the two could be integrated and work synergistically when needed.

#### 6.2.2. Revitalization can also fulfil cultural potential

In urban literature, various terms have been used to address redevelopments in urban areas. For example, urban regeneration, urban revitalization, gentrification, urban renewal, rehabilitation, renovation, and more (Palen & London, 1984). In this article, the term “urban revitalization” is used to refer to the process of transforming the urban environment, as well as generating vitality for urban development. It has at least four folds of meanings: creative space utilization, new forms of economic growth, local cultural uplifting, and eventual social sustainability.

For a long time, revitalization programmes could be justified only if they resulted in improvements in the affected residents’ standard of living and contributed to improvements in the city’s overall public infrastructure (Abramson, 2001; Junhua, 1997). But as stated above, revitalization is more than that. Heritage in the built environment holds the status of a ‘preservable asset’. This asset has good potential for direct economic exploitation, such as through tourism and thus can contribute to revitalization (G. J. Ashworth, 1994; McKercher & Cros, 2002; Prentice, 1993). Article 4 of *Principles for the Conservation of Heritage Sites in China* states clearly that “heritage sites should be used in a rational manner for the benefit of society. The values of the site should in no way be diminished by use for short-term gain” (China ICOMOS et al., 2004, p. 60). As an asset, heritage’s cultural perspectives also aid culturally-based image building of local economic development and the promotion of corporate enterprises (Gertler & Networks, 2004; Miles, 2005; Muriithi & Crawford, 2003). What

is more, in the longer term, these cultural perspectives can not only benefit cities today, but can also nurture the future of cities, and thus aid their revitalization (Steinberg, 1996).

### 6.2.3. The extended sense of heritage conservation – revitalization of heritage cities as a heritage conservation approach

“Heritage conservation” and “urban revitalization” are two phrases that have been put together or mentioned together for a long time (Gospodini, 2004; Nasser, 2003; Pickard, 2001; Strange & Whitney, 2003; Yeoh & Huang, 1996). 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” (Gregory John Ashworth, 1991, p. PREFACE) respectively, these two fields indeed have stopped developing largely independently of each other and now overlap in “the contemporary industry that uses these historic resources to satisfy modern demands, many of which are associated with leisure” (Gregory John Ashworth, 1991, p. PREFACE). However, “heritage conservation” and “urban revitalization” are still two separate objects of study and practice involving different communities of scholars and practitioners. They have not been dynamically connected to work to support each other in theory or in practice.

The condition of monuments/heritage sites is determined largely by their present function and use. Those which have no further utilization tend to decay rapidly (or require expensive conservation), while the ones that are still in use have a better chance of being maintained. Use can also lead to modifications which can reduce the site’s heritage values. But there is a good chance that having a new function through "adaptive re-use" will lead to even better maintenance. The strategy of conversion for

adaptive re-use appears to many authors (Binney, Machin, & Powell, 1990; Bullen, 2007; Burton, Jenks, & Williams, 2013; Heath, 2001; Velthuis & Spennemann, 2007; Yıldırım & Turan, 2012) to be the most effective approach for a sustainable form of conservation (Steinberg, 1996). However, it is still a tricky issue to balance the “desire to preserve a sense of the past” with an appreciation that monuments, heritage sites, and historical cities are all formed throughout long periods of various development and habitation stages and development is going to keep happening (Pendlebury, Short, & While, 2009).

In China, the rich resources of archaeological and historic legacy have been facing tremendous pressure from rapid social and economic development. All levels of heritage conservation authorities are thus hard pressed to meet these challenges effectively. But it should not merely be the cultural heritage authorities’ job to conserve heritage, especially when according to *Principles for the Conservation of Heritage Sites in China* “all conservation master plans, especially those for historic precincts (villages or towns), should be closely coordinated with the local official development plan... (and) they should be incorporated into the local urban or rural development plans” (China ICOMOS et al., 2004, p. 62). Therefore, urban planning practitioners and researchers are also often involved in decision and policy making that directly affects heritage conservation. The issue mentioned in the previous paragraph on seeking the balance now in practice turns into the question: how can heritage conservation and urban planning integrate and work towards the same direction?

It is predicted that China’s urbanization level will rise to more than 70% around 2050, with about a billion people living in cities (Heilig, 2012; Seto, 2007; Wilson, 2012). Alongside a climbing urbanization rate are continuous expansion and development of

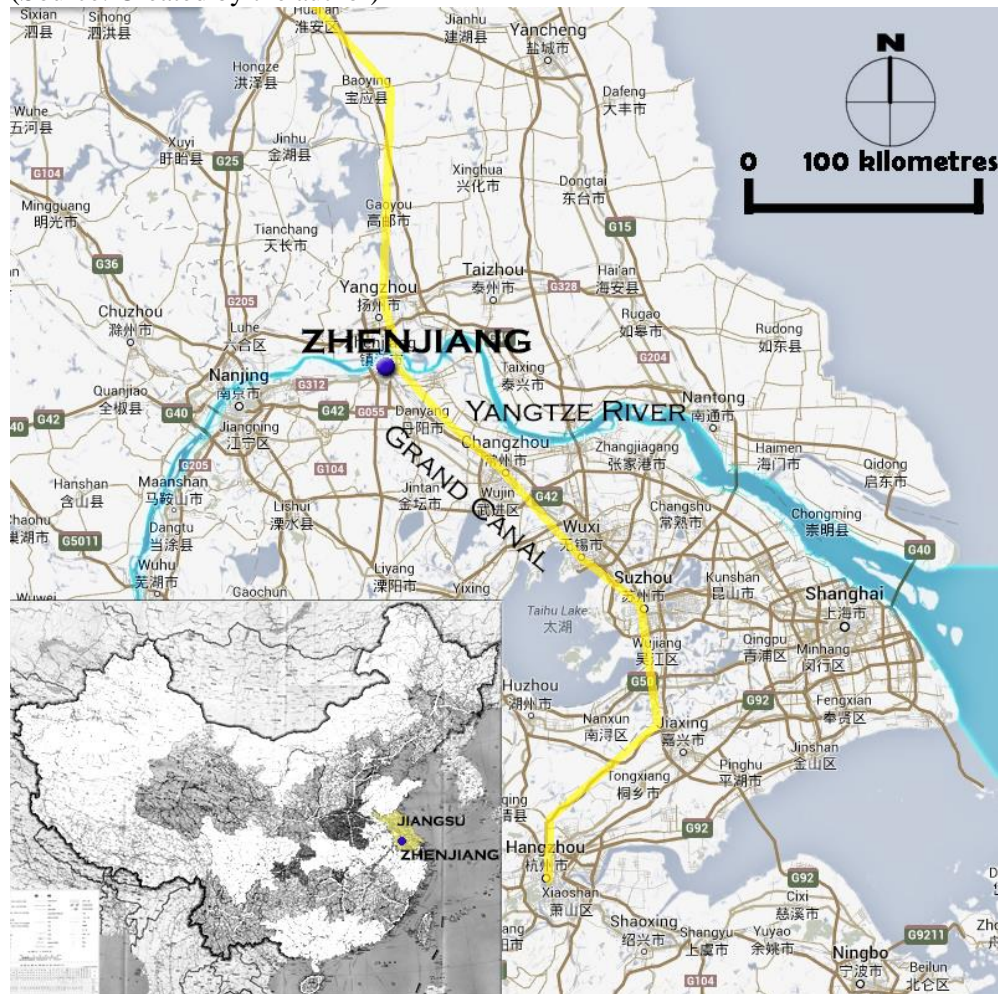
the urban areas, which come with increasing demand for urban construction sites (Lu, 2007). However, The Urban and Rural Planning Law of The People's Republic of China (National People's Congress of the People's Republic of China, 2008) clearly indicates that Chinese cities have entered a phase of massive renewal, and new construction land will be strictly limited (The Central People's Government of the People's Republic of China, 2008). This leaves a dilemma for urban development in China. The situation would be different if conserving heritage was not only an approach for heritage itself but also contributed towards revitalization of its host city. In this case, aiming for revitalization in the process of urban planning, consciously bringing in the sensitivity, awareness, notions and approaches of heritage conservation should be a good way to effectively meet both ends.

To conclude this brief review, heritage conservation research and practice have not yet been successfully carried out on the urban or a more extended scale. The need for such integration is most keenly felt in rapidly developing nations with rich cultural heritage, such as China. The discussion of heritage conservation as an effective and sustainable way to achieve urban revitalization and urban revitalization as a holistic approach to conserve heritage has only just started, and has not been discussed thoroughly in any practical cases. The following case study looks back at the development of urban planning practice on a historical site, extracts the concepts that have been used in this practical process, and illustrates how better links between practice and research could be formed.

### 6.3. A Chinese case study: Xi Jin Ferry

Zhenjiang is a prefecture-level city on the south bank of the Yangtze River, southwest of Jiangsu province (see Figure 6.1). It is where the Yangtze River intersects the Grand Canal, and it is a famous historical city which integrates industry, a port and tourism.

**Figure 6.1: Location of Zhenjiang**  
(Source: Created by the author)



This city represents an indigenous culture which is unique in China and even worldwide – a historical port city at the intersection of a major river system and the Grand Canal, and its formation, growth, and development. Xi Jin Ferry as the port, not only connects the waterways of the Grand Canal and the Yangtze River, it is also where China’s southern and northern cultures blend. The Ferry has witnessed the processes of both the

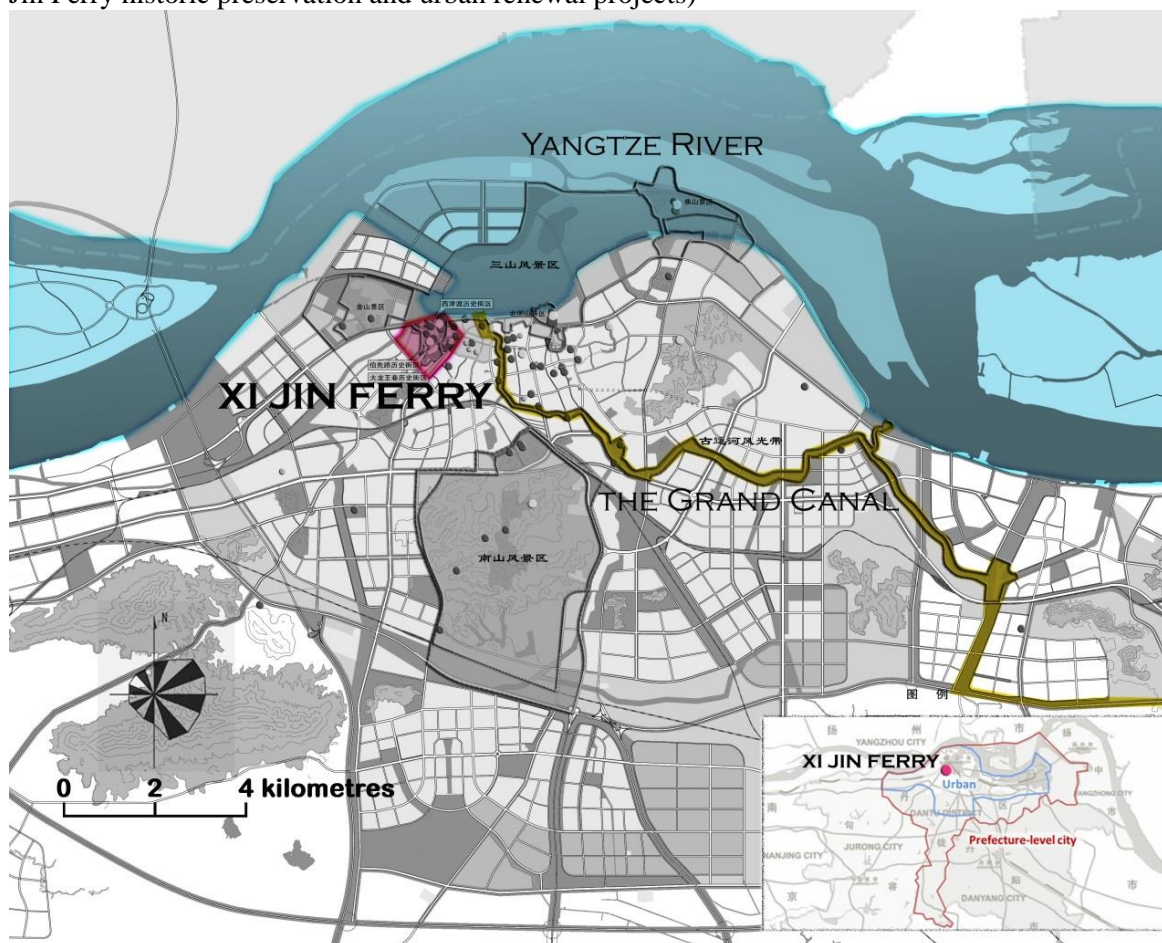
early stage of northern culture moving towards the south, and the movement of culture and resources from the south to the north after the Sui (581–618 AD) and Tang (618 – 907 AD) Dynasty. In China and worldwide, Zhenjiang holds an irreplaceable role as testimony of a typical port city's history of development throughout multiple historical periods. The author has conducted a range of historic preservation and urban renewal projects in the Ferry area. A mass of observations on this case study has been collected through the author's direct experience in these projects. The projects involve the repair of buildings, restoration of street furniture, repaving of streets, clearing and presenting of block fabric, as well as a large amount of historical research activity. The projects have mostly been completed, and the area is now used as a tourist, dining, and leisure area.

### 6.3.1. General historical research on the site

This section interprets Xi Jin Ferry's various roles and cultural representativeness over the historical periods, from the urban perspective. Zhenjiang is located at the meeting point of the Yangtze River and the Grand Canal. This has made Zhenjiang a nationally important node city of South-North and East-West traffic, and Xi Jin Ferry is the major node in this city (see Figure 6.2). This important role not only largely affected the early city forms of Zhenjiang, but has also been maintained for over 2,000 years. During this time Zhenjiang has been a typical riverside city along the lower stream of the Yangtze River. Because of the unique strategic location, Zhenjiang became the capital city of Wu during the Three Kingdom Periods (220–280 AD). In addition to the crucial

**Figure 6.2: Location of Xi Jin Ferry in Zhenjiang**

(Source: Created by the author using information and image acquired while participating in the Xi Jin Ferry historic preservation and urban renewal projects)

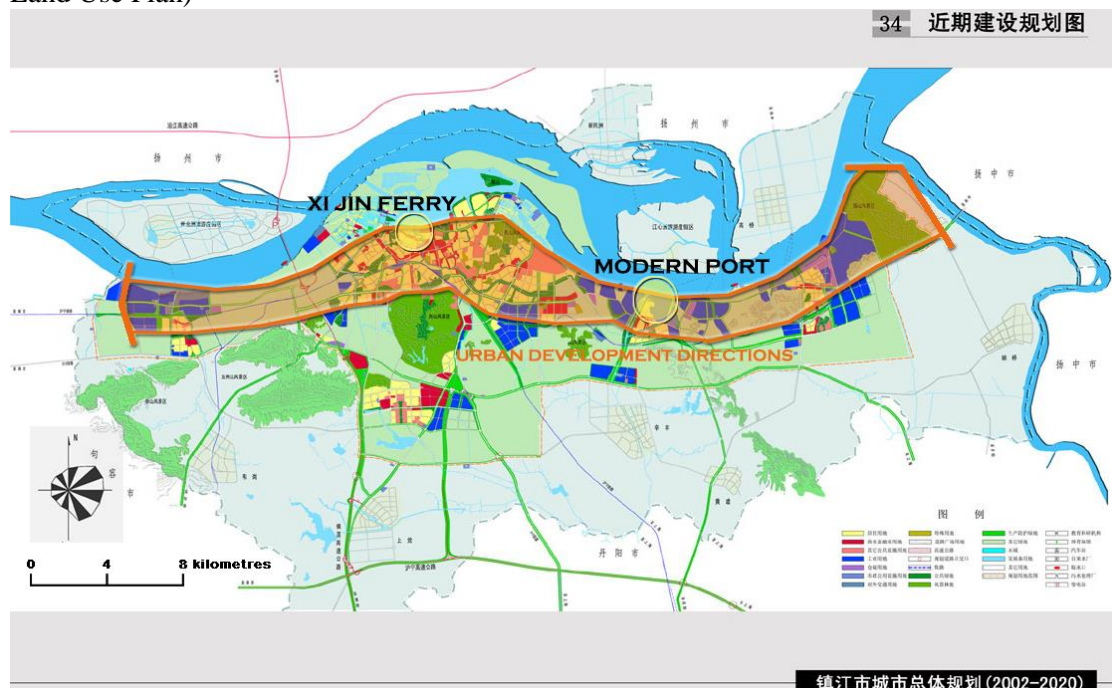


military and defensive functions, Zhenjiang then developed into a national level South-North trading centre. By the Tang Dynasty (618–907 AD), Zhenjiang had developed and formed a fully functioning port – Xi Jin Ferry, and completed the transformation from merely a military possession to an economic centre of the country. Over the following 1,000 years, Zhenjiang was the ‘golden node’ of those transportation arteries. Even today Zhenjiang’s linear development trend still follows its port and navigation node function in history (see Figure 6.3).

After the Second Opium War (1856–1860), Zhenjiang became a British Settlement (1861), and Xi Jin Ferry therefore started transforming from a commercial centre into a treaty port. After the Tianjin-Pukou (Nanjing) Railway was built in 1908, modern industry blossomed in the Xi Jin Ferry area. From 1927 to 1937, Zhenjiang was the capital city of Jiangsu Province. Large-scale developments took place in the old town area and the west suburban area. During the Second World War, the old town of

**Figure 6.3: The Linear Spread Development Trend**

(Source: Created by the author based on the Comprehensive Plan of Zhenjiang (2002–2020) – Land Use Plan)



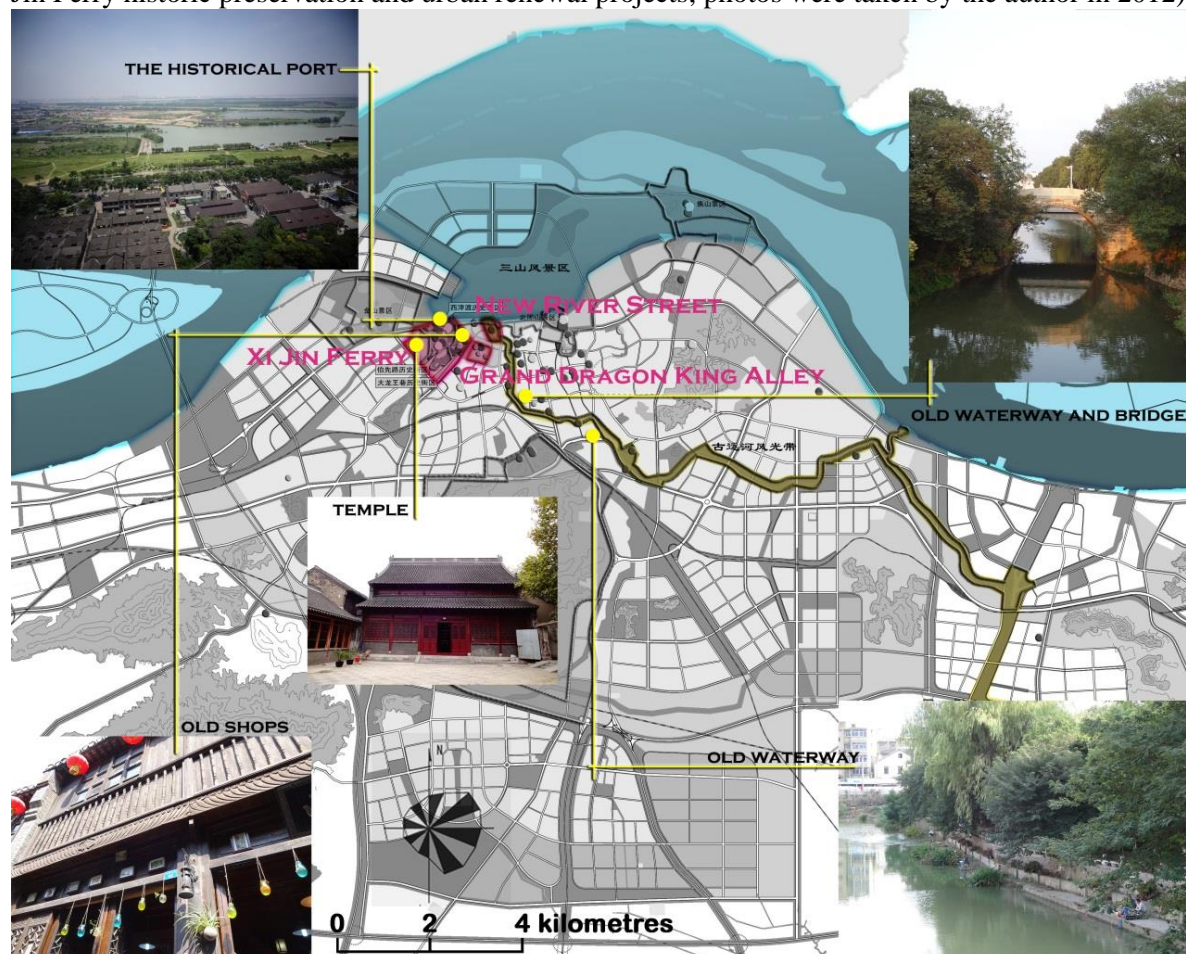
镇江市城市总体规划(2002-2020)

Zhenjiang and the British Settlement area were heavily bombed and turned into ruins. As the land use and urban activities changed over time, the physical layout, social structure, and economic political patterns changed with them.

After 1949, new development started to be focused in the old town area and east suburban area. The old streets and blocks in the west suburban area were kept as “specimens”, except for Da Xi Road which remained as a busy commercial street until the 1990s. Now Xi Jin Ferry, Grand Dragon King Alley, New River Street, and other historical areas make up the core traditional neighbourhoods in Zhenjiang (see Figure 6.4). These neighbourhoods have started to function as the historic core of the city.

Within this core, heritage sites such as the historical port, the old waterways of the

**Figure 6.4: Location of traditional neighbourhoods and photos of heritage sites in Zhenjiang**  
(Source: Created by the author using information and image acquired while participating in the Xi Jin Ferry historic preservation and urban renewal projects; photos were taken by the author in 2012)



Grand Canal, traditional streets, temples, old shops, traditional residential clusters, and many other types are preserved (see Figure 6.4). Traditional life styles and customs are still widely maintained too, such as going to the old markets for daily supplies and running small businesses in the neighbourhood.

According to the Comprehensive Plan of Zhenjiang (2002-2020) (People's Government of Jiangsu Province, Zhenjiang Municipal Government, & Zhenjiang Urban Planning Bureau, 2005), Xi Jin Ferry is in the heart of the city's "northern waterfront development zone". In the conservation plan of the Grand Canal (Zhenjiang Section) (Architecture Design and Research Institute of Southeast University, 2009) completed in 2009, Xi Jin Ferry was designated as one of the core components of the Grand Canal (Zhenjiang Section) Important Heritage Sites under State Protection.

To sum up, for hundreds of years, the Xi Jin Ferry area was the downtown area of Zhenjiang. Although it was on the wane from 1990s until recently, its characteristic and historic role representing the old golden days has always been irreplaceable. The area has exceptional location, symbolic historic and cultural values, as well as remarkable landscape and tourism values.

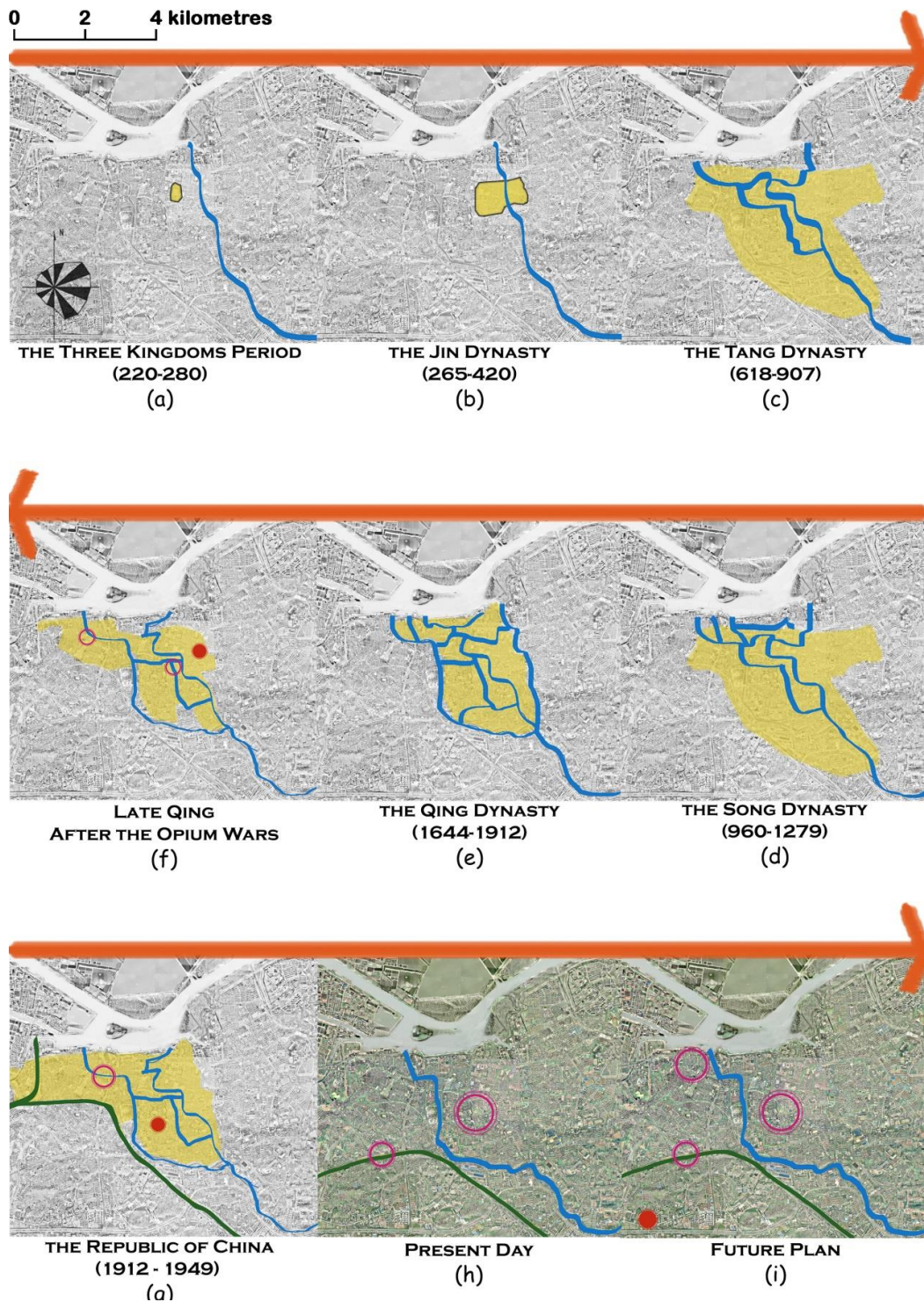
### 6.3.2. Cartography of change – urban form shifting analysis

In order to further understand how urban heritage has influenced the built environment, and how the heritage site's role/status has changed as the surrounding environment has changed, a basic urban planning research method is employed here – i.e. the study of changing urban form. To be specific, an analysis of the two-way interaction/interrelation between the city – Zhenjiang and the site – Xi Jin Ferry has been performed by consulting archives, studying historical maps, using GIS databases, as well as Adobe Photoshop and AutoCAD remapping.

In Zhenjiang's urban development history, Xi Jin Ferry has experienced 5 major stages: the transportation and trading centre, the commercial centre, the secondary commercial centre, old housing area, historic centre; and is planned to be the future cultural, tourism, and leisure centre. As the Xi Jin Ferry area switched from one role to another, the city form of Zhenjiang has also changed accordingly (see Figure 6.5).

Before the railway and other modern factors, changes of the canal watercourse had, to a great extent, determined the formation and development of Zhenjiang's city form. During the Three Kingdoms Period (220-280) (see Figure 6.5 a)), when Zhenjiang was an important city of the Wu State, the settlement and the water course did not have a particularly close relationship. In the Jin Dynasty (265-420) (see Figure 6.5 b)), the town area had developed towards the direction of the canal water course. At this point, the canal ran through the settlement. In the Tang Dynasty (618-907) (see Figure 6.5 c)), the Xi Jin Ferry (Port of Zhenjiang) developed into a fully functional port. The water course of the canal slightly changed, and became more of a network with two stream mouths. While the network appeared to be in a "Y" shape, the settlement also spread towards west, east, and south. In the Song Dynasty (960-1279) (see Figure 6.5 d)), the network of the canal water courses grew and two more stream mouths were dug. The shape of the town area remained similar to how it was during the previous regime. In the Qing Dynasty (1644-1912) (see Figure 6.5 e)), the form of the city actually condensed. The watercourses were not largely different from the previous period –the changes included a moat that was dug surrounding the city, and a moderately more complicated water network inside the city. Altogether there were five stream mouths to this point.

**Figure 6.5: The interaction between the city and the canal waterway(s)**  
 (Source: Created by the author using information acquired from historical research while participating in the Xi Jin Ferry historic preservation and urban renewal projects)



As the role of an area in the city changed through history, the whole spatial pattern of land uses and activities also began to change. One major socio-economic change was the shift of the city centre - as the location and development of the city centre

throughout history reflects a unique historical link with the past in the form of physical manifestations of the social and cultural elements of the city. These social and cultural elements, which have emerged, developed, and changed throughout the development course of the city, are the elements in the modern city and society which carry and represent the meaning and character of the locality (Steinberg, 1996). In Zhenjiang, because of the transportation importance of the port, population, development, and other social and cultural urban activities started gathering around the port, which led to the formation of the centre of firstly transportation, then commerce and other urban functions. This change of city form then further boosted the thriving of the port area, which in turn enhanced the centre. This can be seen clearly in the figures described in the following paragraphs.

After the Opium Wars (see Figure 6.5 f)), possibly resulting from becoming a treaty port, Zhenjiang started to develop in a more open way. At this point, only two stream mouths remained, and the layout of the water courses was much simpler compared with what it was earlier. More importantly, multiple city centres started to form, and their locations relatively clearly connected to the water network. One administrative centre located roughly where the city was formed (in the Jin Dynasty). One commercial centre was not far from the administrative one, by the canal waterway. The other commercial centre was in the west of the city, which part developed along the canal water course.

After the railway line was built (1908), in the Republic of China (1912 - 1949) (see Figure 6.5 g)), the city form shifted because of this new means of transportation. The administrative centre moved west of its location in the Qing Dynasty. Only one, but larger-scale and more multi-functioned, commercial centre developed on the base of the previous one in the west of the city. A tendency of development of the city area towards

the west, where both the railway station and the port were, was evident during the first half of the 20<sup>th</sup> Century.

More complicated factors have been involved in modern times (see Figure 6.5 h) and i)), but since the canal lost its old transportation function, the commercial centre in the west of Zhenjiang has also disappeared. However, after over 1,500 years' interaction with the canal, the built environment in the west part of the city, together with the remaining canal waterways are now considered as "heritage". They carry both the story and the evidence of their long interactive history, and the changing urban forms tell a very vivid and convincing tale of time and space.

### 6.3.3. Urban planning practice in the Xi Jin Ferry Area and its effect on the city

The first master plan of Zhenjiang dates back to the Republic of China when it was included in the *Capital City Plan* (shou du ji hua, or SDJH) (The National Capital Planning Office, 1929) in 1929.

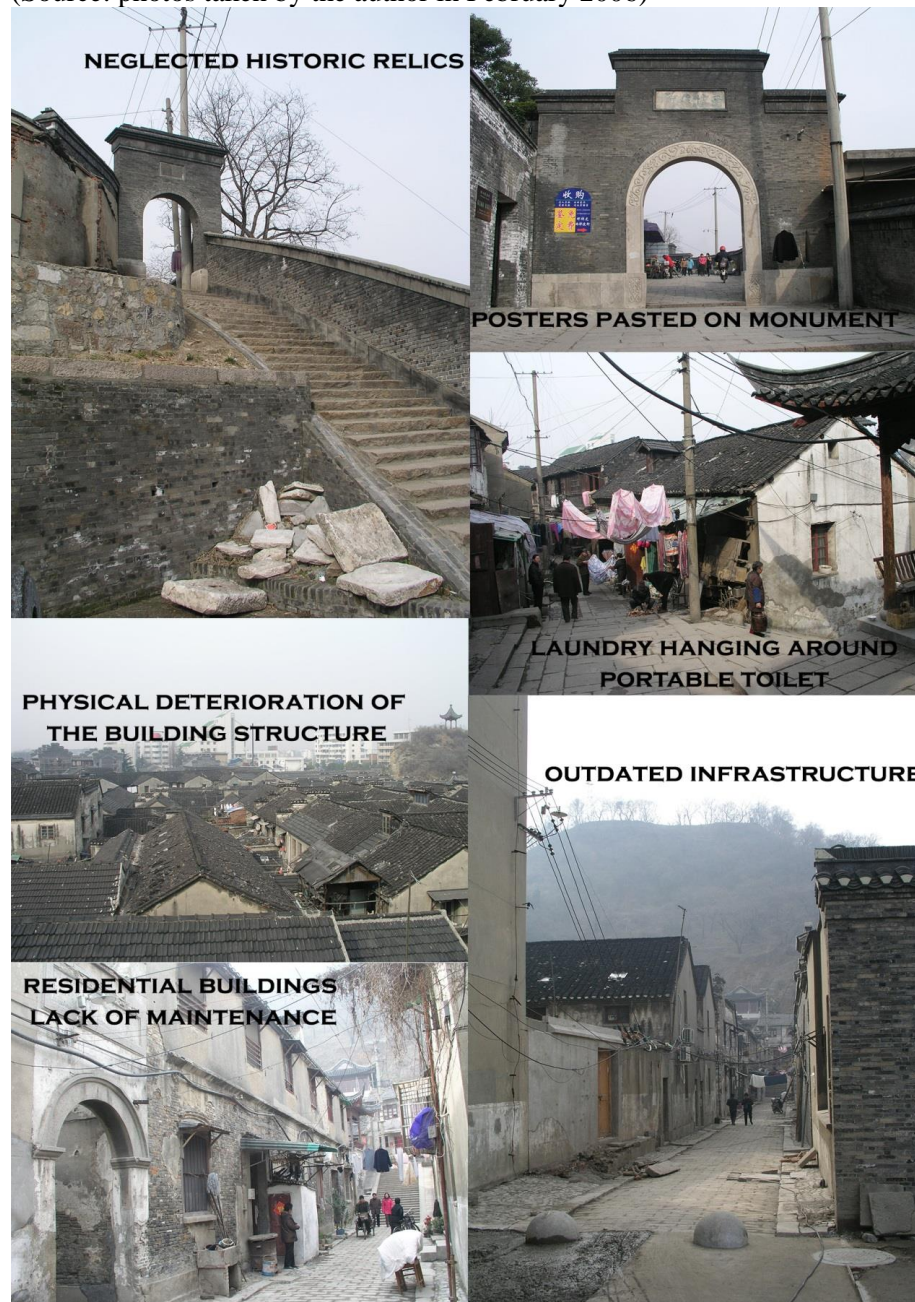
In 1986, Zhenjiang was listed as a national level historic cultural city. Soon after, the municipal government of Zhenjiang launched the preparation of the first conservation plan for the city. In 1996, the historical site of the British Consulate in the Xi Jin Ferry area was listed as an Important Heritage Site under State Protection. Since then, modern urban planning practice has been carried out non-stop in the area. Based on the Comprehensive Plan of Zhenjiang (2002-2020) (People's Government of Jiangsu Province et al., 2005) and Zhenjiang Historic Cultural City Conservation Plan (Urban Planning and Design Institute of Zhenjiang, 2003), from 1997 to 1998, the Xi Jin Ferry Historical Street Conservation Plan (covering the core district with an area of 10.67 hectares) (Urban Planning and Design Institute of Southeast University & Urban Planning and Design Institute of Zhenjiang, 1998) was made as a special plan. The

main intention of this Plan is to emphasize the culture exchange that has taken place in the area in history, and to protect the “key protection area” set out in the Detailed Regulatory Plan of West District of the Old Town of Zhenjiang (Tongji University & Urban Planning and Design Institute of Zhenjiang, 2002).

Before the implementation of Xi Jin Ferry Historical Street Conservation Planning, the area had been experiencing a severe decline. Cultural relics and historic buildings were affected by lack of maintenance and preservation. The living conditions of local residents were low, and below the basic standards enjoyed by residents of other areas of the city at the time (see Figure 6.6). The numerous industrial plants surrounding the area were causing environmental problems. From 1998, under the guidance of the Planning activities, pipelines, gas, electricity, and other civil facilities were systematically planned, regulated, and provided, providing a solid foundation for the following developments, and the possibility of considerably improving living conditions within the area.

From the beginning of the 21st Century, the preservation and regulation process in the area entered a new stage. Early in 2002, the Zhenjiang Municipal Government set up the Zhenjiang Xi Jin Ferry Construction and Development Company (now Zhenjiang Xi Jin Du Culture and Tourism Co Ltd (Xi Jin Du Co Ltd)). During the first decade of the 21st Century, the Company has organized and assisted the preparation of Xi Jin Ferry Historical Feature Area Preservation and Improvement Plan (Urban Planning and Design Institute of Zhenjiang & Urban Planning and Design Institute of Southeast University, 2002), Xi Jin Ferry Townscape Conservation Area Detailed Construction Plan (Urban Planning and Design Institute of Southeast University & Urban Planning and Design Institute of Zhenjiang, 2008), Xi Jin Bay International

**Figure 6.6: Condition of Xi Jin Ferry in early 2006**  
(Source: photos taken by the author in February 2006)



Holiday Village Plan (2010), and a few other planning documents. These plans directed a number of improvement projects (“53 Slope” and arch, stone steps, Avalokitesvara Cave, Life Saving Union, Zhao Guan Stone Tower, and so on), some new constructions (Small Hill Building), and the night scene beautification and illumination project. The Xi Jin Ferry Northeast Plot Historic Preservation and Urban Regeneration Detailed Construction Plan (which the author has been directly involved in since early 2006

doing the preparation and design work), relocated three factories, transformed the old industrial buildings into new space for cultural and leisure uses, repaired and restored the Municipal Council Building, planned the north entrance square and an Eco parking lot<sup>1</sup>, planned the conservation and redevelopment of the Silver Gate Block, and started the relocation and redesign of Zhenjiang No.2 Hospital (see Figure 6.7).

The growing number of tourist visits (during the National Day holiday week 2013, it reached 20,000 – 30,000 per day; 5,000 on a regular day; and nearly 10,000 per day on weekends<sup>2</sup>) requires more parking space. Currently, in the Xi Jin Ferry area there are only 70 parking spaces, which are clearly not adequate. Therefore, in the north of the district, outside the conservation area, a large-scale underground parking lot has been planned and is under construction. When fully finished and open (planned for October 2014), the parking lot will have a total area of about 340,000 m<sup>2</sup>, and provide over 1,000 parking spaces (data collected during fieldwork in Zhenjiang through the collaboration with Xi Jin Du Co Ltd). The rooftop of the parking lot is planned to be a landscape corridor, and its underground pedestrian paths will connect it to the main historic district. The design and planning of the parking space were carefully made so it will not harm, destroy or otherwise threaten the heritage values of the district.

In addition to the above practical urban planning activities, historical and cultural research has been conducted throughout the course of the urban planning preparations. This research includes a number of archaeological excavations which have resulted in many important and valuable discoveries. In May 2007, Xi Jin Ferry historical street was listed as an Important Heritage Site under State protection. Since then, Xi Jin Ferry

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1. Eco parking lot, or eco-friendly parking lot, is designed with practices such as using recycled materials, solar panels and energy-saving lighting, and adding green surfaces
  2. Data acquired from meetings and discussions with collaborators in Xi Jin Du Co Ltd.

**Figure 6.7: New developments in Xi Jin Ferry resulting from the urban renewal approaches**

(Source: Created by the author using information and image acquired while participating in the Xi Jin Ferry historic preservation and urban renewal projects)



has gained even more attention from scholars and practitioners in the historic preservation and heritage conservation field. In Spring 2008, during the construction of the Eco parking lot, the remains of lifesaving docks<sup>3</sup> dated back to the Kangxi Period Qing Dynasty (1644-1912) were discovered. The planning approach was then revised in order to preserve and present the remains (see Figure 6.8). In the summer of the same year, after thorough historical research on archives and other historical documents, a survey was carried out near the Chao An Temple (west of Xi Jin Street). In Spring 2009, docks, a rock bank, government office buildings, and other important remains were found in the excavation. To date, the excavation has covered an area of 3,000 m<sup>2</sup>, and revealed stone banks, dock platforms, and many other relics of various time periods (see Figure 6.8). Now, the historical remains of the docks from the Tang, the Song, the Yuan, the Ming, and the late Qing Dynasty have all been uncovered. In this way, a relatively complete historical chain has been formed and presented to public view. Since the urban plans have been revised accordingly to preserve, and moreover to present the remains, the evolving culture of the port is visible to the citizens, tourists, and the general public. For example, because of the flexibility allowed and celebrated by the planning authorities, the archaeological excavation pits are on display by adding information signs and being covered by walk on glass floors, as well as being landscape nodes (see Figure 6.8).

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3. Founded in 1693, the lifesaving society is a charity organization carrying out nautical safety activities such as lifeguarding, and rescuing.

**Figure 6.8: Archaeological discoveries and the presentation of them**  
 (Source: photos taken by the author from 2010 to 2013)



None of the mentioned activities could have been carried out if there had not been financial support secured via various means. In 1998, the special conservation and

facility fund set up for the Xi Jin Ferry project was in total 9,800,000 Yuan<sup>4</sup>. The establishment of Zhenjiang Xi Jin Ferry Construction and Development Company in 2002 enabled diverse investing and financing opportunities and ways. In December 2010 when the Company was transformed into Xi Jin Du Co Ltd, its registered capital increased from 50,000,000 Yuan to 1,000,000,000 Yuan, and its total assets worth 5,000,000,000 Yuan, which is a substantial growth from 697,000,000 Yuan in 2002 (Pang, 2012). In the five years between 2011 and 2015, the planned investment in the area reaches 2,300,000,000 Yuan.

In summary, urban planning practice in the Xi Jin Ferry area has aimed to maintain the typical urban tissue and essential qualities of the historic areas and of the life of the communities residing there; and adapt the physical structures and activities to encompass and enhance their present day requirements. Clear and reliable historical references and context for planning practice have been provided by the archaeological discoveries and historical research results. This has encouraged vigorous debate on issues such as ‘Is heritage dating back to older periods more valuable?’, ‘Why should we conserve many layers of history?’, and ‘How to present diverse heritage sites that date from various time periods and have varied features in the same built environment?’ among others. The moderate changes and gradual improvements in the area have completely altered the status of the Xi Jin Ferry Area in the city. It is now the new cultural and leisure centre of the city, and the first stop for tourists travelling from across the country, and even the world, to Zhenjiang (voted as one of the top 20 most popular World Expo Experience tour demonstration sites (Xinhua Daily, 2013); 1,200,000 tourists in 2011, among which 30,000 from abroad (ZJCCIG, 2012) ).

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4. 1 Yuan = around 0.096 GBP

#### 6.3.4. Learning from success: The ‘Xi Jin Ferry model’

In recent years, the success of the planning developments in the Xi Jin Ferry area has led to a changing attitude towards the effectiveness of linking urban revitalization and heritage conservation practice in this area of China. What are the wider lessons that can be learnt for international planning and heritage conservation practice? In this section, a few methods that have been applied in the Xi Jin Ferry project are summarized and brought forward to inform future practice on sites that have similar traits as the Ferry.

To begin with, Xi Jin Du Co Ltd, in association with the practitioners, experts, researchers, and scholars that have contributed to the development of the area, including the author of this paper, have proposed a methodology whose working title is “Xi Jin Ferry Model”. This Model of planning has been developed and improved through the practice in the area. It is a set of methods including successive field investigation, thorough archive sorting, timely archaeological excavation, utilization of traditional techniques, attentive and satisfactory community communication and interaction (see ‘Regulatory Regime’ in the following text), and long-term and diverse professional consultancy. All these together provide the conservation and development of the area with sustainable goals and scientific guidance. The core of the “Xi Jin Ferry Model” is based on studying and understanding indigenous history and culture, using scientific research methods, balancing cultural and socio-economic developments, and following the circle of research – planning – development. It has been practiced in Xi Jin Ferry area, and the idea has been formed and developed by Xun Pang (president of Xi Jin Du Co Ltd) and the Literature and History Research Office within the Company. However, it has not as yet been written up as a methodology.

To illustrate the key components of the methodology, here are a few crucial approaches worth attention:

- **Historical research:** This should be organized and conducted before the planning process. Urban planning is an important decision-making process which to a very large extent determines the destiny of an entire city, its development, and its residents' living and working conditions. Therefore, it should be carried out carefully and based on research. Historic research is a crucial one, as learning from what has happened in history can help urban planners study the development patterns of a city, learn from the past, and accordingly make rational decisions for the future. As detailed in Section 6.3.2 - cartography is used to study urban form shifting and then inform the urban planning practice.

- **Culture – led approach:** For this approach, several key activities are required, i.e. conserve symbolic architectural and landscape features; carry on conducting historical research on the diverse cultural settings and rich historical resources; highlight the indigenous characteristics; improve the neighbourhood by preserving cultural relics and historic sites, renovating the streets, and maintaining the traditional townscape; bring out the dynamism of the community; facilitate developments in commerce and tourism. In the Xi Jin Ferry case, these have resulted in the research results introduced in 6.3.1, 6.3.2, and 6.3.3. Moreover, the culture-led approach requires the planners to understand, appreciate, and present a history that can be read from its physical existence (6.3.3): emphasize multi – layer features, which fall in various styles and time periods, in monuments, historic buildings, building clusters, alley/street systems, space configuration, and surrounding areas.

A research focus on authentic intangible heritage is also needed in which the researchers sort out and keep historical records of traditional living voice, i.e. indigenous people and customs in written forms; revive conventional functions of the block; decide suitable means and direction for future development. For instance, it is important to save and support historic brands, old shops, indigenous conventional services and products. In the course of conserving intangible heritage, principles of authenticity should always apply, so that living intangible heritage develops along with its environment, to respect and follow customs and rituals attached to the heritage, and through protection to encourage communication as well as inheritance.

- **Sustainable development approach:** This requires planners to conserve heritage using eco-design ideas to save energy, make healthy indoor and outdoor space, and eventually enhance the quality of the entire neighbourhood environment. Several technologies suggested to be used include WSHP (water source heat pump), solar panel, green roofs, natural ventilation and natural lighting for underground space, and more. In addition, it is crucial to carry out architectural, urban and landscape design research and experiments to integrate the technologies mentioned above into the creation and development of the built environment. But in the meantime, these activities and actions should not compromise or endanger the authenticity and heritage values one is also trying to conserve and enhance. For example, the Eco parking lot concept and technology introduced in Section 6.3.3 was used in the Xi Jin Ferry area.

In order to maintain the traditional spatial structure, and at the same time to meet the modern infrastructural, facilitative, as well as commercial and recreational requirements for more available space, systematic exploitation of underground space is an effective strategy. It is economical to plan underground space to take advantage of upcoming

conservation projects, for example, in the Xi Jin Ferry area underground space outside the conservation area is utilized as parking space (see Section 6.3.3 together with the Eco parking lot example).

- **Regulatory regime:** It is clear that the sustainability and revitalization of the monuments will be most feasible if they are integrated into new concepts of use. According to China ICOMOS, SACH, and the Getty Conservation Institute (GCI), good day-to-day management of heritage sites is vital to successfully conserve them (China ICOMOS et al., 2004). Thus, setting up an office like Xi Jin Du Co Ltd which has clearly stated responsibilities and specially allocated funding support is vital. This kind of administrative office coordinates between departments and advisory bodies; conducts technology monitoring; and builds and maintains databases and archives. Also for the indigenous residents, the office runs a housing security system which is an incentive scheme to implement demolition and relocation. At the same time the scheme is based on open decision – making approaches when it comes to relocation compensation standards. The office also seeks and secures a housing supply chain for relocation.

- **New funding sources and business models:** Here, experience in the Xi Jin Ferry area has shown the importance of setting up a fiscal budget and earmarked funds (as introduced in Section 6.3.3). At the same time, while securing assignment charges, it is also important to encourage endowments, for which fund raising campaigns should be planned and implemented. Some approaches which have proven to be successful are to offer tax incentives to individuals and organizations that are participating in conservation related projects; to facilitate financing initiatives; invite and support real estate developers to join the protective developments such as adaptive reuse, conservation, and revitalization; and to subsidize or provide loans for heritage site owners/occupants to carry out spontaneous maintenance and renovation which is

approved by architecture, planning, as well as cultural heritage departments. If the finances of the site really cannot be expected to breakeven after a long run, it is essential to factor this in during the larger scale urban planning process. In this way, necessary financial inputs will be planned, pulled from other sources, and made available for the purpose of safeguarding the heritage. In regard to other sources, for instance, land revenue from outside the heritage site and its surroundings – the location of this land, the area, and means to profit all have to be ensured.

In conclusion, in the Xi Jin Ferry area a large amount of historical research has been conducted before and during the urban planning process. A culture-led approach has been the core of ‘Xi Jin Ferry Model’. Various advanced sustainable development strategies have been introduced and applied in the architecture transformation and infrastructure improvement. There has been substantial input into management and policy making – the setup of a special office - ‘Xi Jin Du Co Ltd’. Led by this special office, a wide range of investing and financing means are made possible for the smooth running of projects. Planning research and practice in the Xi Jin Ferry area has developed from focusing on the preservation, improvement, restoration, and regulation of historical buildings and streets, to a larger and more comprehensive understanding and presentation of heritage. The role heritage conservation plays in the development of the city has largely changed from passively responding to urban development pressure to actively aiming for revitalization.

## 6.4. Discussion

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### 6.4.1. Looking towards the future

The historical research on the Xi Jin Ferry site points out clearly that the historical canal was at the centre of the region’s successful development over the centuries, and in fact

laid the foundation for the current prosperity of Zhenjiang. In recent years, fast development of the surrounding area, modern transportation means, industrialization, and rapid urbanization pushed the canal and the ports along the old waterways of the canal into an inferior position. But for future longer-term and sustainable development, the cultural potential which lies in the current canal heritage sites provides the foundations. What heritage means for localities is both in cultural terms and in terms of economic incentives.

In the near future, “Xi Jin Ferry” including the Xi Jin Bay block will be a one-square-kilometre (100 ha) history, culture, and leisure ground in West Zhenjiang. With the traditional service industry joined by modern consumer industry, the area will become a new fashion centre in the city, and one of the most attractive destinations in the metropolitan area. In future Xi Jin Ferry will be a new type of node within the city – no longer a key port, but now a key cultural heritage centre.

#### 6.4.2. Application to other sites

This case study discusses the issue of urban revitalization through heritage conservation based on the author’s long-term participant experience in the site. The in-depth and intensive fieldwork offered insights into the day-to-day operations of both heritage conservation and urban regeneration affairs. For example, identifying and facing difficulties, experiencing daily negotiations, i.e. how conservation is discussed and carried out in practice, who gets to decide, and what counts as heritage, how and why, and more. By compiling a comprehensive picture of actions undertaken, messages imparted, and interpretations made, and constructing a multi-faceted understanding of the interaction between the site and changing societal conditions and circumstance, as well as the institutional analysis, this research describes a context for historic sites in a

built environment which is undergoing nonstop changes. During and after the activities mentioned above, how the physical and cultural values can be combined is examined, and referred back as well as put into literature. In this way, this case study can inform practice in other sites that are experiencing similar problem (s), and also provide first-hand material for future further theoretical research.

#### 6.4.3. The developing relation between conservation and development

Throughout the practice and research process in the various planning preparations, conflict between conservation and redevelopment has been inevitable.

The gradual change of land uses from downtown to residential neighbourhood lowered the quality of the environment and the dynamism of the district: population grew, residential buildings became crowded, the traditional street system was disrupted, infrastructure was lacking, newly built or altered buildings were discordant with their historical context, traffic within the street was bad and congested which could constitute fire hazards, and so on. All together they indicate that the district has been suffering from structural, functional, and material recession. The reasons for the recession include on the one hand, the natural aging process, and on the other hand, internal socio-economic changes along with variation in external circumstances.

In the Xi Jin Ferry area, residential buildings are mostly very old and suffer from lack of maintenance. Despite planning improvements, the infrastructure is still outdated. The residents in the area are still leading a life where they have to use coal stoves, portable toilets, and other unmodernised facilities. For these practical reasons, they urgently call for relocation or redevelopment. Meanwhile, historic preservation and heritage conservation fields favour the authentic life style and original neighbourhood structures. Facing a dilemma like this, urban planning institutions, urban administrative offices,

and society have been thrown into conversation. Urban planners thus have been acting as coordinators, and gradually taken on more comprehensive and diverse roles as the presenters of the city.

Currently, the World Heritage List nomination for the Grand Canal is awaiting the verdict which will be revealed in summer 2014. If the nomination is successful, as one of the most important ports along the Grand Canal, Xi Jin Ferry stands a good chance of attaining more attention, more thorough conservation research, potentially more financial input, and so on. It might provide a good example of how heritage conservation and urban revitalization can be brought into a World Heritage Site.

Heritage is something of the ‘past’ (and therefore not about development as such), but it can also be a force for development and urban revitalization. If such tension and the symbiotic relation between conservation and development can carry on to be well regulated and navigated in practical heritage conservation and urban revitalization research and activities, the work in the Xi Jin Ferry area will be a substantial contribution to international conservation theory made by China as a signatory to the UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage and as a member of ICOMOS (China ICOMOS et al., 2004).

#### 6.5. Implications and conclusions

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Overall, the case study of the Xi Jin Ferry Area has summarized and introduced a number of concepts and approaches that have been proved effective in practice. For example, apart from the achievements in repairing damaged building structures and improving outdated infrastructure, it worked well having a fairly independent organization - Xi Jin Du Co Ltd. This gives a clear example of how such organization

can be seen to have “succeeded in generating an ambience for private-sector participation in urban heritage conservation through the establishment of an attractive and innovative strategy of heritage "commercialisation" (Steinberg, 1996, p. 465). Led by this organization, many particular concepts and approaches have been adopted: support and achieve wider community involvement; intentionally minimize the impact of the planning and design on heritage sites; protect heritage sites’ authenticity, historical features, the integrity of the spatial structure, indigenous life style, and the continuity of the humane spirit; carefully consider economic, ethical, and other aspects; adjust aging population structure, regenerate local economy, balance conservation and development, seek political support, and others.

When the Xi Jin Ferry project was first launched in the 1990s, and even in the first few years of the 21<sup>st</sup> century, the fact that there was not a very strong financial background, in some way, restrained the speed of development in the district. It could be a possible reason that Xi Jin Ferry area has been steadily conserved and only gradually redeveloped over the past two decades. It is unclear whether another historic site like Xi Jin Ferry in another city with more funding opportunities would follow a sustainable scheme like the ‘Xi Jin Model’, as there might be more speed and less research and reflection.

In general, (urban planning and/or heritage conservation) practice pushes forward theoretical research - theory is developed through and during the process of practice, and research results – theories, concepts and approaches in turn inform future practice as well as get verified or adjusted during practice is the lesson from the Xi Jin Ferry case study. In terms of a research agenda for the future, when a project is in the sphere of heritage conservation and urban revitalization, there will always be conflicting

interests. In this article, it is advocated that planning and conservation practice should be carried out after careful and in-depth research, and urban planning should be more involved in heritage conservation. The level of interventions in conservation should be aimed to be kept to a minimum, especially at key points. All conservation action that is proposed should firstly have an objective clearly defined in advance, and then be carefully analysed and evaluated before being put into effect. As for urban planning perspectives, lack of decision or attempting too ambitious schemes often cause 'planning blight', which must be avoided. Continuity of policy and consistency of artistic treatment are essential in heritage conservation and urban revitalization. In order to achieve this, an operation team or chief practitioner should be carefully formed/chosen and given overall responsibility for the project. But at the same time, this core team/person should be subject to multidisciplinary advice (Feilden, 2003). Conversations cross disciplines should always be strongly encouraged. While experts who obtain specialized knowledge and skills in both heritage conservation and urban planning may be rare, fundamental courses on heritage conservation should be introduced to architecture/planning school students, and building transformation and urban renewal ones for heritage/archaeology/art history major students. Therefore, research on interdisciplinary education design, the dynamics of conservation and development experts working together, comprehensive level management and policy making, and more is needed.

## CHAPTER 7

### THE 'HERITAGE SYSTEM' FRAMEWORK: THEORETICAL AND PRACTICAL EXPLORATIONS OF CONSERVING LARGE AND COMPLEX HERITAGE BASED ON THE WORLD HERITAGE LIST NOMINATION FOR THE GRAND CANAL.

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#### 7.1 Introduction

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The World Heritage List nomination process for the Grand Canal, which runs through six provinces and two municipalities, connecting the most important rivers in East China, started in 2007. The final decision on whether it will be listed as a World Heritage Site will be revealed in summer 2014. The nomination process has been by far the largest, and most concentrated, heritage conservation activity in China. Based on this case, this article explores theories and methods for conserving large and complex heritage. It includes an exploration of key practical and theoretical issues, an investigation of current interactions between heritage and the built environment in China, and proposes the 'Heritage System' framework in an attempt to introduce an applicable and innovative philosophy for systematic heritage conservation in dynamic urban environments.

The body of the article is divided into four parts. The first part is an introduction to large and complex heritage. Secondly, the Grand Canal is introduced, in particular its size, long history, complexity, and in-use nature. Third, current concepts and practical approaches to heritage conservation and their inadequacy for large and complex heritage properties<sup>1</sup> like the Canal are discussed. The fourth part questions whether a set

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1. The World Heritage Convention refers to properties as being component parts of the cultural and/or natural heritage. The term property is used interchangeably with site in the Operational Guidelines

of innovative heritage conservation approaches, notions, and philosophy could help better understand, appreciate, and present the Grand Canal as a heritage system. In order to answer this question and attempt to bring heritage conservation forward, a ‘Heritage System’ framework is offered.

## 7.2 Introduction to large and complex heritage

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In this article, the Grand Canal in China is discussed as a key case of large and complex heritage properties. In general, large and complex heritage has traits such as first of all, being large in physical size and geographical extent. A property could cover or spread through a geographical area consisting of multiple cities, regions, and even countries. The complexity could be broken down into a number of characteristics: the diversity of the heritage types within one property, the long history of the property which means a variety of time periods that various heritage sites within the property date back to, and the dynamic relations between the property and the built environment and society – as most complex properties will have many “in-use” components. Examples of large and complex heritage include the Silk Road stretching from Europe to China and El Camino de Santiago (the pilgrimage routes in Spain). The Silk Road is currently preparing for its World Heritage List nomination files and El Camino de Santiago (Route of Santiago de Compostela) is a UNESCO World Heritage Site inscribed in 1993.

## 7.3 Introduction to the Grand Canal

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The Grand Canal is about 1,794 kilometres long and the history of it can be traced back to 2,492 years ago (SACH, 2013). It is the largest and oldest man made canal in the

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(UNESCO February 1996). see Sites, Cultural heritage, Natural heritage (<http://whc.unesco.org/archive/gloss96.htm>)

world. For thousands of years, it has been an important water transportation passage connecting Northern and Southern China. Moreover, it has played a crucial role in securing national unity, fuelling economic prosperity, achieving cultural fusion, and fostering international communications.

The major natural rivers in China all run from west to east. In order to connect the river network for the convenience of transportation, the excavation of the Grand Canal started in the Spring and Autumn period (770-476 BC). During the Tang Dynasty (618-907) and the Song Dynasty (960-1279), the development of the canal reached its peak. Then its construction continued through the Yuan Dynasty (1279-1368), the Ming Dynasty (1368-1644) and the Qing Dynasty (1644-1911) (Fu, 2000). Today, the Grand Canal extends for 1,794 kilometres from Beijing to Hangzhou (see Figure 7.1). It is the world's longest man made river containing the wisdom of generations and generations of Chinese. It is the most important water channel in east China connecting the north and the south. It is also a cultural path along which countless families lived and are living. The Grand Canal is flowing history to China.

The heritage related to the Grand Canal is diverse and does not only refer to the individual 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 this heritage include building blocks, streets and communities that have formed because of, or interacted and developed with, the canal. Intangible cultural heritage, the bio-ecological 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 further important components (Architecture Design and Research Institute of

**Figure 7.1: The Grand Canal and its 10 sections**

(Source: Created by the author based on information and images from *Conservation and Management Plan for the Grand Canal (2010-2030)*)



Southeast University & Zhejiang Administration of Cultural Heritage, 2009). For example, Xi Jin Ferry<sup>2</sup> in one of the canal cities is not only a historical port and trade centre, but also an area which still have the street pattern formed because of its historical function, a residential district where indigenous people still maintain and practice many of the old customs and life styles, and a cultural centre which is a testimony of the concentrated history of the development and transformation of the city. The World Heritage List nomination for the Grand Canal is a huge and complex heritage conservation activity with diverse layers including a large-scale heritage site,

2. More information see Chapter 6/He and Viles, submitted

various heritage categories, the involvement of multiple administrative and jurisdiction levels, and numerous experts and practitioners.

The Grand Canal was originally built for defensive and military purposes, and then developed into the major transportation corridor connecting the north and the south of China. Under the influence of new transportation means such as sea and railways, the Canal gradually lost its dominating role in mass transportation in East China from early 20<sup>th</sup> Century, but the southern sections still function locally and regionally. Since the Canal connects major rivers, it also provides industrial and domestic water resources for cities and areas along the waterway. The Grand Canal is not only a landscape, but is still an important transportation corridor and source of industrial and domestic water supply. Thus, the Grand Canal is a heritage site that comprises landscape/waterfront leisure/historic districts, as well as being an in-use waterway. This has two-fold effects on the heritage site and its conservation as discussed more fully in the following paragraphs.

The watercourses that are still in use are functional parts in the cities they run through. Thus, departments and offices responsible for water resources, environment, and transportation also work as closely on the Grand Canal as the ones that are responsible for cultural heritage and tourism. This on the one hand means more attention from more aspects of the urban life and activities, and on the other hand brings the Canal closer to the future development of the city and region. One of the advantages of the in use nature is that the routine maintenance work needed to facilitate the Canal's practical use is an effective way to protect the physical condition of the property. At the same time, retaining functions such as transportation also helps maintain cultural continuity.

Because there is a substantial in-use element, the Canal is also at some disadvantages. For example, the more departments and offices that are involved in the administrative work of the Canal, the more difficult it is to coordinate various goals and focuses, work routines and patterns, regulations, and more. Another disadvantage of the in use nature of the parts of the canal is that it affects the perception of the heritage value. In order to retain/maintain the practical use of the Canal, various scales of alterations to the watercourse are needed, additions of safety facilities are required, and potentially more intervention might occur than would be the case for regular monuments and heritage sites. These could all damage the property's authenticity and integrity if not carefully planned and monitored, especially when the watercourse itself or the body of the Canal is emphasized in heritage recognition.

#### 7.4 Current concepts and practical approaches to heritage conservation and their inadequacy for large and complex heritage like the Grand Canal

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For a long time, cultural heritage - monuments and sites - was viewed in terms of singular destinations and places. Since the beginning of the 21<sup>st</sup> Century, a growing recognition that lines or groups of features can act as heritage properties has developed in the heritage conservation field (Howard, 2003; Orbasli & Woodward, 2008).

Heritage sites such as settlement clusters, landscapes, routes, railways, and canals have been seen and treated as groups of heritage sites by scholars and practitioners in heritage conservation, heritage tourism, and other heritage related research fields. This is largely because of their physical existence – multiple heritage sites of various scales and types, which are relatively straightforward. But how they are recognized or, in this case, how the Grand Canal as heritage is recognized culturally, and treated and conserved as a large and complex heritage remains questionable. Individual sites or

groups of sites are still what current knowledge and practice have focused on. Moving on from here to a more holistic ‘Heritage System’ where theories, philosophies, methodologies, practice protocols are developed to view and treat heritage systematically, need to bridge several gaps and unpack the complexity of properties and the heritage conservation practice for these properties like the Grand Canal and its World Heritage List nomination process respectively. Therefore, in the following two sections key knowledge and practice gaps this paper seeks to address are discussed.

#### 7.4.1 Exploration of three existing concepts

Currently, there are three concepts - ‘heritage corridor’, ‘heritage canal’, and ‘cultural route’ that have attempted to cover groups of heritage sites such as landscapes, routes and canals. In this section, these three concepts are introduced and evaluated, and shown to be not directly applicable to the Grand Canal, thus there are still conceptual gaps which hamper the conservation of large and complex heritage.

- **Heritage Corridor**

‘Heritage Corridor’ is a USA-based term which provides a cross-section of the landscape, history, and culture; it is a special kind of park designed to preserve the history of an area. In 1984, Ronald Reagan (the 40th President of the United States from 1981 to 1989) signed an Act of Congress which created the 97-mile Illinois and Michigan Canal National Heritage Corridor - America's first National Linear Park.

‘Heritage Corridor’ is mainly based on tourism promotion, which is clearly not sufficient for the Grand Canal because of its large, complex and ‘in-use’ nature.

- **Heritage Canal**

Unlike ‘Heritage Corridor’, ‘Heritage Canal’ is an international concept. In 1994, the Information Document on Heritage Canals defined ‘Heritage Canal’ as “a human-engineered waterway. ...may be of outstanding universal value from the point of view of history or technology, either intrinsically or as an exceptional example representative of this category of cultural property. The canal may be a monumental work, the defining feature of a linear cultural landscape, or an integral component of a complex cultural landscape” (UNESCO, 1994, sec. 3). According to the International Canal Monuments List, “the significance of canals can be examined under technological, economic, social, and landscape factors” (TICCIH, 1996, p. 2). ‘Heritage Canal’ is more like an idea or a category, instead of a title. Therefore, so far there has not been any example of any waterway/canal line/canal corridor claiming to be called as a “heritage canal”.

‘Heritage Canal’ seems to be a complete formulation, and in the Heritage Canal Document, four essential aspects were mentioned (technique, economy, society and landscape). However, the terms in the Heritage Canal Document centred particularly on the aspects of the engineering structures, the constructional methods and the technology transfer. There is a lack of attention paid to the intangible aspects of the heritage. Moreover, ‘Heritage Corridor’ and ‘Heritage Canal’ concepts are set up mainly for conservation, utilization and management of the heritage and its surrounding environment. They do not consider related social developments nor have they been linked in any way to urban revitalization (Yao, 2010).

- **Cultural Route**

Founded in 1998, the International Scientific Committee on Cultural Routes (CIIC) aims to promote, consistent with the aims of ICOMOS, international co-operation, the identification, study and enhancement of cultural routes (or ‘Cultural Itineraries’). In 2003, Cultural Routes were added to the Operational Guidelines for the Implementation of the World Heritage Convention (UNESCO, 2003). The 5<sup>th</sup> draft of the ICOMOS International Charter for Cultural Routes (2005) responded to the rising recognition of the linear aspects of heritage, as well as the conservation and management challenges encountered by such sites. According to the Charter, a cultural route is “any route of communication, be it land, water or some other type, which is physically delimited and is also characterized by having its own specific dynamic and historic functionality” (ICOMOS, 2005, p. 2) . The definition is followed by the conditions that need to be fulfilled for a property to be considered a cultural route: “a route must have tangible and intangible elements that arise from multidimensional and continuous exchanges between peoples, regions and countries and must have therefore promoted a cross-fertilization of ideas. Furthermore a route will capture the abstract notions of space and time” (Orbasli & Woodward, 2008, p. 166). “The location of the cultural route is recognized as a continuum of space, places and areas that share a common theme” (Sugio, 2005, p. 840). “A cultural route is not just a sum of its many elements, i.e., historic towns, cultural landscapes, sites, etc., but really incorporates the intangible historic spirit that ties these elements into a single whole” (ICOMOS-CIIC, 2002, v. Recommendation). “The concept of cultural route implies a value as a whole which is greater than the sum of its parts and gives the route its meaning” (Conti, 2005, p. 892).

Examples of existing cultural routes include the Hansa Cultural Route, Routes of the Legacy of al-Andalus, the Routes of the Olive Tree, Via Francigena, Transromanica and so on (referred to as Cultural Routes by the Council of Europe) (Council of Europe, 2010).

‘Cultural Route’ has the purpose of providing a framework for the mutual understanding among peoples, regions and countries, various forms of historical pluralism, and dynamic concepts of culture, based on population movements, encounters and dialogue, and the exchange among and cross-fertilization of cultures in time and space. In accordance with the ICOMOS International Charter for Cultural Routes (2005), the Grand Canal could be considered to be a cultural route, because it has been conducive to the communication of ideas and exchanges between the south and the north of China for centuries (Orbasli & Woodward, 2008). Unfortunately however, describing it as a cultural route as defined here is not sufficient for it fails to appreciate its scientific and engineering contribution - the technical nature- of the Grand Canal.

To sum up, none of the currently existing heritage conservation concepts is adequate to apply to the canal heritage of the Grand Canal. Moreover, the concepts of ‘Heritage Corridor’, ‘Heritage Canal’, and ‘Cultural Route’ are in fact dealing with heritage categories not really systems. According to Oxford Dictionary of English, a system is “a set of things working together as parts of a mechanism or an interconnecting network; a complex whole”. The three concepts are only for a set of things that are categorized together, which is far from a view towards a system. Furthermore, the current concepts (especially ‘Heritage Corridor’) may have already developed conservation and management mechanisms, but they are very case-specific. Or, they

(like ‘Cultural Route’) have only been discussed generally as an idea in short paragraphs, but no actual proposals or guidelines for practical and further conservation and management action have been forthcoming. Therefore, in order to fully understand and systematically treat large and complex heritage like the Grand Canal, a holistic ‘heritage system’ framework is called for.

#### 7.4.2 Examination of the practice in the Grand Canal nomination

This section examines whether the Grand Canal has been treated as a system in practice and whether the concepts discussed previously have been utilized during the nomination process.

During the recent largest and most concentrated heritage conservation activity for the Grand Canal, the World Heritage List nomination, the canal waterways have been looked at in 10 sections: Tongji Canal, North Canal, and eight more (see Figure 7.1). This is due to the large scale of the property, and thus the feasibility of any research, conservation, and management work. These waterways themselves are seen respectively as a continuum of space, places and areas. Since within each section, the day-to-day work is carried out by the city that the watercourse runs through, the waterways are thus further divided into shorter and more local stretches. Moreover, the history of the canal waterways’ changes, the development of water transport/utilization infrastructure/technology, the canal – settlement relations, the socio-economic and cultural affairs and other issues that relate to the canal, are all separate stories for respective cities (rarely, though, for respective provinces). Therefore, although the Grand Canal is running for the nomination as one property, it has been treated as a collection of a large number of heritage sites – the waterways, and groups of monuments and such urban heritage sites. We are still very far from seeing the

development of the entire property as an uninterrupted historical period, from understanding the complexity of the property, or from conserving it as a system. Neither splitting by sections nor by responsibilities when dealing with the canal, will achieve integrated conservation of the canal. In particular, when problems and difficulties emerge, the lack of a well-formed management system will lead to confusion about rights and liabilities (Liu, 2007). Therefore, there is an urgent need for cooperation at all levels of governance.

When reviewing the overall goal of this heritage conservation activity – the nomination - according to the ‘Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal - the First Stage’ (2008), the principles of conservation plans for the Grand Canal are to legally and effectively protect, harmoniously develop, and maintain the authenticity, integrity, and continuity (Chinese Academy of Cultural Heritage & School of Architecture, Southeast University, 2008).

In the ‘Requirements Regarding the Preparation of the Conservation Plan for the Grand Canal - the Second Stage’ (2009), the core idea is to follow the basic guideline of heritage conservation work in China: to focus on protection, to save the heritage (which is the number one priority), to reasonably utilize it, and to reinforce its administration. The conservation plans are designed to understand and deal with various canal heritage categories and types, emphasize the concepts of the canal system and hydraulic engineering system; mainly adopt “Heritage Canal” concept and standards, and take account of “linear heritage,” “cultural route,” “heritage corridor,” and other concepts (Chinese Academy of Cultural Heritage & Southeast University, 2009).

In the ‘Conservation and Management Plan for the Grand Canal’ (2010-2030), it is finally stated that “the Grand Canal heritage is an outstanding representative of

‘Heritage Canal’ described in the Operational Guidelines for the Implementation of the World Heritage Convention (2012)” (Chinese Academy of Cultural Heritage et al., 2011). This means the research subjects indicated in the Requirements (2008) which are, “the canal, its surrounding environment that needs protection, regulation, and orderly development, and which periphery spaces that need planning and research” (Chinese Academy of Cultural Heritage & School of Architecture, Southeast University, 2008, p. 5) are confirmed to be narrowed down to almost only the canal itself. To summarize, from 2008 to 2010, the conceptualization of the Grand Canal has changed from a broad and open property which should be protected as well as developed, eventually to a collection of waterways and directly related entities.

For the pressing World Heritage List nomination, which was carried out over a relatively very short time period, that the focus of work has been placed on interpreting and presenting transport/hydraulic heritage is understandable. The World Heritage List nomination is not the absolute end goal. There are more safeguarding, monitoring, managing, and other responsibilities to be taken up after the (possible) successful inscription. So is continuing research, recognition, understanding, evaluation, categorizing, and conservation work. Moreover, a very promising point is that at the presentation of the Conservation and Management Plan for the Grand Canal (2010-2030) it was declared that since the Grand Canal heritage is large-scale heritage, a unique cultural route formed over thousands years of cultural infusion and exchange, and its development and transformation have been going on non-stop, the value and connotation of the Grand Canal heritage is still open to more research and exploration.

## 7.5 The 'Heritage System' framework: A new approach to conserving large and complex heritage

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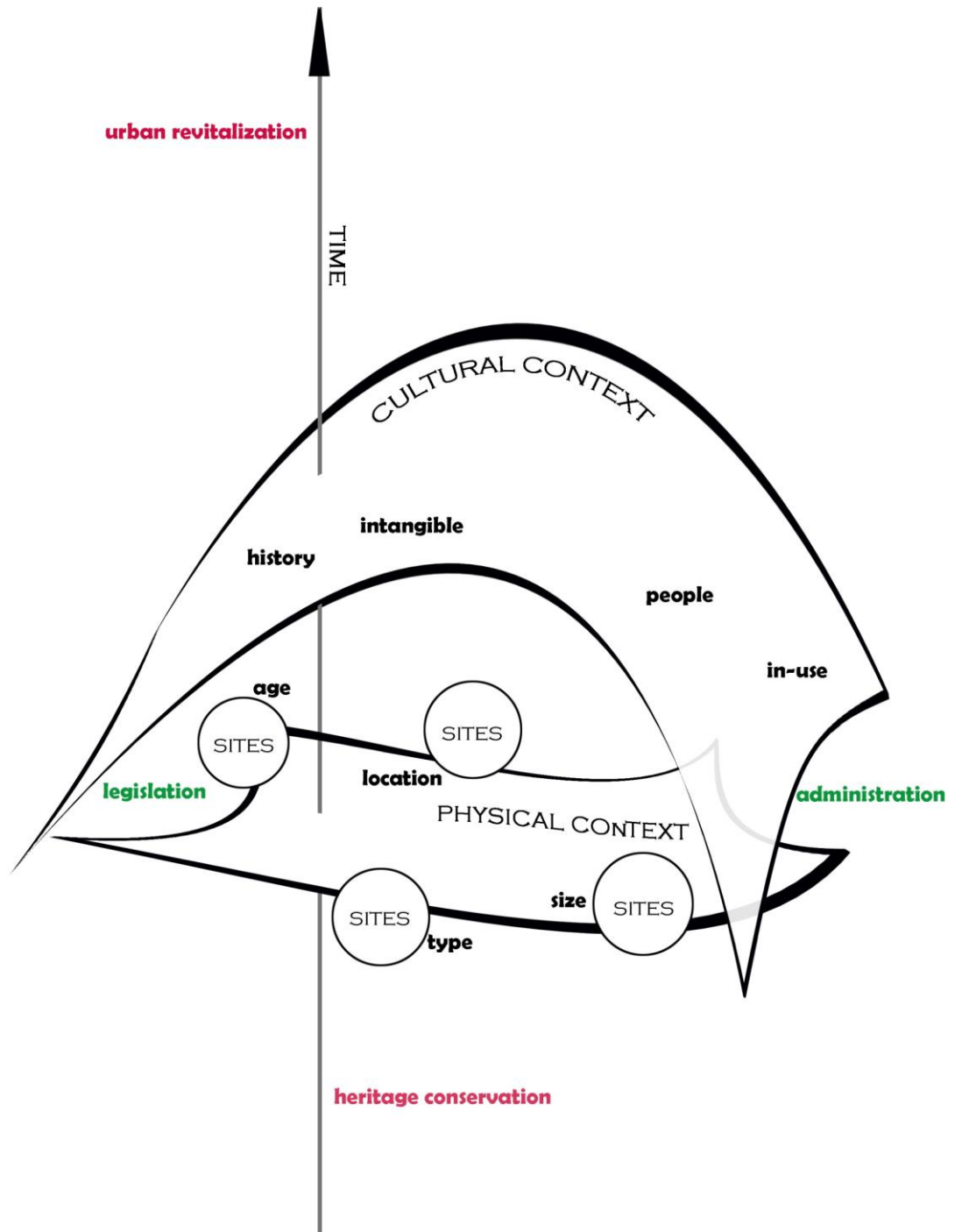
The word "system" originated from ancient Greek. For a long time, people have been trying to characterize or define this notion. Scientists have made attempts from various angles. The results so far have been contradictory and unsatisfactory - they characterized it only obliquely, by saying it comprised all studies of interest to more than one discipline. It is worth noticing that the word "system" generally stands together with an adjective or other modifier: ecological system, agricultural system, social system, economic system, legal system, and even "general" system (Rosen, 1986). A widely accepted way of defining "system" is to consider it as an organic entirety - it is not a machine composed of a number of parts that are simply put together one by one. A system is a systematic entirety which has a kind of new function or meaning that each element does not have when it is isolated. These elements influence each other and interact according to certain relationships. There are various relationships between the entire system and its subsystem, one subsystem and another, as well as the system and its outside environment (Huamao & Fengqi, 2007).

Based on the concept of "system", the understanding of large and complex heritage is furthered and explored as 'heritage systems' in this paper. A 'heritage system' (see Figure 7.2) contains a series of sites which are of different sizes, ages, locations, scales, and types. These are the basic elements of the system. There is a physical connection between these sites - their physical backdrop/landscape, which is the natural environmental context. There are also dynamic connections between the sites, which form the cultural context - layers of history and people that are linked to the sites - the society. Intangible heritage is also a part of this context, while some of the sites' in-use

nature ties closely to both the context and people. Within this system, practical affairs such as legislation and administration are cross boundary. This 'heritage system' at the same time has a dynamic relationship with its environment - the developing relations between heritage conservation and urban revitalization, which indicate a whole different dimension – time – the future.

“It is not the answer that enlightens, but the question.” (Lisnek, 2003, p. 233) - Eugene Ionesco. In this paper, the attempt to bring forward the 'Heritage System' framework is made to initiate discussions on looking at heritage properties as systems and eventually developing a mature set of philosophies, methodologies, and theories to understand as well as treat these heritage systems. Although complete answers will not be provided in this paper, the questions that are identified and raised provide a constructive start of the research on systematically conserving heritage.

**Figure 7.2: Heritage System**  
(Source: Created by the author)



### 7.5.1 What it is

The ‘Heritage System’ framework this article proposes is in fact a set of closely related questions that need to be answered together. It is an endeavour to explore a new way to look at heritage and heritage conservation. It does not only apply to the Grand Canal this article is based on. It should apply universally to any heritage property especially large and complex ones, as instead of being seen in terms of single monuments, heritage that has formed in the past, come a long way in history, and stands today has always been an element in its surroundings. It is time heritage was seen beyond physical boundaries, but instead widely considered in systems. The ‘Heritage System’ framework could provide a new methodology, theory, and philosophy that should one day be the mainstream in heritage conservation field. But only a framework will be attempted to be put together as an initiation in the following text.

### 7.5.2 Tentative proposals for how to set up and run a ‘Heritage System’

- **Independent administrative system**

The most important and foremost step is to set up special offices/teams to oversee as well as carry out research and practice following the same set of standards and principles. Throughout the World Heritage List nomination process for the Grand Canal, there have been too many departments involved in every city. Therefore, although SACH has overseen the process, it has also been dealing with all other heritage affairs across the entire country. This has made it very difficult for SACH to actually make sure in this particular nomination process the heritage conservation work carried out in each city and canal section is done equally well or thoroughly<sup>3</sup>. This

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3. See more in Chapter 4: Section 4.6.2

independent administrative system which involves a special office/team specifically set up for one heritage system will be much more focused and able to solve problems such as local bias since the administration is not conducted by authorities appointed due to associated geographical or jurisdictional relations. Local and respective level heritage offices can still carry out daily protection, research, maintenance, and other work. The special office/team should function as academic and technical support as well as a supervision body. It should engage the municipal authorities with responsibility for planning and development control to protect the heritage from development and other pressures (Orbasli & Woodward, 2008). It also holds a role to balance inequality between regions in heritage research and practice, and solve problems such as conflicts between regions, functional departments, industries, and various interest groups.

- **Thematic grouping system**

Instead of having municipal, provincial, and national (in China; other concepts apply in other countries) level selecting and ranking systems for sites to be included in a heritage system, a better approach would be to group heritage according to themes. Designate anchor sites that are fundamental to the significance of the particular theme group, and support sites which are connected physically or conceptually to the anchor sites and which contribute to the value of the whole (Feng, 2005). For example, in the World Heritage List nomination process for the Grand Canal, instead of every city nominating its collection of heritage sites<sup>4</sup>, different expert teams responsible for different themes such as the waterway, the settlement, the intangible heritage could have carried out heritage identification and evaluation work respectively. These teams would work separately but interact with each other on a regular basis. In this way, again

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4. See more in Chapter 4: Section 4.5

the local bias could be avoided, and the research as well as conservation work could be done more in depth.

- **Stand-alone financing system**

A financial system should be set up to try to bring in considerable capital investment from various sources, including government, private sector, foundations, and to develop more active and effective financial models. This would also help change completely the potential unequal input levels between regions. For example, for future conservation, monitoring, management and other work for the Grand Canal, a foundation could be set up to raise fund, manage the assets, as well as cooperate and interact with the local, national, and even global economic developments. Getting assistance from the World Bank as has been happening in China since the early 1990s (The World Bank, 2011) could be an approach to initiate the foundation.

- **Specialized research group/institute**

For the operational part of the heritage, modifications are often necessary in order to accommodate present-day technologies and safety standards (Coulls, 1999). Some of these alterations may impact on the integrity of the property. Adaptive reuse and other means to include heritage in development, such as tourism, keeps the heritage interesting and attractive to the general public, and moreover, viable. Although tourism is seen as a means of safeguarding heritage, the loss of authenticity and/or, erosion of integrity will diminish the heritage's value. Conservation priorities should be carefully weighed and planned (Orbasli & Woodward, 2008). For these reasons and for the overall goal of scientifically conserving the heritage, each 'Heritage System' should have a specialized research body. In the World Heritage List nomination process for the

Grand Canal<sup>5</sup>, CACH has been functioning as such research institute. However, from the final nomination file as well as from the observation of the preparation process, CACH was to a certain level overwhelmed by the amount of information the Grand Canal property carries. It is much needed to have a specialized research group or institute which has the experience and specialty as CACH but specifically focuses on one particular heritage system.

- **Presentation team**

Since culture is a good way to promote tourism as well as the local investment climate or ambience of cities (Steinberg, 1996a), in urban planning, there are a number of approaches which present the cultural values of the urban heritage so it “functions” as an attraction.

The built environment is a dynamic combination of physical, social and cultural environments. Heritage as a physical existence in this environment therefore not only requires conservation technologies and knowledge, but also social and cultural promotion to be “saved”. In addition, fragments of the urban heritage remaining as, isolated, static, preserved, or fossilized entities and converted into “open-air museums” should be avoided (Steinberg, 1996b).

Therefore, exploring how the physical remains of the heritage can be used as an anchor for the preservation and interpretation of the cultural extent of the heritage (Orbasli & Woodward, 2008) is an important focus in systematically conserving heritage. At the same time, studying into the cultural extent of the heritage – the intangible heritage carried by the physical remains enhances the understanding of the tangible heritage, and

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5. The inadequacy in research see more in Chapter 4: Section 4.4

provides contextual as well as reflective ideas and concepts for marketing and promotion.

The team should at least plan and implement a system of directional signs to assist the accessibility of the sites. Interpretation signs are essential too. These for example, can provide information that maps out the entire 'Heritage System', placing the given point into context as well as providing links to close by spots and other 'systems' (Orbasli & Woodward, 2008). An interactive media system could also be something the team should work on to include the wholesome background information and history of the property as a system. Besides the interpretation and information provision for the whole property, this team also initiates and runs focused interpretation, presentation, and promotion activities. Therefore in this way, all these marketing and promotion will be consistent based on consistent interpretation of the meaning and value of a property despite the physical, geographical, or juristic boundaries.

For instance, when the experts from the advisory body came to Yangzhou (one of the canal cities) for the field investigation required by the World Heritage Centre, they noticed that although there were signs directing certain canal sites, it was in fact very difficult to tell the relation of the sites to the Canal.

- **Coordination system**

This is a system that deals with the logistics, loose ends, and ensures the smooth operation of all other systems/teams as well as the coordination between them. For instance, this system jointly, with the research body, should execute the preparatory procedures for conservation: inventories, initial inspections, and continuing

documentation (Feilden, 2003). Legislative provision<sup>6</sup> for protection, preservation and conservation is a prerequisite for all the possible approaches to be successfully carried out (Ahmed & Alam, 1990). This is also accomplished by this system, together with the legal consulting team, actively advocating the need for the legislation for concerned ‘Heritage System’, and constructively providing feedback and suggestions to the legislation process.

Stewardship is a concept both in environmental conservation and historic preservation standing for the belief that it is our duty to maintain the environment for future generations (Turner, 2012). This is an example of the responsibilities of the coordination system as well.

For example, for the World Heritage List nomination process for the Grand Canal, if there had been a team like this, all aspects in this heritage conservation activity would have been more balanced, instead of mostly focusing on the fundamental but basic steps such as heritage identification and evaluation.

### 7.5.3 What it adds to the current concepts and practical approaches

The ‘Heritage System’ framework proposed in the previous section challenges current heritage conservation concepts and practice in many ways such as organization, access, interpretation, and marketing. It advocates the incorporation of diverse clusters of cultural heritage relics.

A heritage property like the Grand Canal involves natural, rural and urban settings, each situation requiring different management practices and priorities, as “each type has different implications for visitor behaviour, different potential for commercial

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6. See more about the legislation for the Grand Canal in Chapter 4: Section 4.6.1

developments, and contrasting requirements in planning and managing strategies” (Wall, 1997, p. 241). However, in ‘heritage corridor’, ‘heritage canal’, and ‘cultural route’ concepts, there is an absence of coordinated policies for consistently managing a property and there is no one management solution yet. This is one of the main issues the ‘Heritage System’ tackles by emphasizing successful initiatives that depend on the collaboration of various authorities (Conti, 2005).

In the ‘Cultural Routes’ concept, involved properties may appear as a line, a belt, a network, a circle or a cluster, thus the setting and landscape value vary, therefore conservation research and practice under the guidance of ‘Cultural Routes’ has been on a case by case basis (Sugio, 2005). While the ‘Heritage System’ is a dynamic and systematic way of looking at heritage and heritage conservation, and therefore it can be applied widely to any heritage related case.

#### 7.5.4 How ‘Heritage System’ could be used to enhance understanding and management of the Grand Canal

Considering the Grand Canal as a ‘heritage system’, having several ‘issue clusters’, adapting ideas from ‘Heritage Corridor’, ‘Heritage Canal’ and ‘Cultural Route’, and establishing a ‘Heritage System’ framework will provide the possibility for “preserving heritage sites as well as the associated knowledge and traditional culture” (Chan & Ma, 2003, p. 22) and drive the revitalization in the cities along the Grand Canal. Applying the ‘Heritage System’ in heritage conservation for the Grand Canal will solve a number of problems, such as the inconsistencies in administrative strength<sup>7</sup>, cultural scope and

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7. See more in Chapter 4: Section 4.6.2

understanding and interpretation of history<sup>8</sup>, financial input<sup>9</sup>, research effort<sup>10</sup>, presentation and marketing styles and means, and many more.

## 7.6 Implications and conclusions

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The World Heritage List nomination process for the Grand Canal has revealed the problems of trying to theorize and practically manage heritage conservation of such a large and complex heritage ‘site’. These problems are likely also to be relevant to other heritage ‘sites’ (such as the Silk Road) and reveal gaps in current understanding and practice of heritage conservation. This article reasons that neither systematic heritage conservation theories nor methods have been well developed in China and worldwide for large and complex heritage systems such as the Grand Canal. Thus a new set of theory and methodology is tentatively brought forward.

This paper proposes a new ‘Heritage System’ framework for improving the conceptualization and practical management of such large and complex heritage ‘sites’. The framework tries to learn from, but more importantly add to, the current concepts and practical approaches. It attempts to tackle a number of obstacles encountered in reality by drawing up an innovative scheme that includes a few key systems for one goal – dynamically and systematically furthering the understanding and conservation of large and complex heritage.

Since this article aims to initiate the building of the ‘Heritage System’ theory, methodology, and philosophy, there is still a long way to go. Necessary future efforts should at least include conversations and communication with a wide audience that

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8. See more in Chapter 4: Section 4.5

9. See more in Chapter 5: Section 5.4.2

10. See more in Chapter 4: Section 4.4

consists of experts from all the related fields, seeking for advice and support from international heritage conservation organizations, and learning from other disciplines such as sociology, philosophy, and law among many more for the methodology construction.

## CHAPTER 8

### DISCUSSION AND CONCLUSIONS

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#### 8.1 Results and findings

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The overall aim of this thesis is to further understanding of the developing relations between heritage conservation and urban revitalization, by following the on-going World Heritage List nomination process for the Grand Canal in China. As stated on p.3, this aim has been reached through tackling four, linked objectives. This chapter discusses the findings of the different substantive sections of the thesis, in the light of these objectives and in the context of the overall aim.

The literature review presented in Chapter 2 illustrated the great developments in research and practice in both heritage conservation and urban revitalisation worldwide over recent years. However, this review also identified a lack of literature addressing a) how to understand and treat large and complex heritage, b) links between heritage conservation and urban revitalization, and c) very recent practice and new theoretical developments. This gap in the literature led to the development of this DPhil project; drawing on empirical field investigations, it set out to produce suggestions for improved research and practice.

In particular, questions raised by the literature review have been applied to the case study of the Grand Canal, China. For example, the research examines whether heritage conservation theory and practice are sufficiently developed to support large-scale, complex heritage conservation activities such those associated with the Grand Canal. This question has been addressed primarily in paper one (Chapter 4) at a national level,

and has provided the impetus for the first objective of the DPhil research: to examine whether systematic heritage conservation has been established as a concentrated, nationwide heritage conservation activity in China through a critical study of the World Heritage List nomination bid for the Grand Canal. As a large-scale, intensive heritage conservation activity, the nomination process has produced considerable achievements; for example, the heritage survey, identification and evaluation activities employed in selection of sites to be included in the nomination bid, and the production of multi-level conservation and management plans for the Canal. However, weaknesses in academic research, interdepartmental cooperation, and legislation systems warrant significant concern. The final World Heritage List nomination file, which provides a summary of the heritage conservation activities associated with the nomination bid, shows that the Grand Canal is still perceived, and treated, in a very static way; this missed an opportunity to explore new ways of handling large, complex heritage systems. Despite promising beginnings in the early stages of work, eventual nomination and heritage conservation activities lacked dynamism, unfortunately the rich cultural context of the canal, and its on-going, contemporary use, were not taken into account.

The question set out above, concerning the ability of heritage conservation theory and practice to support large-scale, complex heritage conservation activities, has also been addressed, at a municipal level, by the case study in paper two (Chapter 5); here, it has provided the impetus for objective two of the DPhil study: to investigate flaws in current heritage conservation practice at an urban level – drawing on a critique of one city's performance in a large-scale heritage conservation activity (Zhenjiang's World Heritage List nomination work for the Zhenjiang section of the Grand Canal). This case study, and its comparison with a similar, adjacent canal city, Yangzhou, produced a number of clear results. For example, nomination and heritage conservation activities,

for the Grand Canal, have primarily been executed by individual cities; this has inevitably resulted in inequality and bias in the selection of sites for inclusion in the nomination file. These negative consequences had a number of potential causes: for example, the strength of financial support, political commitment, and administrative systems. Chapter 5 also discussed the dynamism of heritage conservation, examining whether achievement of the 'ultimate' status of 'World Heritage Site' provides an optimal pathway to heritage conservation. It argued that there is a need for future research to give more in-depth consideration to the tension between universal values and those associated with localities, and to the opposition between pure conservation (for example, the achievement of a prestigious heritage status) and dynamic engagement (for example, promoting adaptive reuse, and immersion in the contexts of urban activities and populations).

A second question emerging from the literature review concerned identification of the fresh ideas and approaches that heritage conservation can bring to concepts of urban revitalization, and attention to the role of heritage in the development of cities? This question provides the impetus for the third objective of the research project: to explore (i) the relationship between heritage and its host city, and (ii) the interaction between heritage conservation and urban development through a case study of the Xi Jin Ferry (in Zhenjiang) historic preservation and urban renewal project. These themes have been addressed by the case study in paper three (Chapter 6). The Xi Jin Ferry project demonstrated many new modes of thinking and practice. For example, historical and cultural research, before and throughout urban planning process, led to informed decision-making results. Simultaneously, implementation results were evaluated to assess and verify research methods and results. In this way, research and practice, in both urban planning and heritage conservation, develop together via constant and close

interactions. Several practical approaches proved successful in the Xi Jin Ferry project; for example, the use of underground spaces improved development while, simultaneously, safeguarding the conservation of heritage above ground. Similarly, heritage conservation provided an opportunity to introduce innovative eco-friendly technologies to historic urban areas.

The final question emerging from the literature review concerned the potential lessons that the global heritage conservation community might learn from China, the World Heritage List nomination process for the Grand Canal, and Zhenjiang's heritage conservation and urban revitalization activities. This question provided the impetus for the fourth objective of the DPhil project: to draw up a 'heritage system' framework, based on the empirical research in Chapters 5 to 6, providing a new methodology and philosophy for the systematic conservation of heritage in dynamic urban environments. These issues were addressed predominantly by paper four (Chapter 7). Fieldwork, combined with theoretical research, has provided the basis for a rigorous response to that question: joined-up systems level thinking and practice are required, and these should be coupled with the dynamic management of lived-in and re-used heritage. Existing approaches do not provide an adequate response; a fresh conception of heritage, particularly large and complex heritage configurations, as 'heritage systems' is essential; these should, from the outset, be considered dynamically and in relation to their context. This framework also places renewed emphasis on the dimension of time – the latter extended forwards; focusing attention towards the future promotes organic development of a closer relationship between heritage conservation and urban revitalization.

Learning from the lessons of the Grand Canal in China, the core theoretical element in the debates that cuts across all four empirical chapters is the developing relations between heritage conservation and urban revitalization. The research in this thesis has demonstrated the value that heritage conservation can provide for urban revitalization. As demonstrated in the Xi Jin Ferry area of Zhenjiang, well executed conservation of historic areas, in rapidly developing cities, can result in a new role for heritage: while connecting to the past, heritage sites may equally open out new possibilities for the future, enabling improved relationships between people and their urban environment. The research in this thesis has demonstrated the particular value, for heritage conservation, of adaptive reuse of heritage buildings and sites. Such repurposing, when properly executed, prevents further deterioration and allows ongoing, dynamic connections between people and the historic environment; in this way, adaptive reuse permits revitalization and enhances heritage conservation.

In conclusion, this thesis has demonstrated that neither theories, nor methods, for systematic heritage conservation have been well developed in China or worldwide; this finding was amply demonstrated as this DPhil research followed and participated in the World Heritage List nomination process for the Grand Canal. This nomination process was unique in its grand proportions and considerable complexity; however, the conclusions of the study are relevant to the conservation of many other heritage sites around the world.

Many problems emerged during the World Heritage List nomination process for the Grand Canal; however, instead of actively tackling these problems, and looking for innovative ways to present the ‘Chinese characteristics’, heritage conservation practice for the Grand Canal merely adopted existing ‘universal’ criteria and methods. In

addition, the process lacked a number of elements that are essential for successful, long-term heritage management; for example, mature legal and administrative systems, well established cooperation (institutional) mechanisms, and a dynamic approach to heritage. As seen in the literature review (Chapter 2), it is widely observed that heritage conservation requires additional effort, particularly in the context of urban development. This insight was reflected in the research; for example, the debatable benefits of inscription on the World Heritage List were examined. This research project has provided an opportunity to capture learning opportunities associated with the Chinese Grand Canal nomination process. Outputs include a research-led planning and conservation agenda. The research has also identified key requirements for future research and practice; these include: advocacy of interdisciplinary collaborations, innovation in education, a fresh emphasis on the management of heritage in the built environment, and on the role of heritage conservation in the process of urban development.

The research results described above suggest that relations between heritage and the urban environment have been closely connected throughout history; it is unlikely that this will change in the future. Therefore, in order to balance conservation and development, heritage should be examined in relation to its immediate surroundings: for example, the cities in which heritage is situated. Instead of being passively protected, heritage should, and could, play a more active role in urban development. Heritage conservation is a method of urban revitalization, and urban revitalization presents an opportunity to strategically conserve heritage. However, this research demonstrates that systematic conceptualization and management of heritage conservation remains elusive. Therefore, having employed empirical research techniques to answer the three questions set out at the beginning of this chapter, this DPhil research goes further and

attempts to answer a bigger question. While relations between heritage conservation and urban revitalization continue to develop, how can such relations be understood dynamically, enabling the systematic conservation of heritage in the ever-changing built environment?

As seen above, this DPhil thesis sets out a bold proposition, proposing that heritage conservation theory and practice be approached through the framework of 'heritage systems'. Drawing on 'lessons learnt' in the course of empirical research, this conclusion also provides a starting point; it provides groundwork for the construction of a new heritage conservation toolbox: a set of theories, a methodology and a philosophy for the appreciation and research of heritage in urban environment, which together (heritage and city) constitute a system.

## 8.2 Contributions and distinctiveness

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As seen above, this thesis makes an original contribution to the theory and practice of heritage conservation and urban revitalization; the value of this work may be summarized in the five themes that follow.

Firstly, the use of three case studies, focusing on national, regional, and local levels respectively, established a complete profile of one heritage conservation activity, the World Heritage List nomination, and of urban revitalization processes in the host cities. The case studies demonstrated the scale and context of the research, fostered in-depth comparative analysis, and investigated day-to-day practice and experience. Together, the case studies linked first-hand experience from within the nomination process with heritage conservation and urban revitalization research and practice.

Secondly, the use of mixed methods has proved effective. The methodology incorporated quantitative technique; for example, the collection and analysis of data demonstrated that the two cities studied enjoyed similar levels of economic development. Similarly, the study employed qualitative methods including, for example, a classic urban planning research method: the analysis of the dynamics of urban form. In addition, it integrated historical archive research and visual analysis; this linked evidence from archives and historical maps with field mapping, and produced robust results showing shifting patterns of urban form and their relation with major transportation developments.

Thirdly, this DPhil has experimented with, and evaluated the potential for, mutual feedbacks between research and practice. The case study of Xi Jin Ferry in Zhenjiang provided a comprehensive account of interactions between heritage conservation and urban revitalization supported by closely related processes of research and practice. As seen above, this case study demonstrated the necessity of a theoretically-informed, but practically-viable, approach to linking heritage conservation and urban revitalization: learning from the past and looking towards the future. These empirically grounded insights contribute to new theorizations of research-led practice in urban planning.

Fourthly, this research has a number of additional novel attributes. These include:

- a. a shift from a conventional focus on tourism, when discussing the contribution of heritage towards development, to an exploration of dynamic and organic relationships between heritage conservation and urban revitalization
- b. a discussion of the effectiveness of World Heritage List nomination in bringing together diverse parties to work towards heritage conservation in cities. This analysis provides a basis for interrogation, in future research, of the role that

UNESCO, and similar organizations, should, or could, play in internationally significant heritage conservation projects.

- c. a delicate approach to the author's positionality, resulting in a valuable contribution to the literature highlighting, for example, questions such as: 'What do different stakeholders (local community, developers) want?' and 'Who decides the future of the city?'

These original dimensions increase the relevance of this DPhil research to both academic researchers and practitioners.

Fifthly, the impacts of this research, at present and in the future, include:

- a. establishing recognition and celebration of the dynamic nature of heritage in academic research. In particular, the research acknowledges and studies the ways historical changes shape a heritage property; this provides a consistent conceptual framework for research into the future of a given heritage site.
- b. providing empirically grounded but generalizable results. Although the empirical research for this thesis has focused on the Grand Canal, its outputs may equally be applied to other heritage sites; this is because the research focuses on issues associated with the process of heritage conservation and urban revitalization, not on any one specific heritage type. Similarly, the careful selection of sample cities enables examination of the relations between conservation and development in general, rather than a narrow focus on the specificity of a particular heritage site or urban area.
- c. generating a model, guiding, for example, future World Heritage List nomination work, urban planning practice, research into historical urban areas, administrative and institutional operations, and educational purposes. Similarly, the research has

been written in an accessible format and could eventually provide the general public with improved knowledge of heritage and urban affairs.

In summary, this project's defining original contribution is its treatment of heritage conservation and urban development as related processes. This represents an important step, responding to a critical gap in scholarship on the relationship between conservation and development. As well as providing a significant contribution to cultural geography, the outputs of this research shed new light on both heritage conservation and urban studies.

### 8.3 Future research

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Building on this thesis, future research may include seeking to make direct impact of international standing, furthering interdisciplinary and multidisciplinary research, and deepening the understanding and use of systems theory in engagements with conservation heritage and urban redevelopment.

Such work could commence with the completion of a comparative studies considering the Grand Canal and other listed canals elsewhere in the world. The crucial role of the Grand Canal, within a society that was historically agriculture-oriented, makes it unique and representing exceptional universal value. Furthermore, the impact of colonialism on the development and decline of the Grand Canal also links the property to other countries and cultures.

Further international experience will be essential for future research in this field. In particular, opportunities to gain experience and knowledge of heritage conservation and urban revitalization research and practice, in additional global locations, would be invaluable; in this way, studies could incorporate contrasting perspectives such as

‘Global South’ versus ‘Global North’, ‘eastern’ versus ‘western’, or, alternatively, research could consider different types of operational systems.

Future research should also demonstrate increased emphasis on management, policy, or outreach; this will enable increased understanding of historical, cultural, economic, and related heritage values, and will facilitate cultural exchange. Exploration of ways to improve multi-levels heritage and urban studies education also represents an important direction for research; this will aid enhanced mutual understanding, foster collaboration between the two fields, and spur higher levels of comprehension and appreciation of culture – in academia and among the general public.

Building on this doctoral research, a longer-term enquiry will be carried out into the ‘Heritage System’. This will investigate additional case studies, for example, other physical infrastructures in China and worldwide. It will examine the issue of complexity, and will consider the similarities between ‘heritage systems’ and other systems, such as the fashion system (McCracken, 1986; Paris, 2010). It will also address wider questions; for example: What is universal value? Who defines it? Does heritage research privilege Eurocentric or western approaches and cases? How can systems theory be applied to heritage? How could a ‘heritage system’ function, and what management challenges would it present? How can a ‘heritage system’ methodology be helpful to other disciplines? This sustained examination will provide an opportunity to test and develop the concept of ‘heritage system’, increasing its applicability and value to a wide range of fields.

In order to provide a concrete agenda, three priority areas for future research may be identified; studies could:

- 1) investigate links between heritage and cultural diversity - the place of heritage and heritage conservation in promoting cultural diversity and cultural identity
- 2) examine business innovations that promote cultural diversity and lead to constructive conservation-development interactions
- 3) advance understandings of policy and educational developments that are needed to actively endorse cultural diversity and business innovation - so as to facilitate consideration of the complex role of heritage, and heritage conservation, in urban development.

Instead of being viewed conventionally, as related to history, and its protection, future research will demonstrate that heritage can be considered as enlightening and profitable - fueling future urban development. This could be achieved by pointing to a conceptual investment in the understanding of cultural diversity and cultural identity, the cause and the source of power of urban development, and through efforts to connect the knowledge of both.

In conclusion, the research documented in this thesis is timely as on the one hand heritage is facing immense pressure from development, and on the other hand, development is seeking breakthrough and innovation. This thesis offers a unique interdisciplinary approach linking urban studies with heritage research and practice. This approach has potential for wide application in social science research. With increased international coverage, future research in this area will continue to offer fresh perspectives; similarly, it will provide in-depth examinations of the potential for interdisciplinary insights to advance both heritage conservation and urban development theories and methods - establishing two-way connections between these fields. Finally,

the findings of this research provide valuable evidence and applicable tools for policy-makers at local, national and international levels.

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