



Chen, F. and White, J. T. (2021) Urban design governance in three Chinese 'pioneer cities'. *International Planning Studies*, 26(2), pp. 130-148. (doi: [10.1080/13563475.2020.1752160](https://doi.org/10.1080/13563475.2020.1752160))

The material cannot be used for any other purpose without further permission of the publisher and is for private use only.

There may be differences between this version and the published version. You are advised to consult the publisher's version if you wish to cite from it.

<http://eprints.gla.ac.uk/214040/>

Deposited on 17 April 2020

Enlighten – Research publications by members of the University of  
Glasgow

<http://eprints.gla.ac.uk>

# Urban design governance in three Chinese ‘pioneer cities’

Fei Chen <sup>a\*</sup> and James T. White <sup>b</sup>

*<sup>a</sup>School of Architecture, University of Liverpool, Liverpool, UK; <sup>b</sup>School of Social and Political Science, University of Glasgow, Glasgow, UK*

\*Fei Chen

School of Architecture

Leverhulme Building, University of Liverpool

Liverpool, L69 7ZN

[Fei.chen@liverpool.ac.uk](mailto:Fei.chen@liverpool.ac.uk)

+44 (0) 151 794 2620

ORCID: 0000-0001-8168-507X

James T. White

Urban Studies, School of Social and Political Science

University of Glasgow

216, 26 Bute Gardens

Glasgow, G12 8RS

[JamesT.White@glasgow.ac.uk](mailto:JamesT.White@glasgow.ac.uk)

+44 (0) 141 330 3664

## Urban design governance in three Chinese ‘pioneer cities’

**Abstract:** This paper investigates the formal instruments of design governance and the urban design decision-making environment in Chinese cities. It identifies Shenzhen, Shanghai and Nanjing as three cities pioneering in design-led planning in China and critically evaluates their approaches using a series of ‘best practice’ principles for design review and development management. The findings are based on 20 semi-structured interviews with key stakeholders, a review of their design portfolios, and an analysis of urban design policies and plans. The paper identifies the progress made with design governance in the three ‘pioneer’ cities as well as the challenges associated with adopting more design-sensitive planning practice in a highly centralised governance context. It concludes with four recommendations for Chinese cities. These focus on foregrounding sense of place in city-wide urban design visions, raising the quality of design guidance and codes, more effectively coordinating regulations produced by different government departments and agencies, and widening opportunities for public participation.

**Key Words:** design governance; urban design review, development management; urban planning; Chinese cities

### Introduction

One of the primary objectives of urban design is to generate more coordinated development outcomes while also supporting growth, change and a diversity of activities, aesthetics and forms (Scheer, 2010). The mechanisms of ‘design review and development management’ (Punter 2007; White 2015) that cities employ in pursuit of this objective are collectively termed ‘design governance’. This is defined as “[t]he process of state-sanctioned intervention in the means and processes of designing the built environment in order to shape both processes and outcomes in a defined public interest” (Carmona, 2016, p. 705). Studies of design governance have tended to employ the case study methodology and focus on the tools and mechanisms used by the public sector to deliver a better designed built environment.

These range from discretionary mechanisms such as design policies, design guidance and design frameworks, to regulatory instruments like design codes, zoning by-laws, masterplans and pattern books (Carmona 2017; Cowan, 2002).

With some limited exceptions (e.g. Deng 2009; Chen 2016), the literature on design governance has mostly focused on Western practice (e.g. Chapman, 2011; Farhat 2019; Kempenaar et al., 2016; Lang, 2017; Punter 2003; White 2016; Freestone *et al.* 2019). Findings from this body of scholarship suggest that successful design governance occurs when a governing authority recognises that ‘good’ design is indivisible from successful urban planning (Punter 2003). Leadership, whether from a political figurehead or a senior civil servant, is often crucial (Freestone et al 2019). So too is the deployment of a consistent hierarchy of policy and guidance (Carmona 2027; Punter 1999) supported by tools like discretionary design review and thoroughgoing public participation (Punter 2003; White 2016 Farahat 2019).

This paper focuses specifically on public sector urban design actions (i.e. plan making and the process of development management) in three Chinese cities pioneering with more design-sensitive planning practices: Shenzhen, Shanghai and Nanjing. These key elements of design governance are often referred to as ‘urban design control’ in the literature and, as such, this turn of phrase is also used in the paper to describe the processes under review. The aim of the paper is to analyse and evaluate the current state of design governance in the ‘pioneer’ cities using a series of ‘best practice’ principles, which the authors have adapted from Punter (2007) and White (2015) for the Chinese context. The paper identifies the progress made with design governance in Chinese city planning and reflects on the challenges that remain.

The paper is written in response to the Chinese State Council’s recent call for higher quality design outcomes in the wake of slowing urbanisation and growing concerns about climate change. A national emphasis on urban design was made explicit during the State Council’s *Urban Working Conference* in December 2015 and in a subsequent policy document which stated that some of China’s most pressing urban challenges needed to be urgently tackled through improved design governance (China State Council, 2016). In 2017, the first national-level policy document on urban design was enacted. Titled the *Regulation of Urban Design Management* (subsequently referred to as the *UD Regulation*) (MOHURD, 2017), it promotes the use of tighter design controls in Chinese cities by placing greater emphasis on the design

aims contained in local statutory plans and supporting more contextual design outcomes that protect local identity.

The next section of the paper provides a review of the literature on design governance and establishes an evaluation framework for the study of Chinese cities, adapted from the aforementioned 'best practice' principles (Punter 2007; White 2015). It is followed by a statement on the methodology employed in the research. The paper then gives a history of design governance in China, with a particular focus on the transference of Western design principles and practices to Chinese cities, before presenting the paper's findings on the design governance tools and mechanisms used in the 'pioneer' cities of Shenzhen, Shanghai and Nanjing. The paper concludes with a series of recommendations on the future development of Chinese design governance.

### Urban design governance in the literature

Urban design has a long-recognised role in public policy and local governance (e.g. Barnett, 1974; Lang, 2017). In the West, the context for urban design governance has shifted from an initial focus on aesthetic concerns, such as building facades, to holistic considerations about wider urban design qualities including permeability, legibility, identity, robustness and liveability (Bentley et al., 1985) and, more recently, ecology and resilience (e.g. Larco 2016). Sets of principles or practical recommendations for 'best practice' in design management have been variously offered in the literature, for example, Nelissen and de Vochit (1988)'s work in the Netherlands, James Schuster (1990) and Brenda Scheer (1994)'s research in the USA, Richard Lai's (1988) studies on practice in New York and San Francisco, John Punter's case studies in the USA, England and Canada (Punter, 1999; 2003; Punter and Carmona, 1997), as well as work by the authors of this paper on China (Chen, 2016) and Canada (White, 2016).

Public sector intervention on design matters tends to be driven by wider public policy concerns, such as local economic development, justice and social cohesion, environmental benefits, particularly around sustainable development, as well as an interest in aesthetics (Carmona, 2016). Design governance tools are also employed to help stabilise market conditions, by coordinating the development process, shaping the products of that process

and managing change and regeneration (Madanipour, 2006). Consistent design-led planning can therefore play a positive role in improving the function(s) of a place while increasing its symbolic value (Carmona et al., 2001; Gospodini, 2002), however, design governance has also been cast as a tool of urban neoliberalism deployed to enhance urban competitiveness and attract capital to cities. This has seen design investments in many cities channelled towards spectacle projects (Dovey 2005) that become the new globalised spaces of consumption for the middle class and which, in turn, drive up rents and house prices causing gentrification (Lees 2003).

### A framework for studying design governance in China

Punter's (2007) best practice principles sought to distil the key lessons from the broad swathe of design governance research produced during the 1980s, 1990s and early 2000s. The principles are grouped into four themes: (1) 'Community Vision' which suggests that governing authorities develop clear urban design visions in collaboration with communities; (2) 'Design, Planning and Zoning' which advocates for a commitment to design quality through zoning and other planning instruments; (3) 'Broad, Substantive Design Principles' which notes the importance of non-prescriptive, wide ranging design principles and contextual analysis; and (4) 'Due Process' which focuses on operating an efficient and effective administrative system to provide design expertise to support design review. White (2015) latterly extended these principles to stress the importance of meaningful community collaboration and participation; the integrative role of ecological design principles; and the need for urban designers to become more competent market actors to impact change.

Punter (2007) states that the principles are relevant in both developed and developing countries alike. Citing the Chinese example, he states that "[i]n many Chinese cities there is a good deal of innovation in both comprehensive and detailed plans and more design aware development control is emerging" (p. 195). Explicit details on the Chinese experience nevertheless remain quite limited, except for the two aforementioned studies conducted by Deng (2009) and Chen (2016). Deng (2009) reported on the design control process for a commercial office development in Shenzhen, arguing that design control in China should move away from elevational control to address the quality of public space, sustainable design and construction issues and be more widely employed as a mechanism to regularise

planning negotiation and promote public participation. Chen’s (2016) work took a city-wide perspective summarising how design issues are dealt with in the Chinese planning system using empirical evidences from Nanjing. Her research found that the design principles followed in practice were often inconsistent and that the important role that urban design could play in the wider process of development control was underestimated.

Punter (2007), and latterly White (2015), intended that the principles be used as a “basis for evaluating, reforming or developing review processes” (Punter 2007, p. 170). This paper therefore evaluates the Chinese experience according to the principles. To suit the Chinese experience the principles have been regrouped to match the tripartite structure of urban design policy, implementation, and decision-making environment in China (see Table 1). The authors have also omitted one of the principles that relates to mitigating the exclusionary effects of urban design control through planning gain mechanisms like bonusing because the interviewees who participated in the research had limited knowledge and experience on this topic. For the same reason, reference to planning appeals was also omitted from the principles. Appeals are not widely used in China, although relevant procedures are in place in the three pioneer cities.

Table 1: Best Practice Design Review and Development Principles for the Chinese experience (Adapted from Punter (2007, p. 171) and White (2015, p. 344))

<i>Evaluation Criteria Principles</i>	
<i>City-level policies, strategies and principles</i>	<p>Principle 1: Developing and monitoring urban design plans at the regional, city and site level with community and industry support,</p> <p>Principle 2: Producing a comprehensive design vision that adopts wide-ranging design principles that go well beyond elevations and aesthetics to embrace ecological urban design;</p> <p>Principle 3: Developing design guidelines with the community that are supported by regional, city-wide and site-specific contextual analysis.</p>
<i>Implementation tools in the DDCPs</i>	<p>Principle 4: Integrating zoning in planning and addressing the limitations of zoning.</p> <p>Principle 5: Not attempting to control all aspects of community design by accommodating organic spontaneity, vitality, innovation and pluralism; not over-prescription.</p> <p>Principle 6: Identifying clear rules for urban design intervention, administering permitting efficiently and managing discretion effectively.</p>
<i>Process and Politics</i>	<p>Principle 7: Encouraging collaboration within departments/agencies of local government and with neighbouring authorities.</p> <p>Principle 8: Providing the conditions for all members of the community to be involved in the process of developing and committing to a coordinated vision of environmental beauty and design, and employing innovative participation tools that encourage the broadest cross-section</p>

of local people to participate in the design process.

Principle 9: Harnessing the broadest range of actors and instruments (tax, subsidy, land acquisition, etc.) to promote better design and encourage ecologically-sensitive development.

Principle 10: Articulating desired and mandatory design outcomes in the design review process.

Principle 11: Providing design expertise and skills to support ecological urban design policymaking and review, and ensuring urban design staff have an operational knowledge of the local property market.

## Research Methodology

The research was conducted as a qualitative case study to ensure that a range of sources and multiple perspectives on the complex landscape of design governance in China could be explored (Creswell 1998). More specifically, the research was designed using an ‘embedded case study’ model (Yin 1989). China was therefore the primary case study, while the three ‘pioneer cities’ (Shenzhen, Shanghai and Nanjing) were embedded ‘sub units’ of analysis (Yin 1989). The cities were purposefully chosen for their atypicality as exemplars of design governance. Following Flyvbjerg (2001), such embedded sub units of analysis have the potential to deliver richer and more diverse information than typical examples because of their unique characteristics.

The primary data was collected in the three cities during the summer of 2016. 20 semi-structured interviews were conducted by the lead author with the following actors: 11 urban designers working for the local planning and design institutes in each city (subsequently identified as UD1 to UD11); 2 architects (subsequently identified as A1 and A2); 4 design consultants working for developers operating in the three cities (subsequently identified as DC1 to DC4); and, 3 urban policy makers (subsequently identified as PM1 to PM3). In addition, the lead author was granted access to the design portfolios of 9 of the interview participants allowing a visual analysis of their work to be conducted. Relevant policies, guidelines and statues were also collected where available.

The interview data was first translated and then transcribed by the lead author and coded in NVivo 10 according to the criteria in Table 1. The written and visual data was also subject to content analysis and was triangulated with the transcribed interview data to confirm, clarify



or illustrate points made by participants and to enhance the findings that were drawn from the participants' narratives. The University of Liverpool granted the ethical approval for this study.

### The history of Chinese urban design governance in the 'pioneer' cities

The Western concept of 'urban design' was slowly introduced into the scholarly discourse on Chinese urban planning during the 1980s. Zhou (1981) wrote the first academic paper advocating for individual buildings to be designed with greater awareness of their context. He argued this would lead to more efficient land use, economic development and greater morphological diversity. The term 'urban design' first appeared in Chinese government regulations in the 1991 *Regulations on the Production of Urban Planning* (*Chengshi guihua bianzhi banfa* in Chinese), an explanatory document that accompanied the 1989 *City Planning Act*. The Act established a comprehensive planning system in China (Yeh and Wu, 1999), while the supporting Regulations stated that urban design methods should be used in the planning process to help arrange a city's physical spaces to promote environmental, life and landscape qualities (Article 8, MOHURD, 1991). The Regulations were rather vague and, as such, had a limited impact on Chinese urban design practice.

The earliest example of design governance in China emerged in Shenzhen following the introduction of the watershed Economic Reforms in 1978. Before this time, the governance of design outcomes, as defined at the beginning of the paper, did not exist due to the absence of a private real estate development sector. Shenzhen was designated as the first Special Economic Zone in China and became the first city to experiment with market-oriented economic policies. Processes of urban design governance were exemplified in the planning of Huaqiao Town in central Shenzhen by the Singapore urban designer Meng Daqiang in 1986 (Sima et al., 2016; Zhao, 2011). Due to the involvement of the lead urban designer throughout the planning and development process, the masterplan was implemented in its entirety (Sima et al., 2016).

In 1994, an Urban Design Office (UDO) was established in the Urban Planning and Land Resource Management Committee of Shenzhen (UPLRMC of Shenzhen). It was the first, and so far, the only administrative unit that specifically deals with urban design issues at the local

authority level in China. The legal status of urban design as a planning control mechanism in Shenzhen was formally established in 1998 via the *Shenzhen Urban Planning Regulation* (UPLRMC of Shenzhen, 1998). It stated that specific urban design outcomes for individual precincts or land parcels should be adopted in the relevant statutory plans. As a result, Spatial Control Masterplans (*kongjian kongzhi zongtu* in Chinese) have been attached to land auctions in Shenzhen since 2009 (where the state sells land to private developers) as compulsory design conditions (UPLRMC of Shenzhen, 2009). These design conditions are shown, for example, in the Futian CBD development (1980-2010) (Figure 1).

<Insert Figure 1 here>

Figure 1: Commissioned by the local government, the American firm SOM produced two urban design control documents in 1998 for the development of Block No.22 and No.23-1 of the Futian CBD in Shenzhen. The document at the top specifies the location and height limits of towers while the one below regulates the street façade. This development was regarded as a milestone of design governance in Shenzhen and China, because it successfully coordinated architectural and landscape design on land parcels owned by 13 different developers (UPLRMC of Shenzhen, 2002).

Shanghai and Nanjing were also among the earliest cities in China to issue local regulations that promote design governance. For instance, the 2003 version of the *Shanghai Urban Planning Regulation* specified that urban design guidelines should be included in the city's Detailed Development Control Plans (DDCP or *fujia tuze* in Chinese). Shanghai was also the first city to produce comprehensive guidance on street design, namely the *Shanghai Street Design Guide* (Figure 2), in order to create liveable, sustainable and 'smart' street spaces (UPLRMC of Shanghai, 2016). Similarly, Nanjing published the *Nanjing Urban Design Guideline and Public Space Design Guidelines* in 2013 (subsequently referred to as the 'Nanjing Guidelines'), which provide detailed guidance on public space design outcomes.

<insert Figure 2 here>

Figure 2: A page extracted from the *Shanghai Street Design Guide*, suggesting the widths of the pedestrian lanes alongside various categories of street facades (key information translated by the lead author)

As it currently stands, there remains significant variability in the implementation of urban design governance beyond the 'pioneer' cities identified in this paper, and it was not until the 2010s that the role of urban design in the planning and governance of cities emerged more

widely as a political topic in China. Notably in 2014, President Xi Jinping criticised the so-called ‘weird architecture’ produced by international star architects in China citing an insufficient understanding of the local context. Xi’s comments triggered a host of calls for high quality design and contextually appropriate architecture and urban spaces in China. These precipitated the aforementioned *Urban Working Conference* of the State Council in 2015 and the *UD Regulation 2017* that subsequently followed.

### Instruments of urban design governance in China

The formal procedures for development management in Chinese cities, as noted earlier in the paper, were established in the 1989 *City Planning Act*, and the updated version, the 2008 *City and Town Planning Act* (Yeh and Wu, 1999). The 2008 *Act* defines the institutional context for planning and urban design governance. Amongst a range of legal directives, it establishes two conditions that are especially relevant for understanding the roles and limits of design governance. First, the *Act* sets out the standard hierarchy of statutory plans that cities and regions must adopt and, second, it details the administrative mechanism commonly known as the ‘one note and two permits’ system that is used to determine development approvals<sup>1</sup>.

The hierarchy of plans consists of a Regional System Plan and Strategy for city clusters; Masterplans for cities and towns; Masterplans for districts (only produced in big cities); Detailed Development Control Plans (DDCPs) for precincts, and Detailed Construction Plans (DCPs) for building clusters and sites (Chen, 2016). Urban design plans were not included as a form of statutory plan in the 2008 *Act*, but the more recent *UD Regulation 2017* as well as local policies in each of the pioneer cities have proposed that design governance be executed through the governing authority’s hierarchy of statutory plans or used by local planning bureaus on a discretionary basis when granting or refusing permission for new development.

Table 2 shows the types of design governance instruments delivered by the statutory plans at each spatial scale and the particular design elements they target. In summary, the municipal

---

<sup>1</sup> These include the Permission Note for Location, the Land Use Planning Permit and the Building Permit, which are issued by the local authority at various stages during the development process to ensure conformity with the assigned terms and conditions (Chen, 2016).

or district masterplans include design strategies, objectives and principles at a large scale; the DDCPs are effectively ‘zoning plans’ specifying land uses and compulsory indices/codes for individual sites (e.g. development intensity, street lines and height limits, etc.) alongside non-compulsory guidelines (e.g. building features, plantation, colours, signage, etc.); and, the DCPs deliver detailed masterplans for a given site for direct implementation. The DCPs are usually produced by the developer and approved by the planning bureau but are not widely used now. In addition, a fourth type of design governance instrument is topic-specific design guidelines. These are not directly related to the statutory plans and their implementation is discretionary. They are very limited in number at present although one example is the *Shanghai Street Design Guide* (UPLRMC of Shanghai, 2016) (see Figure 2).

Table 2. Types of urban design governance instruments and the design elements they impact upon

<b>Types of urban design governance instruments</b>	<b>Related legal plans</b>	<b>Scale</b>	<b>Land area</b>	<b>Design elements</b>
<i>Type 1: Design policies, strategies, objectives and principles in Masterplans</i>	City Masterplan	Municipal level	Hundreds to thousands km <sup>2</sup>	Spatial structure—axes, visual corridors, skylines and nodes; overall height limit zoning; areas of historical and natural characteristics
	District Masterplan	District or town level	Tens to hundreds km <sup>2</sup>	specified area characteristics; axes, visual corridors, skylines and nodes; height limit zoning; system of public spaces; transportation system;
<i>Type 2: Design codes and guidelines</i>	DDCPs or <i>fujia tuze</i>	Precinct level	1-10 km <sup>2</sup>	land use, height limit zoning; transportation; public spaces; landscape and underground space; building massing, shape, colour;
<i>Type 3: Site Masterplan</i>	DCPs or <i>Xiangxi lantu</i>	Land parcel level	Less than 1 km <sup>2</sup>	building set back; street interface; height limit zoning; open space; pedestrian routes (on the ground or elevated); underground space; building massing, shape, colour
	DCPs or <i>Xiangxi lantu</i>	Building cluster level	Building cluster	Building arrangement, massing, façade materials, colors, street interface, towers positioning and heights, roof pattern.
<i>Type 4: Topic-specific design guidelines if exists</i>	N/A	Individual public	Square, parks, streets,	Depends on the subject

	space	waterfronts	
N/A	Environmental and civil facilities	Signage, bridges, lighting etc.	Depends on the subject

### Key actors and organisations in the design governance process in China

The formal design governance instruments discussed in the previous section are mostly produced by local urban design and planning institutes. Before the Economic Reforms began in the late 1970s, the institutes were state-owned and had responsibility for design and planning at the local level. Since the 1990s, however, they have been gradually and, in most cases, partially privatized. In contemporary China they operate like a consultant providing advice and producing plans for mostly public clients. The design and planning institutes in the three ‘pioneer’ cities all share this status. They still work closely with and are trusted by the local planning bureaus, but now draw a fee for their work and produce work for other cities as well.

Other key actors and organisations at the local level include the aforementioned urban planning bureau and the land administration bureau. The land administration bureau manages land and natural resources at the local level. They produce and monitor the implementation of land use plans and also administer land auctions. The planning bureau is responsible for conveying design conditions to developers, granting development permits and performing completion checks. The planning bureau also organises design reviews for important projects and makes sure that, once a project has passed through design review, it is reported on the internet, in newspapers, and via public meetings and other channels for public consultation for at least 30 days. If no significant dispute emerges, the project is approved by the planning bureau or the mayor. For more strategic projects, higher level government officials give the final approval. In two of the pioneer cities, Shenzhen and Shanghai, the urban planning bureau and the land administration bureau have been integrated into one unit in recent years due to their closely related responsibilities. Other local government units, such as the fire-prevention bureau, property management bureau and environmental protection bureau, are also involved in the development process. They give technical feedback to both public and private sector designers during the application process for a development permit or as part of

the design review of important projects. They also play a ‘building control’ function by checking finished projects to ensure compliance with their regulations.

### Evaluation of design governance in the three ‘pioneer’ cities

This section presents the research findings using the evaluation criteria established in the adapted best practice principles (see Table 1). Any direct quotations have been translated by the lead author. The research pays particular attention to the first two instruments identified in Table 2: city-level design policies, strategies and principles; and, the DDCP-related codes and guidelines. These are the primary design governance tools used in the pioneer cities.

DCP-related site masterplans (see Table 2) are omitted from the discussion because they are less frequently used in a formal capacity (UD8, PM2). They are an example of ‘total urban design’ (Lang 2017), where an organisation is in control of a project from inception to completion. DCPs were more common before the introduction of Economic Reforms in China, when large areas of urban land were allocated to state-owned work units which exercised total control over the design and construction of their sites (Xie and Costa, 1991). This is increasingly rare due to the intensification of marketisation. The auctioning of plots to market-operated developers is now the norm.

The fourth instrument identified in Table 2, topic-specific design guidelines, are also extremely limited in number albeit for a different reason. They are usually non-compulsory and, as a result, their impact on development management and control is minimal. This design governance blind spot can arguably be attributed to the relative infancy of the Chinese planning system and the state’s attention on rapid urbanisation over the past four decades. This has tended to premise speed and efficiency over other planning goals. At the time of writing this paper, however, the tide does appear to be shifting in favour of more design-based planning guidelines in cities across China where retaining and enhancing sense of place is increasingly viewed as an important policy objective.

#### City-level policies, strategies and principles

The urban design plans for the three cities are mainly produced at two spatial scales: city-wide, as part of the urban Masterplans, and for areas or districts within cities that have been identified as important, including urban cores or centres, historic areas, new towns, main streets, waterfronts, mountainous areas, etc. In terms of coverage, urban design plans have been produced in considerable quantity in the three cities. For instance, by 2014, Nanjing had enacted 75 urban design plans covering over a dozen urban characteristic areas, including historic districts, newly developed high-tech zones, stadia and social housing areas, as well as main streets (UPB of Nanjing, 2013). By 2018, over 230 DDCPs had been enacted for ten districts of Shenzhen, and most incorporate a focus on urban design outcomes.

The research found that, despite the volume of plans, the current city-level design policies in the three cities tend to focus quite narrowly on view corridors and the visual identity of the city, while offering very limited typo-morphological advice on urban form. Detailed analysis of the city-wide masterplans for each city<sup>2</sup> found that the urban design chapters emphasised defined landmarks, visual corridors, skylines (height limits) along natural boundaries and conservation areas. In Nanjing, for example, the strategy details the city's spatial configuration, identifying three rings between the historic core and the city boundary, 20 sub-regions, 12 main routes, 43 landmark nodes, 42 visual corridors and 9 conservation areas. Their boundaries and zoned height limits are shown in Figure 3. The Shanghai Masterplan contains similar strategies that identify the three urban cores, transit and landmark nodes, historic areas, towns and villages, as well as main streets and rivers fronts. In Shenzhen, the Masterplan identifies a forest and suburb park system outside the core city as well as 4 seaside landscape areas, 5 waterfront areas, 5 main streets; 3 mountain regions; and 5 historic urban areas.

<Insert Figure 3 here>

Figure 3: Urban design strategies for Nanjing at the city Masterplan level highlighting the areas that are important for showcasing the city's identity. Green areas are the natural landscape; blue the historical conservation areas; red the Modernist conservation areas; purple the landscape sensitive areas; dots representing high viewpoints in and around the core city.

---

<sup>2</sup> This analysis covered the *Masterplan of Nanjing (2007-2030)*, the *Masterplan of Shanghai (2017-2035)*, and the *Masterplan of Shenzhen (2010-2020)* as well as the *Nanjing Guidelines* and the latest version of the *Shenzhen Urban Planning Regulation and Standard (2017)*.

The emphasis on visual quality in the masterplans partly aims to address the ‘identity crisis’ of Chinese cities resulting from large-scale urbanisation (Chen and Thwaites, 2013). It also serves the purpose of image-building to increase urban competitiveness in both the global and domestic market. Yet, the masterplans arguably place undue emphasis on natural surroundings at the expense of other considerations. Some of the urban designers (UD1, UD9, UD10 and DC3) interviewed as part of the research stated that visual corridors towards the natural environment are frequently used to justify their design proposals at the site level, despite being only one of many urban design factors that might impact upon the wider area. A senior urban designer in Shanghai (UD9) criticised this focus on visual quality, arguing that “...urban planning in our country focuses mostly on land use and visual appearances at large scales....We need to pay attention to the spatial typologies of the urban fabric instead”. As a result, it tends to be unclear from the designation of zones in the masterplans, which are typically very large (Zhang and Lü, 2003), how the general morphology and physical characteristics of each zone should be shaped and managed.

The masterplans for the three cities do all contain normative Western ‘urban design principles’, such as human-centred development, compact development, mixed use, Transit-Orientated Development (TOD), ecological and low carbon development, and use terms like efficiency, liveability and sustainability to describe future urban forms. Similar terminology is also found in the national *UD Regulation* policy document and in the influential *12 Green Guidelines* by China Development Bank Capital (2015), a national funding organisation for important infrastructure projects. Such principles appear to be drawn from Western-originated urban design theories and practice, yet how these principles vary cross-culturally and ‘land’ in a Chinese context remains an important research question (Punter, 2007). Indeed, a key finding of the research was that the Chinese government’s advocacy of Western principles has triggered heated debates especially with respect to their cultural appropriateness (UD7, UD9 and UD11). One oft-cited example is the potential social consequences of opening up gated communities, which are common across China, in order to achieve better permeability (Beijing Daily, 2018).

A number of the participants interviewed for the research also noted that the city masterplans and other associated policies do not offer detailed guidance on how to implement urban design principles (UD3, UD6, UD8 and UD11) meaning their utility remains limited. An urban designer in Shenzhen (UD11) noted, for example, that a density limit considered



‘compact’ in a Chinese city might be very different from that in a US city, yet a definitive definition of ‘compact’ does tend to be given in the plans. Some interviewees (UD3, UD4, UD9, UD11) alternatively believe that Western urban design principles are sufficiently generic to be applied in Chinese cities, but need to be contextualised more clearly so they can be better interpreted on individual design projects (UD3, UD10). An urban designer in Nanjing (UD4) commented that, in certain cases, “a Western principle is adopted to make the design sound more ‘advanced’ when presented to leaders and officials. The designers themselves may not understand the principle in depth...” This can mean that urban design principles are often not applied especially well or with much consistency.

### Implementation tools in the DDCPs

As mentioned earlier in the paper, precinct-level Detailed Development Control Plans (or DDCPs) are the main development control mechanism in China and is essentially an area-based zoning by-law. The DDCPs define the street build-to lines, development intensity and building height limits for a district or neighbourhood (see Figure 4). They also contain a non-compulsory (*fujia tuze*) series of design guidelines which propose possible building envelope and landscape treatments. The research found that, much like the design principles contained in the city-wide masterplans, the compulsory section of the DDCPs are often too generic to ensure design quality and, in a lot of instances, the non-compulsory ‘*fujia tuze*’ guidelines are not followed with any consistency (UD2; DC1; DC3; DC4; A1; A2).

DDCPs have long been criticised for their inflexibility with respect to site specific design solutions (Wang et al., 2011; Ye and Zhao, 2009). It has been argued elsewhere that the DDCPs were devised on the basis of efficiency and standardisation to speed up the development process (Yeh and Wu, 1999), rather than to deliver design quality. As a result, they often fail to pay sufficient attention to the spaces between buildings (Deng, 2009) or influence the quality and diversity of building proposals (Jin, 2016). Professional designers interviewed in the pioneer cities noted that the current focus on urban design in Chinese planning might ultimately lead to the better use of the DDCPs for visualising possible development outcomes and providing more realistic design suggestions (UD3, UD6). However, presently, the non-compulsory guidelines in the DDCPs are still often ignored during the building permissions process because the planning officers in charge do not have

the design skills necessary to exercise the discretionary judgment required (Jin, 2016). Moreover, planning decision makers in China often avoid exercising discretion because they fear being accused of corruption, should a dispute subsequently arise (Du, 2015; Ye and Zhao, 2009).

<Insert Figure 4 here>

Figure 4: The illustration of a typical Detailed Development Control Plan of Shanghai showing the land divisions, land uses (color coded) and development intensity of each numbered plots.

The national 2017 *UD Regulation* furthermore suggests that additional urban design plans should be produced for urban areas undergoing regeneration at the same time (or before) a DDCPs is finalised, in order to coordinate and deliver positive area-wide design outcomes. However, one of the key findings of the research was that designers often found it difficult to convert area-wide design aspirations into workable design guidance (UD9, UD10). This problem is partially attributable to the inflexibility of the DDCPs, which are standardised to accommodate a limited number of zone-able design solutions. In the pioneer cities, local technical standards have been produced to streamline this process. For example, the 2013 *Nanjing Guidelines* and the *Technical Standard for Plot-level Urban Design* (UPB of Nanjing, 2013) specify the design elements that should be covered in urban design plans at the precinct level, as well as the format of accompanying drawings and the written content of the guidelines.

A designer interviewed in Shenzhen (UD10) criticised these sorts of measures for handicapping the creativity of designers and potentially making urban design plans the same as the DDCPs, i.e. inflexible and rules based. He stated “the primary objective of urban design is to solve problems. If we regulate the format and content of the design outcomes it could be problematic....as the designers may just fulfil the requirements rather than solve problems...” (UD10). To counteract this, two of the urban designers interviewed suggested that designers should be much more involved in decision making at the development implementation stage. This, they argued, might ensure that area-wide design concepts developed during earlier plan-making stages can be delivered through the DDCPs and beyond (UD1; UD11).

## Process and politics

There are a complex array of organisations and actors involved in the urban design decision-making process in China. These include: urban design consultants (including those working for the local planning and design institutes and those in the private sector), the planning bureau, other relevant government sectors (e.g. the transportation bureau, sanitation bureau, parks and greening bureau, and the fire-prevention bureau), local political leaders (e.g. the mayor, heads of bureaus), design review boards (experts appointed by the planning bureau with the role to scrutinise both urban design outcomes and the design proposals associated with major projects), sometimes developers and funders, as well as the general public (albeit in a limited role). The analogy of a ‘battlefield’ is often used to describe a typical planning and development process (Bentley, 1999) in which stakeholders mobilise their resources to create ‘fields of opportunity’ (Tiesdell and Adams, 2011). This is readily observable in the responsibilities and interactions of urban design actors in China.

At an institutional level, design governance is directly influenced by the complex structures of the Chinese government. Numerous interviewees observed that it is hugely challenging for public or private sector urban designers to coordinate the myriad interests and priorities of different levels and departments of the government (UD5; UD6; UD11; A2; DC1; DC4). This governance structure features a ‘vertical relationship’ between the central, provincial, municipal and district governments, and a ‘horizontal relationship’ across various departments at each level (Li, 2014). Vertical and horizontal priorities are often in conflict with one another, and the ultimate responsibility for design matters can easily become unclear (Ye, 2016).

The research found that the lack of intra-government cooperation has further negative consequences because individual departments tend to develop their own policies and focus on their own responsibilities thus creating a ‘silo mentality’. Departments with tangential roles in the urban design governance process are rarely attuned to the benefits of urban design (Deng et al., 2013). For instance, the fire-prevention bureau’s building regulations may not be compatible with the urban design intentions of the planning bureau (A2), while the transportation bureau’s street network policies may not permit the dense urban blocks and narrow streets preferred by urban designers at the local planning and design institutes (UD11). These types of institutional challenges can be illustrated through the example of a typical

commercial street. The ground floor shops are usually managed by the municipal Administration for Industry and Commerce, the pedestrian facilities are managed by the Transport and Sanitation bureaus, while vegetation is the responsibility of the Parks and Greening Bureau. Street design thus requires coordination among the various bureaus and can mean that urban design concerns get undermined. To counteract these sorts of problems, the national Ministry of Housing and Urban-Rural Development (MOHURD) published a document in 2018 about building a digital platform for sharing planning information and coordinating planning actions among different departments (MOHURD 2018). It may, however, take some time for such a platform to be ready.

A further key finding was that the political leaders and civil servants running the various government departments with a role in design governance also have a significant impact on urban design decision-making. Research participants in all three cities highlighted the powerful role played by the Mayor in approving the design of major urban design projects and public buildings (PM3, UD10, A1). A senior urban designer from Nanjing (UD3) stated, for example, that “it is hard to know whether it is the Mayor’s personal preferences or not. The requirements for us are often communicated through his office or other departments. They could make the decision collectively, but the Mayor’s opinion is certainly important.” The research participants interviewed for this paper had mixed opinions about this. Some felt strongly that urban design decisions should not be made by politicians (A2), while others argued that the leaders’ opinions were often sensible (UD6) or reflected wider public or official concerns (UD4).

Urban design actors in all three cities observed that masterplanning and public realm projects in China have traditionally been commissioned by the local governing authority under the direction of the Mayor and awarded to the local design and planning institutes (UD1, UD4, UD5, UD6 and UD9). In recent years, however, it has become increasingly common for governing authorities to host design competitions instead. These attract domestic and international designers and are viewed by political leaders as a way of promoting design excellence at the local level. A chief urban designer in Nanjing recalls that most major projects in that city are now tendered through a competition process (UD2). If the design competition is won by a private sector urban design or architectural firm, however, the local planning and design institute – many of which are quasi-public agencies – still plays a key role in delivery. Typically, the institute is charged with converting the proposals into an

official urban design masterplan or regulation, like a DDCP. An urban designer interviewed for the research in Shanghai (UD8) explained this process, stating that “We will combine the advantages of several schemes, and convert them into legal documents. Only the legal documents can enter the approval procedures and be implemented later... But sometimes, we will do the project all over again by ourselves...” This can mean that the innovative ideas produced for the winning entry of design competitions are not necessarily carried through to implementation.

Alongside the rise in design competitions in the three pioneer cities has been the growing use of design review panels. The requirement for design review as a means of scrutinising the quality of important urban projects was mandated in the 2017 national *UD Regulation*. The process is typically organised by the local planning bureau and tends to be expert-driven. Like in many other cities around the world, the review process is panel-based and the panels are composed of senior professionals or academics who make a professional judgement on the urban design projects under review. The planning bureaus in each of the pioneer cities each have a pool of ‘experts’ who are invited to serve on the panel either on a regular basis or for occasional projects (PM1, PM3). For instance, in Shenzhen, the pool contains over 100 experts with about 20 ‘core’ experts, some of whom are from Singapore, Japan and the United States (PM2). An interviewee from Nanjing noted that the recommendations made by review panels are sometimes criticised for being prejudicial (UD4). He explained that “...the time left for review panel members to review all design proposals is usually short. They can’t get a good understanding of every project, so their suggestions are not always pertinent....The reviewers are selected by the government. The government selects the ones whose opinions are in agreement with the leaders.” A design coordinator in Shanghai (DC3) raised similar concerns, claiming that the reasons for revision or rejection of a design proposal often appear arbitrary. While the planning bureaus and other government departments have strict regulatory requirements for the development permitting process (all interviewees), the criteria for design review tend to be unclear and lack guiding principles. Indeed, without a set of principles or criteria against which urban design plans can be assessed (Farhat, 2019), design review may not be sufficiently transparent or effective.

As a political endeavour, Chinese design governance is mostly a top-down exercise. However, the participants in this research agreed that public involvement in the design process is important (UD2, UD10), if not paramount. The government officials in Shenzhen and

Nanjing interviewed as part of this study (PM2, PM3) stated that the channels for public participation in design are increasingly abundant. Examples include planning ‘open days’, dedicated galleries for exhibiting planning visions, online exhibitions, Mayor’s mailboxes, and onsite displays of design proposals. In Shenzhen, attempts to better involve the general public have included public activities organised by the Shenzhen Centre for Design, an NGO that promotes urban design (UD10), as well as public lectures by international designers funded by the local authority. For important urban projects, such as those located in conservation areas, the planning bureau also organises citizen meetings with local residents. Structural problems persist, however, as a chief architect explained:

Public consultation is very common in the regeneration of urban villages in Shenzhen. [So-called] Villagers are invited to say what they expect the project to be like. It sounds fashionable, doesn’t it? But they are not the real representatives of the public, no, they own dozens of units in the village; they don’t even live there, it is always rural migrant workers living there, but no one asks these migrants opinions. The house owners of course want their buildings to be demolished so they can get huge compensation (A2)

Two urban designers (UD4; UD9) both said that those members of the public who were involved in decision-making tended to be local elites. The troubling assertion that ‘common citizens’ may not be sufficiently well-educated to offer suggestions on design was also proffered. Other urban designers interviewed for the study also admitted that they did not necessarily welcome direct inputs from local citizens and preferred to collect wider survey data (UD2, UD9). The research found that genuine public engagement and participation in urban design remains very under-developed.

## Conclusion and recommendations

This paper has examined the mechanisms of design governance in three ‘pioneer’ Chinese cities: Shenzhen, Shanghai and Nanjing. A set of evaluation criteria was established from the literature (see Table 1) to assess the Chinese experience. This final section of the paper refers back to these principles to offer some concluding reflections and recommendations.

The assessment presented in this paper reveals some clear progress with design governance in the three pioneer cities. Urban design has played an increasingly important role in the cities' planning systems since the 1990s, and design governance has been widely recognised as a way to promote quality and coordinate decision-making. Reflecting first on city-level policies, strategies and urban design principles, the research found that public sector urban design plans are produced widely at the city-level and at the level of 'important' areas or districts, although the involvement of the community or local business/industry is less clear (Principle 1). City level plans are driven by contextual analysis, especially of the relationship of the city *writ large* to the wider natural environment (Principle 3). A wide variety of urban design principles have also been adopted, ranging from compact development, mixed use, human-centred, and ecology to liveability and sustainability (Principle 2).

With respect to the principles focused on implementation, zoning is used as the principal tool for controlling design at the precinct and site level, and the limitations of zoning are compensated by non-compulsory design guidelines, although the latter are not sufficiently implemented (Principle 4). The permitting processes are strict in the three cities, but the procedures do not offer many opportunities for discretion. This has a negative impact on the creativity and diversity of design outcomes (Principle 6). Finally, the examination of the process and politics of urban design found that design competitions for important projects are conducted on an increasingly regular basis to ensure quality and so too is design review, although the impartiality of design reviewers was found to be questionable. The research also found little evidence to suggest that design quality was understood or evaluated on ecological grounds (Principles 9 and 11). Additionally, public participation in design decision-making is encouraged 'in principle' and, despite being limited in many ways, the means through which the public can contribute are growing (Principle 8). At the time of writing, for example, 12 planners and designers in Shanghai have been paired with local neighbourhoods to work with communities on area-based regeneration processes (Li, 2018).

The research also identified a number of significant challenges with design governance in the three pioneer cities and offers a series of recommendations. First, there remains a persistent emphasis on city-wide visual qualities over area-based morphological concerns. This is driven by contextual analyses that give primacy to the relationship between the city and surrounding rural areas. While this suggests a concern for the ecological connection between

cities and rural areas, it tends to come at the expense of finer-grained analyses of built form and human-scaled environments. In the pursuit of city identity-building, governance authorities in China could adopt a typomorphological approach to better catalogue the built environment and identify more culturally-relevant and appropriate urban forms (Chen and Thwaites, 2013; Trache, 2001). These spatial typologies would go beyond elevations and aesthetics to embrace wider urban design qualities (Principle 2 and 3).

Second, normative urban design principles are widely used in national and local planning policy, but they are not locally contextualised (Principle 3). In a similar vein, DDCP design codes are rarely site-sensitive and the attendant non-compulsory design guidelines are often ignored during the development permitting process, as noted above. This remains a deficit in the pioneer cities and requires further skills development (Principle 11). There is also scope for cities to produce additional topic-specific guidelines, which are currently very limited in number, to support planners in making more sophisticated design judgements (Principle 6 and 9). These guidelines might ensure that the normative design principles found in planning policy in China are better understood and also facilitate a more transparent approach to design review (Principle 10).

Third, the research identified numerous challenges associated with coordinating the interests of local governing authority actors, as well as the dominant role played by political leaders (Principle 7). In March 2018, the national State Council initiated a reorganisation of its administrative departments. As part of this exercise, a new ministry named the Ministry of Natural Resources has been established to consolidate the functions of the MOHURD with the relevant duties of the Ministry of Water Resource, Forestry and Grassland Administration, Ministry of Agriculture and the National Development & Reform Commission. This reorganisation will be mirrored at the local level. The effect of this reform is yet to be seen, but hints at a more coordinated response.

Finally, the research suggests that wider public participation in the design governance process is necessary, not only to raise awareness of urban design and its benefits to sustainable city building, but also to engage local people in making decisions about where they live in the context of rapid urban change (Principle 8). How this is achieved in a country where the means of democratic involvement are very limited remains an open question. In the short term, the involvement of increasingly sophisticated national professional bodies in the design



decision making process, such as the Urban Design Society and the growing number of local grassroots design organisations in Chinese cities, is a welcome first step.

Urban design governance is still in its infancy in China. This can be seen in the ubiquitous urban problems of Chinese cities: the monotonous urban form, vehicle-dominated and out of scale streets, inactive building frontages and ill-functioning public spaces (Wu et al., 2007). The new political emphasis on design governance clearly reflects the transition of urbanisation in Chinese cities from rapid outward expansion to the regeneration of existing urban areas in order to improve their spatial qualities, but the experience of the three pioneer cities suggest considerable work still needs to be done to create a more design-sensitive planning system. The new *UD Regulation 2017* is perhaps the clearest signal of a potential change of direction and suggests that design governance is an issue of national importance particularly in the face of climate change, even if the evidence from this research suggests ecological concerns are not yet a core concern of the planning system. The praxis of design governance is constantly evolving in China and the limitation of the research presented in this paper is its focus on only three cities and its generalisation thereof. Chinese urban design and its policy and practice at the local, regional and national level are therefore ripe for further research.

### Acknowledgement

The authors would like to thank the twenty interviewees in China who have participated in the research, and the two anonymous reviewers for their insightful comments on the revision of the paper. The authors would also like to express gratitude to Prof Simon Joss at the University of Glasgow for reviewing and offering suggestions for the improvement of the paper.

### References

- Barnett, Jonathan. (1974). *Urban Design as Public Policy: Practical Methods for Improving Cities*. New York: McGraw-Hill.
- Beijing Daily. (2018). Why is it difficult to open up the community? Accessed via [http://www.xinhuanet.com/house/2018-08-30/c\\_1123350555.htm](http://www.xinhuanet.com/house/2018-08-30/c_1123350555.htm). At Apr 2019.
- Bentley, Ian. (1999). *Urban Transformations – Power, People and Urban Design*. London: Routledge.

- Bentley, I., Alcock, A., McGlynn, S., Murrain, P. & Smith, G. (1985) *Responsive Environments: A Manual for Designers* (London: Architectural Press).
- Carmona, Matthew. (2016). Design governance: theorising an urban design sub-field. *Journal of Urban Design* 21 (6):705-730.
- Carmona, Matthew. (2017) The formal and informal tools of design governance, *Journal of Urban Design*, 22:1, 1-36, DOI: 10.1080/13574809.2016.1234338
- Carmona, M., C. de Magalhaes, and M. Edwards. (2001). *The Value of Urban Design*. London: Thomas Telford.
- Chapman, D. (2011). Engaging Places: Localizing Urban Design and Development Planning. *Journal of Urban Design* 16(4): 511-530.
- Chen, Fei. (2016). The design dimension of China's planning system: urban design for development control. *International Planning Studies* 21 (1):81-100.
- Chen, Fei, and Kevin Thwaites. (2013). *Chinese Urban Design: the Typomorphological Approach*. Surrey: Ashgate.
- China Development Bank Capital. (2015). *12 Green Guidelines: CDBC's Green and Smart Urban Development Guidelines*. Beijing: China Development Bank Capital.
- China State Council. (2016). *Notice for Strengthening the Management of Urban Planning and Construction*. Beijing, Feb 2016
- Cowan, Robert. (2002). *Urban design guidance: urban design frameworks, development briefs and master plans*. London: Thomas Telford Publishing.
- Creswell, J.W. (1998). *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. Sage, Thousand Oaks, CA.
- Deng, Zhaohua (2009) Design control in post-reform China: A case study of Shenzhen's commercial office development. *Urban Design International* 14 (2) 118-136
- Deng, Zhaohua, Yao Liu, and Jianqiang Wang. (2013). Discussion on urban design guidelines as public policy. *Guihua Shi (Planners)* 29 (12):110-5.
- Dovey, Kim. 2005. *Fluid Cities: Transforming Melbourne's Urban Waterfront*. New York: North Point Press.
- Du, Lizhu. (2015). Improvement strategy of urban design as a public policy. *Guihua Shi (Planners)* 31 (11):48-51.

- Farhat, R. (2019). Is Semi-Discretionary Design Review Wieldy? Evidence from Seattle's Program. *Planning Practice and Research* 34(1): 103-19.
- Flyvbjerg, B. (2001). *Making Social Science Matter: Why Social Enquiry Fails and How It can Succeed Again*. University of Cambridge Press, Cambridge.
- Freestone, R., Davison, G. and Hu, R. (2019). *Desinging the Global City: Design Excellence, Competitions and the Remaking of Central Sydney*. Singapore: Palgrave MacMillan.
- Godpodini, A. (2002). European cities in competition and the new 'uses' of urban design. *Journal of Urban Design* 7(1): 59-73.
- Jin, Guangjun. (2016). How to build the 'urban design bridge' in China? An illustrative approach. *Chengshi Sheji (Urban Design)* 2 (4):14-29.
- Kempenaar, A., J. Westerink, M. van Lierop, M. Brinkhuijsen and A. van den Brink (2016). "Design makes you understand"—Mapping the contributions of designing to regional planning and development. *Landscape and Urban Planning* 149: 20-30.
- Lai, R. T. (1988) *Law in Urban Design and Planning: The Invisible Web* (New York: Van Nostrand Reinhold).
- Lang, Jon. (2017). *Urban Design: A Typology of Procedures and Products*. 2nd ed. New York and London: Routledge.
- Larco, N. (2016). Sustainable urban design—a (draft) framework. *Journal of Urban Design*, 21(1), 1-29.
- Lees, L. (2003). Visions of 'urban renaissance': the Urban Task Force report and the Urban White Paper. In: R. Imrie and M. Raco, *Urban Renaissance? New Labour, community and urban policy*. Bristol: Policy Press.
- Li, Zhiguo (2018). *The new initiative of 'neighbourhood planner' in Yangpu District, Shanghai*. Accessed via [http://china.chinadaily.com.cn/2018-01/24/content\\_35572843.htm](http://china.chinadaily.com.cn/2018-01/24/content_35572843.htm) , on Apr 2019.
- Li, Yu. (2014). *Chinese City and Regional Planning systems*. Surrey: Ashgate.
- Liu, C. (2008). Adjustment of fiscal relations and changing functions of local government. *Journal of Finance and Economics* 134 (11):16-27.
- Madanipour A, (2006) Roles and challenges of urban design. *Journal of Urban Design* 11 (2) 173-193.
- Ministry of Housing and Urban-Rural Development. (1991). *Chengshi Guihua Bianzhi Banfa (Regulation on the Production of Urban Planning)*. Beijing.

- MOHURD. (2017). *Chengshi Sheji Guanli Banfa (Regulation of Urban Design Management)*. Beijing.
- MOHURD. (2018). *Technical code for multi-planning united cooperation platform* (version for public consultation), Beijing.
- Nelissen, N. & de Vocht, C. (1988) *Wel-staan over de greenzen heen*. Nijmegen: Zeist.
- Punter, John. (1999). *Design Guidelines in American Cities: A Review of Design Policies in Five West Coast Cities*. Liverpool: University of Liverpool Press.
- Punter, John. (2003). *The Vancouver Achievement: Urban Planning and Design*. Vancouver: UBC Press
- Punter, John. (2007). Developing urban design as public policy: best practice principles for design review and development management. *Journal of Urban Design* 12 (2):167-202.
- Punter, John and Carmona, Matthew (1997). *The Design Dimension of Planning: Theory, Content and Best Practice for Design Policies*. London: E. & F. N. Spon
- Scheer, B. (1994) Introduction: the debate on design review, in: B. C. Scheer & W. F. E. Preiser (Eds) *Design Review: Challenging Urban Aesthetic Control*, pp. 1–14 (New York: Chapman and Hall).
- Scheer, B. (2010). *The Evolution of Urban Form: Typology for Planners and Architects*. Chicago and Washington DC: American Planning Association.
- Schuster, J. M. D. (1990) *Design Review: The View of the Architecture Profession*. Design and Development Group Paper (Cambridge, MA: MIT).
- Sima, Xiao, Xiangwei Kong, and Yan Du. (2016). Review and thoughts about the urban design history of Shenzhen. *Chengshi Guihua Xuekan* 228 (2):96-103.
- The Municipal Government of Nanjing. (2013). *Urban Design Guidelines and Public Space Design Guidelines of Nanjing*. Nanjing.
- The Urban Planning Bureau of Nanjing. (2013). *Technical Standard for Plots-level Urban Design of Nanjing (Trail version)*. Nanjing.
- The UPB of Nanjing. (2013). *Planning Exhibition of Urban Design Projects Nanjing*. Nanjing: UPB of Nanjing.
- Tiesdell, Steve, and David Adams, (eds). (2011). *Urban Design in the Real Estate Development Process*. Chichester: Wiley-Blackwell.
- Trache, H. (2001) Promoting urban design in development plans: typo-morphological approaches in Montreuil, France, *Urban Design International*, 6(3/4), pp. 157–172.

- Urban Planning and Land Resource Management Committee of Shanghai (UPLRMC of Shanghai). (2016). *Urban Design Guidelines (Construction Management) of Shanghai*. Shanghai.
- UPLRMC of Shanghai, and The Transportation Committee of Shanghai. (2016). *Shanghai Street Design Guidelines*. Shanghai.
- UPLRMC of Shenzhen. (1998). *Shenzhen Urban Planning Regulation*. Shenzhen.
- UPLRMC of Shenzhen. (2002). *Urban and Architectural Design of the Block 22 and 23-1 in Central Shenzhen*. Beijing: China Architecture & building Press.
- UPLRMC of Shenzhen. (2009). *Shenzhen Urban Design Standards and Guidelines*. Shenzhen, 2<sup>nd</sup> edition in 2017.
- Wang, Jianguo, Cangjie Chen, Weijia Wu, Yin Wang, Jinghai Zhao, Hong Leng, Bin Lv, Zhiqing Zhao, and Shifu Wang. (2011). Urban design at the crossroad. *Chengshi Guihua (City Planning Review)* 35 (12):20-7.
- White, James T. (2015). Future directions in urban design as public policy: reassessing best practice principles for design review and development management. *Journal of Urban Design* 20 (3):325-348.
- White, James T. (2016). Pursuing design excellence: Urban design governance on Toronto's waterfront. *Progress in Planning* 110: 1-42.
- Wu, F. L., J. Xu and A. G.-o. Yeh (2007). *Urban Development in Post-Reform China: State, Market and Space*. London: Routledge.
- Xie, Y., and F. J. Costa. (1991). Urban Design Practice in Socialist China. *Town Planning Review* 13 (3): 277–296.
- Yang, Zhen. (2015). A critical review of master-urban-design research: 2004-2014. *Chengshi Fazhan Yanjiu (Urban Development Studies)* 22 (4):65-72.
- Ye, Weihua, and Yongwei Zhao. (2009). The integration of urban design with statutory plans in Shenzhen. *Chengshi Guihua (City Planning Review)* 33 (2):84-8.
- Ye, Min (2016) The coordination of vertical and horizontal relationships in local governance: the formal and informal measures, *Journal of Public Management (Gongong Guanli Xuebao)*, 8 (2): 128-140
- Yeh, Anthony Gar-on, and F. L. Wu. (1999). The transformation of the urban planning system in China from a centrally-planned to transitional economy. *Progress in Planning* 51 (3):167-252.

- Yin, J., J. Zhang, and X. Luo. (2006). Chinese city development and entrepreneurialism of local governments in transition. *Urban Problems* (4):36-41.
- Yin, R.K. (1989). *Case Study Research, revised edition*. Sage, London.
- Zhang, Jie, and Jie; Lü. (2003). From mega-urban project design towards daily living space design. *Chengshi Guihua (City Planning Review)* 27 (9):40-5.
- Zhao, Liang. (2011). From 'failure' to 'effect': urban design system research in China's rapid urbanisation. *Chengshi Guihua (City Planning Review)* 35 (12):91-6.
- Zhou, Ganshi. (1981). Fazhan zonghe xing de chengshi sheji gongzuo (Develop comprehensive urban design). The fifth conference of the Architectural Society of China, Beijing.