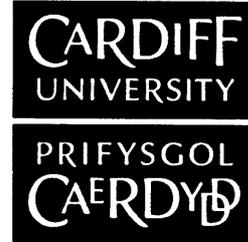


School of City and Regional Planning

Cardiff University



Developing Urban Design as Public Policy in China – A Case Study in Shenzhen

Thesis for the degree of Doctor of Philosophy

PhD Candidate: Zhaohua Deng

Supervisor: Professor John Punter

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ABSTRACT

This research explores how China has been developing urban design as public policy in the context of rapid urbanization and radical Socialist market reform. This is not a well developed area in urban research in China, however Western literature provides a good comparative basis through which to develop a more sophisticated system of design control.

In pursuing the research objective, a Chinese city – Shenzhen has been chosen as a case study. It is the national exemplar and represents the best Chinese practices. Inspired by international aspirations for good practice in design control, the Shenzhen case study allows exploration of the political and economic influences on design outcomes, reveals the instruments used by planners to promote good design, uncovers the shifting concept of urban design, and assesses the impacts of the permitting process on project design. Some 11 commercial office projects have been selected to provide empirical evidence. They range from masterplanned projects in central locations to individual developments in off-centre locations, from conventional developments to projects involving appeals and illegal constructions, from recently completed projects to the ones still in the planning process. The event-sequence and structure-agency models derived from real-estate research have been used to analyse design processes. To collect the data, a ‘snowball approach’ mixed with participant-observation, documentary review, interview and design evaluation are utilised.

This research reveals that Shenzhen has achieved progressive improvements in developing urban design as public policy. However urban design’s public values are only partially embedded in Shenzhen’s urban planning system, due to rapid urbanization processes, the significant change of development scale, top-down hierarchy of political control, lack of discrimination among tenants and the partial application of the generic urban design principles in the planning and design process. Shenzhen is facing many challenges when compared with the best international practice in design review. In detail, the city has a strong design vision for its future, but this is not developed with the local communities, and only reflects an elite vision that is both short-term and oriented towards business. The political support, the use of land powers, and discretionary zoning control have provided a solid basis for Shenzhen to pursue higher quality urban design, but a more regulated system is needed to limit political intervention and provide a better research base for planning decision making. Planners are slowly developing urban design principles to address the quality of the public realm, but they need a deeper understanding of the generic design principles and sustainable design. Shenzhen’s established planning permission process has been a successful mechanism for design intervention, but it needs to address weaknesses in public participation and in dealing with monitoring, enforcement and appeal. It is argued that Shenzhen is representative of most large Chinese cities, but small or medium size cities and the cities with conservation issues may have slightly different experiences. Future challenges are discussed and practical suggestions are made to better develop urban design as public policy in Shenzhen and more generally in China.

PUBLICATIONS

Journal publications in English:

Deng, Z. (2009) Design Control in Post-Reform China – A Case Study of Shenzhen's Commercial Office Development, *Urban Design International* 14(2): 118-136.

Deng, Z. (2008) Book Review of Urbanization in China: Critical Issues in an Era of Rapid Growth, *International Planning Research*, 13(2): 174-176.

Journal publications in Chinese:

Deng, Z. (2008) Urban Design Control in China: An International Perspective, *Urban Planning International*, 23(4): 29-34.

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Deng, Z. (2005) Developing Design Dimension of Planning, *Urban Planning International*, 20(5).

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CHAPTER 1. INTRODUCTION

1.1. Research background

Design control as a place-making activity is essential to promote the public value of urban design by providing democratic access to public space, diversifying activities within that space, and achieving a more sustainable built environment. In this sense, identifying good practice in design control in the Chinese context is necessary to secure the public interest in the built environment, particularly as China is experiencing rapid urban urbanization and radical change of urban form. So, what approach to design control should China adopt? This is the question that initiated this research.

This is a normative aspiration and it focuses on the role of the public sector. Shenzhen is an ideal case study through which to examine Chinese good practice, because the city exemplifies a real commitment to urban design and it is at the cutting edge in China's design control practice. Comparing its experience with international good practice, helps to reveal its strengths and weaknesses, and in turn, the recommendations made for Shenzhen can help to establish practical aspirations for other Chinese cities.

To understand urban design, one should consider its political and economic context (Cuthbert 2006), as urban design is the symbolic expression of urban meaning (Castells 1983). From this point of view, urban development in Shenzhen (or more generally, in Chinese cities) is market driven, growth oriented, and profit focused (especially in commercial development), and obsessed with the notion of 'iconicity' to strengthen competitiveness and place-marketing. But this place-marketing approach creates significant tension with the place-making focus of urban design. It results in a poor

pedestrian experience, poor quality of public realm, car dominance, heavy congestion and pollution, and high energy use buildings.

China is not alone in facing this dilemma and similar urban phenomena have been observed and discussed in Western cities. The tensions between urban design as a place-marketing tool for commercial return and as a place-making tool for the quality of life are operating simultaneously. On the one hand, urban design has been promoted by local governments to re-imagine themselves and to compete for investment, economic growth, local employment, and local tax income (Charney 2007; Gospodini 2002; McNeill 2002), under the conditions of capitalist globalization (Harvey 1989a), neo-liberal governance (Harvey 1989b) and local entrepreneurship (Logan and Molotch 1987). On the other hand, local regulations are relaxed to reduce investment barriers including those in planning and design, and this has diminished urban design's role in civilizing urban space, delivering people-focused development, developing environmental concerns, and promoting social inclusion (Kayden et al. 2000; Loukaitou-Sideris and Banerjee 1998; Turner 2002). These tensions are evident in major office development, because it is a large growth sector in the service economy, attracting significant investment and being a crucial economic driver.

To resolve the decline in the quality of public realm, Western academics and practitioners have been calling for the development of urban design as public policy, with stronger public intervention in private sector project design, in order to promote public values and the social and functional integration in public space (Cuthbert 2006; Madanipour 1999). Good practices have been promoted, studied and adapted, based on assumptions that better regulatory processes would result in better built environments (Barnett 1974; Lai 1988; Punter 1999b, 2007; Scheer and Preiser 1994). This Anglo-American literature demonstrates how urban design as public policy has evolved and been implemented through the relevant planning and regulatory systems.

These studies provide a framework for analysis in China, to discover how the design vision has been established, what instruments have been used to control design, what design principles have been adopted to underpin the decision making and what

process has been established to provide control (Punter 2007). But these have to be set within an understanding of the development process and the political economy of urban design, and how this shapes the review processes and of course, the design outcomes.

1.2. The research questions and the scope of the thesis

The purpose of this research is to provide empirical evidence to explain how Chinese cities have been developing urban design as public policy under current political and economic conditions, to identify the strengths and weaknesses of the evolving system, and to provide recommendations for practical improvement. To achieve these objectives, there are several issues to be addressed, which directly link to the development of the research questions.

Firstly, the way in which urban design is embedded in the Chinese urban planning system needs to be explained, as this system provides a regulatory framework for design and development practice in general. It includes the relevant planning legislation, the approach to development control (land use based discretionary control or zoning based regulatory control), and the planning monitoring and appeal mechanisms, which affect the design control approach and determine the means by which to inject urban design into the urban development process.

Secondly, inspired by the international aspirations of good practice in design control (Punter 2007), four issues that are useful in analyzing design control activities are explored. They provide a useful analytical framework from the perspectives of vision setting, control instruments, design principles and the permitting process:

- ◆ In terms of vision setting, there is a need to look at whose design vision has been implemented and by what means. The purpose is to evaluate whether the design vision is developed with the local community (or the general public) and the development industry, and to see how this vision is realized in the planning process and in individual development proposals.
- ◆ Control instruments include the tools available for the planners to promote good design. The availability and the effectiveness of these tools partly determine the

outcomes of design control. These tools vary from one country to another, and they can stretch beyond the traditional boundaries of zoning and planning. Identifying these tools and how they work together can provide a more in-depth understanding of the Chinese practice.

- ◆ Design principles include the concept of urban design, as well as its constituent design principles/objectives, which guides the making of the urban design plan/policy, and underpins the design decision making. The mainstream urban design ideology in the Western world has moved from the 'modernist' approach of simplicity, functionality and supporting fast vehicle transport to the 'post-modern' approach of place-making and developing a sustainable built environment. Anglo-American literature shows that the change over time in the concept of urban design has affected design practices, the sophistication of the relevant systems, and thereby design outcomes. In this research, it is important to understand whether China is keeping up with this trend, or if a different concept of urban design exists in China, which in turn impacts on the regulatory approach and the design outcomes.
- ◆ The permitting process refers to the public regulatory processes used to control the design outcomes of development, in which different actors utilise their powers and resources to achieve their own objectives. In China's situation, the urban planning permitting process includes the design control process, and the way it shapes the design of development needs to be researched. The fairness, transparency, efficiency and effectiveness of the system will determine the level of success in terms of better design.

Thirdly, the political and economic conditions for urban design practice need to be clarified, as urban design is the spatial expression of the political economy of a society (Cuthbert 2007). Chinese urban development is conditioned by particular political and economic pressures for profit maximization and rapid growth, and these conditions have fundamental impacts on developers' approaches to urban design. In detail, different actors in the land development process have different interests and different

powers to shape design. Revealing these actors' interests, interactions in and influences on, the design development process, can help provide an in-depth understanding of how urban design's commercial and public value is released in this 'power-play' process.

Fourthly, the design outcomes of development need to be evaluated, in order to assess the effectiveness of the Chinese system of design control. In researching design control, the criteria for evaluation should be based on urban design's place-making effects, and an evaluation of the extent to which the design has enhanced the public interest by increasing democratic access to public space, diversifying the activities within that space, increasing the quality of the urban experience, and achieving a more sustainable built environment. The established generic urban design principles and sustainable development principles developed from the Western experience are arguably universally applicable, and can be adapted to provide a useful framework for this kind of evaluation in the Chinese context.

Lastly, based on the research findings, possible reforms to the system can be recommended and practical measures can be suggested to improve the practice of design control.

The research questions for this thesis are therefore as below:

1. How is urban design as public policy integrated into the Chinese planning system?
2. Whose vision underpins urban design practice? And by what means?
3. What instruments have been used by planners to promote good design?
4. What design principles have been used to underpin design decision making?
5. How effective is the regulatory process in promoting good design?
6. How do the political and economic conditions influence urban design practice, and whose design interests have been served in the development process?
7. What is the quality of design outcome of Chinese urban developments?
8. What measures are possible to help achieve better practice and design outcomes?

The scope of this research extends to design control in China. It includes a general review of Chinese urban design control practice and a 'single-embedded' case study of a city which is considered an 'exemplar' in urban design – Shenzhen – in order to provide a focus for in-depth analysis, and a basis for more general reflection. Within this single city case study, 11 commercial office developments are selected to provide empirical evidence of control practices in order to understand Shenzhen's/China's current development of urban design as public policy, and to reveal the political and economic impacts on urban design. Practical suggestions are made at the end of the research to improve Shenzhen's and Chinese practices.

1.3. The structure and organization of the thesis

This thesis is broadly divided into three parts with eight chapters. The first part is the theoretical foundation for the research (Chapters 1 to 4). It examines the nature of urban design as public policy, its historical evolution in the UK and the USA and international good practice (Chapter 2). It discusses some possible approaches to design control research (Chapter 3) and develops an appropriate research framework (Chapter 4). The second part is the core of the thesis (Chapters 5 to 7), and assesses the Chinese version of design control. It describes the general Chinese system of design control and sets the context for the single-case study of Shenzhen – the design ‘exemplar’ city in China (Chapter 5). It reviews Shenzhen’s economic, political and planning profile, explains the development of its planning system (Chapter 6) and analyses 11 case studies of commercial development (Chapter 7). The third part concludes the research findings and answers the research questions (Chapter 8).

Following this introduction, Chapter 2 reviews the literature on urban design as public policy, acting as the conceptual base for the research and providing some critical comparisons to assist the research in China. It first discusses the political economy of urban design, and stresses the importance of securing urban design’s public value. The review then looks at the evolution of urban design as public policy. It identifies the trend in Anglo-American experiences, explains how the normative design criteria have changed in different timescales and in different cultural contexts, and discusses how the relevant planning/zoning systems have been adapted to achieve the design objectives. The possible means to better develop urban design as public policy are discussed subsequently, by reviewing the international aspirations for design control. These aspirations provide a useful template to assess the Chinese practice in this research.

Chapter 3 develops some conceptual frameworks for research on urban design control. It argues that the event-sequence models and the structure-agency models used in

property development research are particularly helpful. It explains that for this research, an event-sequence model is useful to explore how the design of a development goes through different stages of private and public control, such as land acquisition, design parameter preparation, planning negotiation through the design review process and on to final construction. It also explains that a structure-agency model is helpful to understand who has how much control over what design dimension. From this model, the political economic influences on design decision making can be understood, i.e. the roles of politicians, interest groups, developers, architects, planners and other agencies.

The research framework and methodology is presented in Chapter 4. It justifies the choice of a single-embedded case study as the research strategy, in which the city of Shenzhen is chosen because it is considered an 'exemplar' city with a well-developed system of urban design regulation. It also discusses how Shenzhen's experience reflects the general progression of Chinese urban design practice. The reasons for choosing commercial office developments as the focus of study are given, along with the criteria for project selection. Finally, it describes the particular research methods utilised – participant-observation, documentary review, actor interview, and design evaluation – and how they were applied in data collection.

Chapter 5 provides a review of the Chinese planning system and the scope for design, acting as a background for Shenzhen's case study and to facilitate the generalization of Shenzhen's experience to other Chinese cities. It traces Chinese planning and design to its Confucian and *Fengshui* traditions, then reviews how the 'modernist' design ideology was adapted in the Republican era and Socialist era, and argues that all these ideologies still have a certain degree of influence on current practice. The chapter then looks at urban development in the post-reform era in its particular political economic conditions, and discusses the role of urban planning in the rapid urbanization process. Given these conditions, the ways in which urban design has been practiced in China generally, and the role of urban design in the newly established planning system, are examined.

Chapter 6 discusses the unprecedented pace of urban development in Shenzhen and its reformed urban planning system, with special reference to urban design. It first argues that Shenzhen as the 'test bed' for China's economic reform, and its particular promotion of urban design, make it an 'exemplar' city through which to explore the design dimension of Chinese urban planning. It then describes in three stages, how this young city has evolved in economic and physical terms, and how it has developed higher environmental standards for its built environment at each turn. The chapter goes on to explore Shenzhen's current planning innovations and their relationship with urban design. Finally, the trend of Shenzhen's design approach to commercial office development is briefly discussed, acting as the background for the case studies.

Chapter 7 summarises the results of the fieldwork research of some 11 cases, in order to reveal Shenzhen's evolving approach to the delivery of urban design quality. This chapter starts with an event-sequence model to assess the impacts of the planning process on urban design, by following the key stages of planning/design development. These stages include pre-planning negotiation, formal permitting process, and post-planning monitoring. A structure-agency model is then used to reveal the power-play between the key actors (developers, politicians, designers, planners, and general public/users) in the design process. It explores their interests in design, their ability to influence design outcomes and their negotiation tactics. Finally, it uses the generic urban design principles to assess the design outcomes of these office developments, to facilitate the evaluation of the effectiveness of the system.

Chapter 8 concludes the research findings and discusses to what degree urban design has been developed as public policy in Shenzhen. It uses comparators in international good practice to evaluate Shenzhen's practice and discusses how Shenzhen's experiences represent more general Chinese practice. The future challenges to Shenzhen and to China generally are discussed, and practical suggestions are made for improvements in design review. The limitations of this research and suggestions for further research are also identified.

The interview questions and the database for the case studies are included in the appendices. Each case study includes a brief introduction, a description of the land acquisition and development condition making process, a presentation of the evolution of the design development in the planning process, an assessment of the design outcomes and lastly an evaluation of the whole control process.

CHAPTER 2. URBAN DESIGN AS PUBLIC POLICY

This chapter is the theoretical base for the research. It tries to comprehend the notion of 'urban design as public policy' from three approaches. It first considers urban design from the political economic point of view, reviews the impacts of globalization and neo-liberal thinking on urban design, and identifies the challenges urban design is facing. It then looks at urban design's historical evolution to better understand how the objectives of urban design and the mechanisms of its delivery have been changing according to different development climates, political systems and cultural contexts. It focuses on the UK and the USA in order to provide comparisons for the Chinese experience. The third part of this chapter discusses some possible ways to develop urban design towards better public policy that might help the reformulation of Chinese practices.

2.1. Urban design under current political economic conditions

Setting urban design within its political economic context is essential in order to understand the production process of urban form, and to understand the challenges they pose to the development of urban design as public policy. Urban design is both the result and the process of urban physical change, which in Castells' term is 'the symbolic attempt to express an accepted urban meaning in certain urban forms' (Castells 1983 pp.303-4). Cuthbert (2007 p.219) echoes Castells' thesis and promotes a spatial political economic understanding of urban design, where he considers urban design should be conceived as 'the outcome of the social production of urban form, which in turn is the outcome of the social production of space in its material and symbolic dimensions'. In this regard, the current globalized flexible capital accumulation (as the capitalist's role) (Harvey 1989a) and the widespread neo-liberal

ideology of urban entrepreneurialism (as the public authority's role) (Harvey 1989b) need to be explored in order to understand their impacts on urban design.

2.1.1. Urban design in capitalist flexible accumulation

Capital globalization has dominated the world economy since the second half of the 20th century, changing from Fordist production to flexible accumulation (Harvey 1989a). This is a structural transformation of the economic base of cities. Production moves out from city centres and is replaced by the service sector carrying the control and command functions of business and high finance. This demand-side urbanization is also reflected in the city's social and spatial organizations. The private sector (more specifically, speculative commercial developers) has a crucial role to play in this urban transformation, and their interests and approaches to land development determine the projects' design outcomes and, collectively, the quality of the urban environment.

Speculative commercial developers tend to focus on short-term profit making. They are concerned with the project's selling price, production costs and land acquisition cost, which all directly relate to their profit (Tiesdell and Adams 2004). From the public policy point of view, the first two issues are of particular interest. Firstly, the selling price for a development is partly determined by the quantity of floor space (or saleable units) built. Therefore, most developers want to negotiate with the local authority to increase the floor space allowance and are often willing to make some form of amenity or monetary contribution to achieve this. Unit price is another factor to decide the selling price of a project. It is determined by the quality of the development, usually measured by project location, internal layout and services, views to and from the development, the quality of the construction finishing and the relevant public services (such as transportation link). These are the conventional functional concerns of developments and developers who are keen to provide the right quality to match the market demand. But normally the institutional investors who will purchase the final product, if it is commercial floor space, are notoriously conservative, and often design

neutral. Therefore, the quality of urban design and the long-term running costs are normally of little concern in this case.

Secondly, production costs include the costs for site assembly, getting planning permission, infrastructure construction, professional fees, marketing, loan interest and others. The most significant cost here is the high interest the developers pay for bank loans, which requires a rapid permitting, construction and letting process in order to minimise risks and ensure cost-efficiency in the development process. Although developers are willing to increase the project's marketability and lettability by constructing higher quality development, they are very cautious about the cost implications. In the worst case, the short-term financial vision of speculative property development discourages developers to have long-term interest in the quality of the built environment (Madanipour 2006), and causes them fail to recognize the value of quality urban design (Rowley 1998).

Private developers are interested in design, but mainly to the extent that it will enhance their financial return. On the one hand, visual impact is a significant design element developers are concerned about. Zukin (1991) explains that imagery is becoming increasingly important, and companies want to move to the areas having suitable image for their market segment, while private developers try to construct buildings with an external appearance desirable to their targeted customers. Therefore, in city centres, private projects like office developments are normally designed and marketed as 'global spaces' with high-rise forms de-contextualized from their surroundings (Grubbauer 2008), to attract the high value-added service companies. These buildings tend to make themselves 'different and unique' icons that have special symbolic and aesthetic qualities to signify their importance (Jencks 2005; Sklair 2006; Zukin 1991).

On the other hand, developers are willing to provide some public amenities in exchange for extra floor space allowance or to attract the targeted tenants. Some speculative developers, who are aiming at the high market segments, are in the forefront of driving the design agenda. They are willing to invest in high quality of

public realm to provide the tenants and even the general public with a sense of quality, comfort, security and convenience, such as the Argent Group for the redevelopment of Brindleyplace in Birmingham (Latham and Swenarton 1999), Stuart Lipton for Broadgate in London (Punter 1992) and Reichman Brothers for Canary Wharf in London (Carmona 2010). These developers are all innovative developers who lead the market and also are ahead of public policy as regards urban design.

But normally, when there is a lack of sufficient guidance or regulation, public spaces created are inward-looking and tend to block access to the public who have lesser disposable incomes than the middle-class (such as office workers) (Kaika and Theielen 2006; Turner 2002). This design approach helps to create a polarized society where the corporate and commercial spaces are designed only for a certain group of white-collar users/tenants and deliberately exclude wider public and especially those on lower incomes (Loukaitou-Sideris and Banerjee 1998).

Although these factors do not encourage a high quality of urban design, exceptions are observed recently in that some commercial developers are recognising the value of public space, and showing more concern about creating spaces with vitality through introducing street level retail and catering, and quality public squares for their tenants to enjoy (CABE and DETR 2001). Some of these developers who are taking a longer-term interest in their developments, or who are driven to address these requirements by their clients or investors, are concerned about the long-term running cost of their project and try to develop more energy-efficient buildings. These investments in a higher quality of urban design are proving to assist to the letting of buildings, and can enhance financial returns to the developers.

Therefore, if suitable public regulation is not in place, and the recognition of the value of urban design is lacking, the short-term profit-driven design concerns do little help to develop an attractive urban environment or a more inclusive society. Although developers are willing to engage with the local authorities and negotiate design improvements and public amenity provisions, their objectives largely remain profit-oriented, cost-cutting, favours exclusive for certain income groups and

users/tenants, and normally aim for a distinctive 'modern' image and often 'iconic' design. Therefore, although it can be proved that good urban design adds value commercially and some developers are actually the drivers of the place-making of urban design, appropriate public regulation is needed to drive/enable the normal developers to improve public amenities and environmental quality, to accommodate diverse users and activities in the public space, and to promote social inclusion in the built environment.

2.1.2. Urban design in neo-liberal climate

In the past 30 years, two external forces have driven cities' development strategies. One is capitalist globalization, taking the approach of flexible capital accumulation. Investments are no longer bounded by the national boundaries and can be transferred to wherever the market and the regulatory climate are deemed suitable. It implies that cities need to prepare for this new investment trend, normally by the means of inter-city competition, but this will likely reduce their bargaining power. The other external force is the lack of direct funding from the central governments to initiate, subsidise or ameliorate development. These two factors lead to a change in the role of the local government from producer of space to coordinator of space investments to attract the globalized investment and to regulate the private building activities (Harvey 1989b). Local governments now rely on private developments to fund public goods such as infrastructure, transport improvement, affordable housing, public space and others (Kaika and Theielen 2006). In other words, cities' new tasks are defined as promoting local economic development in order to facilitate local employment and capture consumption, and to facilitate social cohesion, all of which affect the practice of urban design.

In most cases, economic development priorities take control of the city's development strategy. Savitch and Kantor (2002) theorise that the city's internal political structure (national policies, governing arrangements, local popular control and political cultures) and its economic factors (resources) contribute to the city's bargaining power, which in

turn determine the city's development strategy. Differences in their bargaining position with investors might make the city to adopt a social-centred strategy (a social strategy to disperse the benefits of development across the city) or a market-centred strategy (a competitive strategy to promote growth), or a combination of both. Generally, cities with strong economies are in a strong bargaining position and have the 'luxury' of choosing between projects when considering their social agendas, while others have to remove certain barriers to attract investments at the cost of their social ambitions. But in practice, most cities are facing tremendous economic challenges and therefore are adopting pro-market strategies, working like business corporations to maximize productivity, and taking aggressive approaches to promote local growth. They compete with each other¹ by intensifying land use, selecting and promoting their preferred projects, making deals with developers, establishing public-private partnerships, and marketing the city for consumption, investment and tourism (Turner 2002). As the result, the tax-base and consumption-base of urban competition prioritizes particular business sectors and social groups at the expense of others.

Urban design now fits into this promotional role. It acts as a facilitator to help local economic development with different urban design promotional strategies in different ways in different hierarchies of cities (Gospodini 2002). In particular, image building through spectacular architecture is considered to have positive effect to produce an instant recognizable locality or city (Charney 2007; McNeill 2002). Therefore, local authorities are keen to construct a sort of 'postcard' image of the city that can easily promote tourism and other kinds of capital investments, using star architects to produce architectural icons (Jencks 2005; Kaika and Theielen 2006; Sklair 2005, 2006). This potentially supports developers' appeal for even taller buildings and more iconic architectures. But in practice this competition-driven urban design concern does little to promote urban design's public value, which in Madanipour's opinion (1999) is the promotion of social and functional integration in public space.

¹ According to Harvey (1989a), cities compete for the spatial division of labour, for the spatial division of consumption, to become financial, governmental or informational centres, and for governmental distribution.

Looking at the role of the local authority, opportunities are often missed to regulate developers and to contribute to good design in a climate of neo-liberal governance². Cities are having an obvious struggle to balance financially successful land and property development (private economic returns) and the making of high quality urban space. The latter is always compromised by allowing private control of the public space (Turner 2002), or is sacrificed in order to remove the investment barriers (Madanipour 2006). Developers control private investment funds, and this prevents the cities from imposing high design standards which in turn excludes the wider public to benefit from the public space supplied by them (Kayden et al. 2000; Loukaitou-Sideris and Banerjee 1998). If the public authorities act purely as private companies to chase profit, their ability to promote social values is reduced. Cuthbert's research on Hong Kong demonstrates how the *laissez-faire* profit-driven urban development can limit citizen freedom by squeezing the public space nearly to 'zero' (Cuthbert 1995). Consequently, diminishing or restricting public spaces results in the loss of the fundamental right of speech and assembly (Harvey 1992). The question now is how to resolve this dilemma.

2.1.3. Developing urban design as public policy

Facing the challenges from capitalist globalization and neo-liberal governance discussed above, urban design should be strengthened to assert its public value. Although some developers are actually the drivers of good design in some particular locations and markets, more regulatory emphasis needs to be paid to urban design's social construction and environmental enhancement potential, by enhancing accessibility to public space and activities within it (see Madanipour 1999). By doing so,

² According to Harvey (2005 p.2), 'Neoliberalism is in the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices.' Neo-liberal politicians consider that removing the regulatory barriers (including planning regulations) is crucial to develop a thriving economy. But ironically, the lack of regulation leads to a 'market failure', which is best seen in today's global economic recession. This signifies that neo-liberalism cannot help to develop a sustainable economy, and worse still, it worsens many problems such as poverty, social inequity and environmental degradation.

the design and management of public space can enhance 'the right to the city' (Cuthbert 2006), helping to develop democracy, justice and equality. But promoting urban design's public values does not mean that the development industry or the local government needs to compromise their economic objectives. A win-win situation can be created. The Commission for Architecture and the Built Environment (CABE, the British Government's design advisor) has proved that 'good' urban design not only benefits the community socially (CABE 2007a; CABE and DETR 2001) but also benefits the developers financially (CABE and DETR 2001) including their business performance (CABE and BCO 2007). Meanwhile bad design will damage the city socially and economically, and reduce returns for investors in the medium and long term (CABE 2006).

Under the current political economic climate, opportunities exist to promote urban design's public value while accommodating economic development. The public sector can retain its position as a regulator to ensure the delivery of public goods. Local politicians as the key decision makers can retain a long-term interest in the public value of urban design, and therefore can provide full support to regulatory activities. The development industry can be persuaded to understand that good urban design adds commercial value to the project while improving the quality of life for users and the general public. Better regulatory and incentive frameworks can help achieve this win-win situation, though the development industry's active participation is also needed.

2.2. A historical review of urban design as public policy

A historical review of the evolution of urban design as public policy that other countries have been through can provide a useful comparison with which to explore Chinese practice. The following review focuses on the experiences in the UK and the USA, with the emphasis on the evolution of urban design objectives, their development through time, and the way that urban design is developed alongside the relevant planning system. It concentrates on the city centres, with some comments on the trends in the inner city areas and the suburbs. The reasons for choosing the UK and the USA experiences are because there is a large amount of literature concerning the Anglo-American practice, and because these two countries represent the two distinct planning systems – the one based on discretion and a land use oriented planning control, and the other based on clear administrative rules and employing zoning to provide both use and volumetric control. Both have similarities to the current Chinese planning system which combines a strong discretionary land use control with the zoning mechanism.

2.2.1. The British Experience

2.2.1.1. The start of design intervention with 'modernist' standards

The *1947 Town and Country Planning Act* marked the maturity of the British planning system with the introduction of comprehensive development control, which is still shaping the town planning practice today. Design intervention into private development was legitimated based on the local 'discretionary power' on all kinds of 'material considerations' (Cullingworth and Nadin 2006 pp.129-134), and includes all matters relevant to land use and amenity. Since then, the British central government has been using planning statements (previously circulars and guidance notes) to guide the local design decision making.

In the postwar era, design control had a minor role to play in planning, and it focused on elevational treatments. In the government's agenda, postwar reconstruction and regional economic development with development plans to facilitate land acquisition were the priority. Public funding drove land development, though local authorities were often in partnership with developers. Design control was facilitated by the central government's design advisory handbook based on the principles of land-use segregation, open planning and traffic efficiency (Punter 1999a p.139). This had a profound impact on the redevelopment of city centres in the postwar era.

The 1950s saw campaigns for a stronger aesthetic control, but 'modernist' rationality dominated the practice and the government discouraged design intervention. Two articles in *Architectural Review* – *Outrage* and *Counter Attack* attacked the planning standards, by-law regulation and fragmentation of planning control, and criticized the standards of density, daylighting and highway as wasting space and as barriers to attractive design, particularly in the suburbs (Punter 1999a p.141). These two articles heralded the British townscape movement which focused on more 'contextual' urban design. In practice, 'modernist' design was still dominant. Subsidised high-rise council housing schemes displayed the 'modernist' ethos of mass production, 'scientific' rationality and 'efficiency' from the middle of 1950s until the early 1970s. Although the government published its first design manual *Design in Town and Village* in 1953, this manual concentrated mainly on issues such as village design, housing density and layout as well as 'civic design', without much substantive design advice. Design control was also discouraged through successive circulars, regarding design as 'matters of taste and ... individual opinion', and it had little positive impact on the quality of development (Punter 1987 p.30).

2.2.1.2. Conservation movement in the 'modernist' design climate

In the 1960s, the conservation movement opened a new chapter for British design control, in which the architectural groups and civic-minded bodies criticized the postwar 'scientific' and 'modernist' approach to design, its large scale clearances, poor

enclosure and quality of space, and promoted humane and contextual vernacular urban forms. Cullen's 'Townscape' with its picturesque approach to urban design (1961) was applied by many local authorities to develop their design guidance in 1970s. But the *Buchanan Report* in 1963 on *Traffic in Towns* helped the radical 'modernist' design, particularly as regards the redevelopment of city centres and the new segregated traffic systems, despite suggesting such schemes were too radical. The latter half of the 1960s saw some important developments in design control. These included the shift from preserving individual historic buildings to the conservation of the character of historic districts enacted by the *1967 Civic Amenities Act*. It consolidated townscape principles and developed the key idea that new development should respond to its context where this was of quality and historic value. A growing number of skilled conservation officers were employed by councils some of whom contributed to new residential design guidance (Punter 1999a pp.142-143). Public participation on design control was also slowly developed, taking the form of conservation advisory committees, and encouraging the public (e.g., local residents, traders, amenity and historical society, and designers) to comment on planning applications. This participative planning eventually spread across most towns and cities (Punter 1987 pp.43-44).

In the 1970s, the conservation movement led to a landmark change of British urban design practice. Essex County Council's *1973 Design Guide for Residential Areas* signalled the arrival of 'post-modern' contextual/local distinctiveness thinking in the public bodies and the development of urban design guidance in Britain. This design guide was derived from Cullen's townscape approach (1961) to correct the poor quality of standard suburban housing, and aimed to reinforce the character of residential development, with an emphasis on proportion, balance, unity, material and contextual treatments on elevations but also appropriate responses to town, suburb and countryside (Fig. 2.2.1). It acted as one of the material considerations to guide local development control. It was accepted by the development industry because it saved land, provided more amenities, reduced service costs, and proved to be popular with house buyers. Essex's approach on design guidance was soon copied around the

country, especially in the South East and localities undergoing large scale residential development (Carmona 2001 pp.25-26).

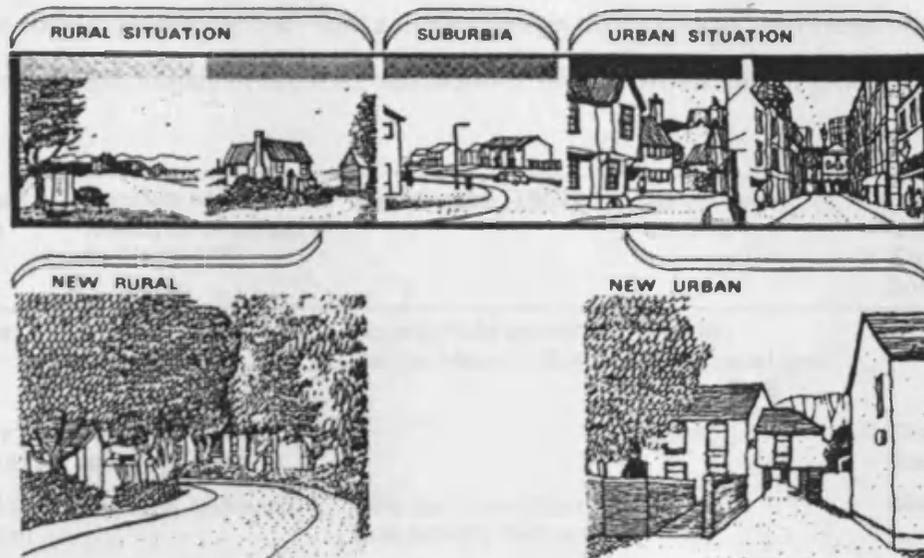


Fig. 2.2.1 The *Essex Design Guide*, visual spectrum of settlement patterns (Source: Essex County Council 1973 p.62).

2.2.1.3. Neo-liberalism and the development of urban design principles

The 1980s saw an anti-design control and a *laissez-faire* development climate created by the conservative government. The introduction of a stronger free-market rationale reasserted a general presumption in favour of development. Design guidance was treated as a useful tool, but was not to be used as detailed rules (Punter 1999a p.145), except in conservation areas and national parks. The centrally controlled appeal system enforced these views.

In the meantime, British academics and design protagonists were actively developing a more positive approach to urban design. Bentley and his colleagues' *Responsive Environments* (1985) was the first publication to draw together the many strands of Anglo-American urban design thinking into a coherently structured 'post-modern' handbook of urban design. It synthesised the design principles developed in the works of Lynch (1981), Jacobs (1961), Cullen (1961), Rowe (1978) and others (Fig. 2.2.2). Tibbalds as the President of the Royal Town Planning Institute also stressed that design

should focus on the quality of public space, such as comfort, safety and vitality (Punter 1999a). The Prince of Wales developed '10 Commandments' to ensure more harmony in the built environment. Despite the negative attitude of the Conservative government on design control, these urban design protagonists' synthesis of the urban design principles heavily influenced subsequent British urban design practice.

| The Prince of Wales (1998) | Bentley Alcock McGlynn Murrain Smith (1985) | Jane Jacobs (1961) | Kevin Lynch (1981) | By Design (2000) (English Government) |
|----------------------------|---|--|--------------------------------------|---------------------------------------|
| The place | 'Responsive' environment | Appropriate activity before visual order | Vitality (biological and ecological) | |
| Harmony and context | Visual appropriateness | | Sense | Character (identity) |
| Material and decoration | Variety, Richness | Mix, concentration, and activity richness | Fit | Diversity |
| Scale with context | Human scale | The street | Vitality | Quality of the public realm |
| | Permeability | Short blocks | Access | Ease of movement |
| Community | Personalization | Social mix and consultation | Control | Continuity & enclosure |
| Hierarchy | Legibility | | Clear sense | Legibility |
| | Robustness and adaptability | Robust spaces | Fit (adaptability) | Adaptability |
| | | Gradual not cataclysmic money | Efficiency | |
| Signs and lights | | Automobile attrition surveillance (safety) | Efficiency justice | |

Fig. 2.2.2 Pioneer urban design thinking, in the UK and the USA in the 1980s and the latest British governmental design guidance (Extracted from DETR and CABE 2000; Punter and Carmona 1997 p.77), showing that the British urban design thinking in the 1980s draws heavily on the American academics.

2.2.1.4. Plan-led, design-led and urban renaissance

The 1990s marked a shift from a *laissez-faire* development climate towards an environmentally responsive planning system in the UK, as it became clear that regulation was needed to get more development accepted at the local level (Punter 1999a). In terms of urban design, the 'neo-traditionalist' approach embedded in *Responsive Environments* (Bentley et al. 1985) was gradually adopted in the

government's policy, and urban design was given a stronger role to reshape the post-industrial cities and to create a quality public realm. A plan-led system was introduced by the *1991 Planning and Compensation Act*, giving priority to Unitary Development Plans (UDPs) which would contain stronger design policies and guidance. Elements of sustainability were actively promoted in *PPG13 Transport*³ (DoE and DoT 1994). Urban design was put back on the political agenda through the 'Quality in Town and Country' initiative which identified the key issues in urban design such as mixed use, density, transportation, design guidelines, and design training. An official definition of urban design was first provided in the new PPGI⁴ (DoE 1997), to strengthen its role in urban development, and this stressed the importance of the public realm and sustainable development principles. At the local level, urban design studies were carried out to regenerate and to re-image the post-industrial cities. Cities like Birmingham who were at the forefront of deindustrialisation, the promotion of service growth, re-branding city centre, integrated its City Centre Design Strategy and subsequent Quarter Studies into its UDP for a better implementation and to underpin project design review (Fig. 2.2.3) (see Wright 1999).

³ The objectives of this PPG 13 in 1994 were to reduce the need to travel, to promote public transport, walking and cycling, to increase residential density and to curb out-of-town developments.

⁴ According to 1997 Planning Policy Guidance Note I, 'Urban design should be taken to mean the relationship between buildings and the streets, squares, parks, waterways and other spaces which make up the public domain; the nature and quality of the public domain itself; the relationship of one part of a village, town or city with other parts; and the patterns of movement and activity which are thereby established: in short, the complex relationships between all the elements of built and unbuilt space.'

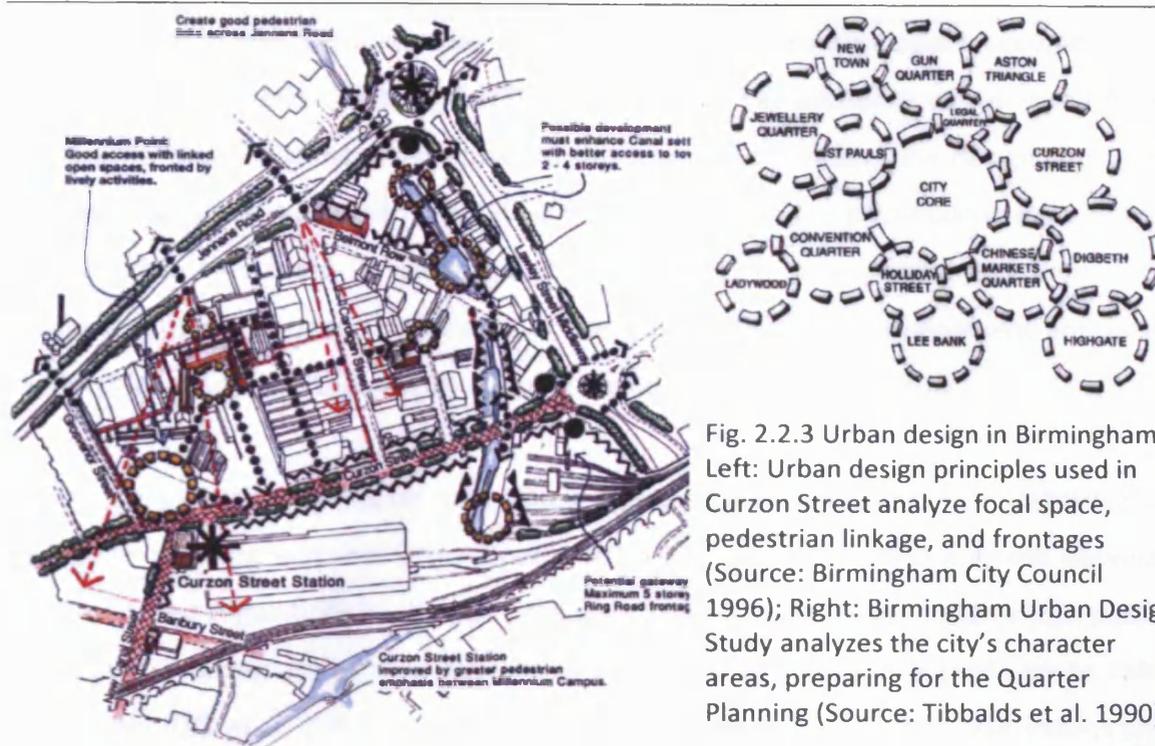


Fig. 2.2.3 Urban design in Birmingham. Left: Urban design principles used in Curzon Street analyze focal space, pedestrian linkage, and frontages (Source: Birmingham City Council 1996); Right: Birmingham Urban Design Study analyzes the city's character areas, preparing for the Quarter Planning (Source: Tibbalds et al. 1990).

The New Labour government elected in 1997 committed to the 'Third Way' in politics as a means to balance the economic development and social inclusion, and was particularly keen to promote better urban design. An Urban Task Force (UTF) was established in 1998 by the Deputy Prime Minister to resolve urban decline, and to manage new housing developments to meet the household growth. It broadened the government's vision with the idea of design-led regeneration to achieve social well-being, environmental responsibility and an urban renaissance. The British government supported the UTF's ideas and emphasized urban renaissance as the core of urban policy in its *Urban White Paper* (ODPM 2000).

In response to the UTF's report, a national urban design framework has been swiftly developed. The long-awaited governmental design manual *By Design* (DETR and CABE 2000) was published providing comprehensive design advice, complemented by other practical guidance on planning, such as access and inclusive design (ODPM 2003), safer places (ODPM and HO 2004), and residential street design (DfT et al. 2007). Notably, since its establishment in 1999, CABE has provided crucial advice, guidance, design review services and good practice studies to champion good design in the built

environment. It also advocates the value of urban design to developers, occupiers and government agencies (CABE and DETR 2001). With the influence of American New Urbanism, the government rediscovered the use of masterplans and design coding in large residential developments (DCLG 2006b, c). In 2004, the plan-making system was reformed into a Local Development Framework. This new system is intended to provide a more visionary city-wide 'Core Strategy' for future development and local action plans for areas that are undergoing major change (Punter 2010).

As sustainability is climbing up the political agenda, urban design has been regarded as a 'key to creating sustainable developments' (DETR and CABE 2000 p.8) and national guidance and regulations have been produced. To reduce car use in urban areas, public transport, walking and cycling have been promoted by developing guidance to calm the street (DfT et al. 2007), together with positive advice from CABE's case studies and guidance on improving the quality of streets (CABE 2007a, c, 2008; CABE and ODPM 2002). National guidance on environmental infrastructure was provided in PPS 9 (ODPM 2005), together with the promotion of green space strategies (DTLR 2002). Remarkably, the government has imposed tougher building regulations to improve building energy performance, by setting the target of making all new housing zero carbon by 2016 in England (DCLG 2006a), and the standards will be progressively applied to commercial buildings. 'Sustainable design' is being developed to tackle climate change (CABE 2007b), with guidance on sustainable urban expansion and eco-towns (CABE and BioRegional 2008).

At local level, significant improvements have been witnessed in design and environmental terms, in the quality of development in city centres and their immediate fringes, alongside local economic regeneration. At their best, new shopping centres and office developments improve the quality of the public realm and attracting shoppers, office workers and tourists. Mixed uses, diversified character areas and pedestrianised environments are created in central locations along with significant residential developments. Sustainable urban extensions with high quality housing design, green infrastructure and local employments have been built in some localities. But academics are still concerned about the negative impacts of the 'image

competition' on design in climate of intense urban competitiveness for all forms of developments, and the local authority's lack of resources and skills to further pursue the renaissance agenda. There are also complaints about poor quality housing, over-dense apartment developments, and tall buildings impairing the cityscape (Punter 2010).

2.2.1.5. Summary

In sum, urban design in the UK has slowly evolved from the concerns of external appearance ('modernist', standardized and aesthetic) to a 'postmodern' 'contextual' urban design, and now embraces sustainability obligations. But it is facing the challenges again by profit-oriented designs of tall buildings and high density developments. Design control has been gradually taking stronger roles in planning and urban development, especially since the 1990s when the government adopted a plan-led planning system to reshape the post-industrial cities. Since New Labour's adoption of urban renaissance as the core in its urban policy, urban design has been promoted to an unprecedented central position in the government's agenda. Urban design in the UK now benefits from a well-articulated national design framework embedding generic urban design principles and sustainability obligations. It is fully integrated with the new planning system through strategic visions and area action plans, with hierarchical policies, guidance, masterplans, design codes and embedded design review. At its best design control has moved away from the previous negative control to promote win-win situations, where the developers are convinced that they can gain more value from building well designed projects not least because these projects are easier to get accepted by the public. The only question left now is how the local authorities can develop the resources and skills necessary to implement the national guidance at the local level.

2.2.2. The American Experience

2.2.2.1. The start of zoning and design intervention

Contrasting with the UK where the central government has strong interests in local development, American planning control is mainly a local issue (Cullingworth and Cave 2003). The early experience of design control in American cities was with zoning regulation, initiated by the *New York Zoning Ordinance* in 1916. The objective of this first *Zoning Ordinance* was to protect and to enhance property value by prescribing exclusive land uses and specific building envelopes (Fig. 2.2.4) (Loukaitou-Sideris and Banerjee 1998). The *Standard State Zoning Enabling Act* in 1924 triggered a tide of American zoning exercises, in which the cities were granted power (police power) to regulate land use, in line with a comprehensive plan. But in practice, American municipalities have not paid much attention to the strategic level of comprehensive plan, and the zoning ordinance always comes before it (Cullingworth and Cave 2003) and exerts a determinate influence in urban form.

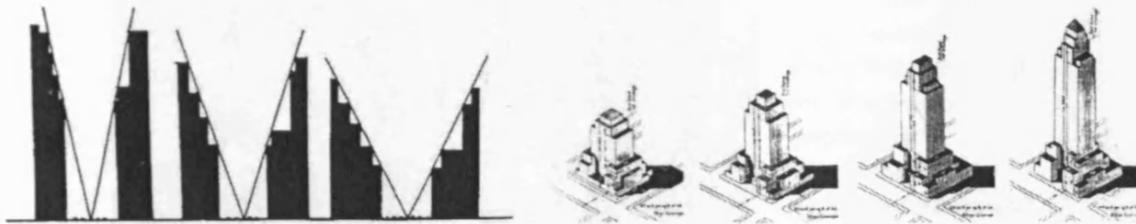


Fig. 2.2.4 Zoning's building setback requirement in New York. Left: building setbacks prescribed by the zoning ordinance of 1916; Right: 'setback style' generated by this ordinance (Source: Loukaitou-Sideris and Banerjee 1998 pp.49-51).

2.2.2.2. Public-led urban renewal with 'modernist' approaches and the reactions

The federally funded urban renewal programme in the 1950s brought the 'modernist' approach to the built environment, and the reactions to it have shaped mainstream urban design thinking. After the Great Depression in the late 1930s and the Second World War, American cities were suffering from poor housing conditions and the inner

cities were facing challenges from suburban sprawl resulting from the federal highway constructions and mortgage supports. *Title One* of the *Housing Act 1949* provided federal funding to cities to cover the cost of slum clearance, and later broadened the scope to support the strengthening of downtown business areas (Teaford 2000). Starting from the 1950s until the 1970s, some seven hundred CBD plans emerged and committed to the development of a 'modern' and efficient business centre with functional urban forms delivered by new zoning (Loukaitou-Sideris and Banerjee 1998). In some cities, suburban shopping malls were brought into the downtowns with freeway loops on the edge of the CBD, and the object-type, disjointed and discrete buildings provided no meaningful public space (Fig. 2.2.5). Cities following these plans used eminent domain to acquire land, evicted occupants and demolished existing structures to prepare for development, but subsequently damaged the city socially. This federal-funded slum clearance programme resulted in a large scale of urban destruction of inner city neighbourhoods, many of which were 'unslumming' and capable of being regenerated in much more sensitive and effective ways (Jacobs 1961).



Fig. 2.2.5 Los Angeles 1967: Bunker Hill razed. Inner city neighbourhoods were flattened, and replaced with 'modernist' superblocks, high-rise towers and wide thoroughfares. But a large amount of the blocks failed to attract investments and were converted to car parks (Source: Loukaitou-Sideris and Banerjee 1998 pp.22-23)

In the reaction to the destructiveness of the urban renewal programme, the notions of advocacy, pluralism, participatory planning and design were promoted by the people like Jane Jacobs (1961) and Kevin Lynch (1960). Jacobs (1961) criticized the brutal inner city redevelopments and promoted the values of traditional and permeable neighbourhood, mixed-use and high-density urban life, short city blocks with active frontages, and gradual investments. Lynch (1960) criticized the top-down approach to planning and design, and treated urban design as a participatory process. His research emphasised people's perceptions, the protection of characters (both mental and physical dimensions) and city wide legibility. He advocated defining character and thinking strategically, including conservation. Lynch's approach in urban design was soon adopted in many downtown urban design plans in 1960s and 1970s (see Southworth 1989; Southworth and Southworth 1973).

2.2.2.3. Developing urban design as public policy and design review

Urban design as public policy came to its mature stage in New York in 1960s-1970s and other American cities in 1970s-1980s. Supported by Mayor John Lindsey, the Urban Design Group for New York was created in 1967. With the 1961 reform of the Zoning Ordinance, urban design in New York took the forms of design review, incentive zoning legislation, special design districts, landmark preservation, rebuilding theatre districts and shopping streets, neighbourhood planning and others, to safeguard the city's interests in private development (Barnett 1974). In the mid 1970s, New York further adopted design guidelines to better negotiate the amenity provision and the floor space bonus.

The late 1970s saw a shift to neo-liberalism with much more emphasis on private development. The limited public direct funding (due to the federal tax cuts and the 1973 oil crisis) forced the American municipalities to compete for commercial developments, by using zoning, design guidelines and design review to achieve public objectives (Lai 1988 350-51). Other American cities soon took the lessons and produced individual guidelines to guide the incremental urban change and to negotiate

for the public goods. At their best, the prescriptive section of the design guides/master plans produced were translated into their zoning ordinances, and the objectives were used as the priorities in project design review or negotiation, such as San Francisco⁵ (Fig. 2.2.6) and Portland (Punter 1999b). These efforts have put the American cities in a strong position to direct the development process and to negotiate with the developers with the help from design review.

CITY PATTERN

OBJECTIVE 1

EMPHASIS OF THE CHARACTERISTIC PATTERN WHICH GIVES TO THE CITY AND ITS NEIGHBORHOODS AN IMAGE, A SENSE OF PURPOSE, AND A MEANS OF ORIENTATION.

CONSERVATION

OBJECTIVE 2

CONSERVATION OF RESOURCES WHICH PROVIDE A SENSE OF NATURE, CONTINUITY WITH THE PAST, AND FREEDOM FROM OVERCROWDING.

MAJOR NEW DEVELOPMENT

OBJECTIVE 3

MODERATION OF MAJOR NEW DEVELOPMENT TO COMPLEMENT THE CITY PATTERN, THE RESOURCES TO BE CONSERVED, AND THE NEIGHBORHOOD ENVIRONMENT.

NEIGHBORHOOD ENVIRONMENT

OBJECTIVE 4

IMPROVEMENT OF THE NEIGHBORHOOD ENVIRONMENT TO INCREASE PERSONAL SAFETY, COMFORT, PRIDE AND OPPORTUNITY.

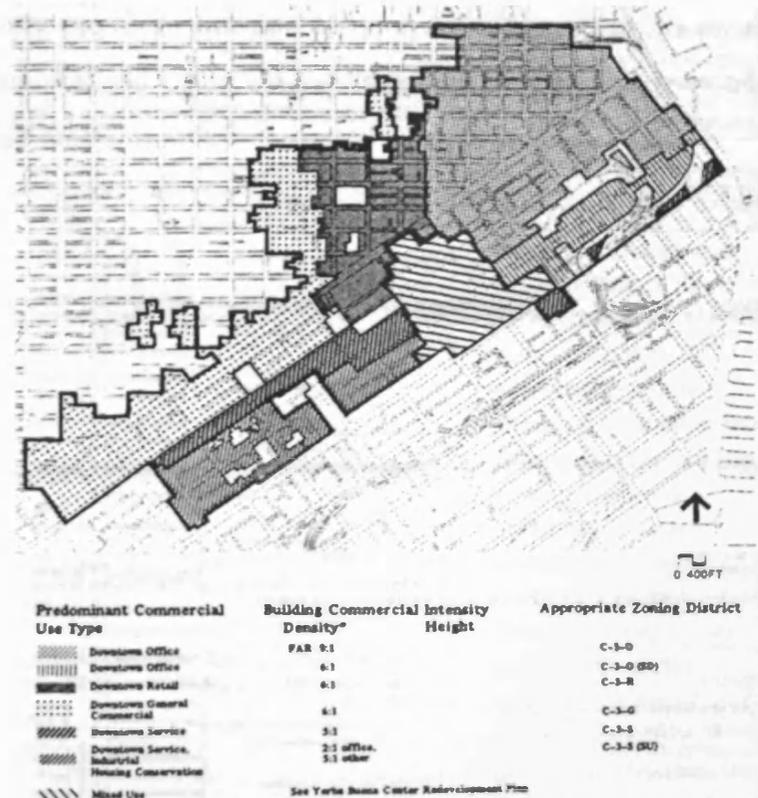


Fig. 2.2.6 San Francisco urban design. The 1972 Master Plan objectives (left for example) and policies were well-researched and later translated into zoning ordinance, used in design negotiation and were carried forward to its next generation – 1985 Downtown Plan (right for its land use and density section) (Source: Punter 1999b).

But in the neo-liberal development climate, local governments overemphasized the economic contribution of the new developments, and the quality of the privately

⁵ San Francisco adopted a comprehensive urban design control and exercised 'discretionary design review' following its 1972 Master Plan. Its major section – the *Urban Design Plan* was based on a two-year study, including the area characters, neighbourhood qualities, public perceptions and the effectiveness of the existing controls. Its objectives and principles of were translated to the 1979 *Zoning Ordinance*. The 1985 *Downtown Plan* inherited many of the previous principles and went on to address commercial development, housing, historic preservation, open space, urban form and transportation (Loukaitou-Sideris and Banerjee 1998; Punter 1999b).

p.1). Depending on the local government, design review could be a parallel approach to project permitting process or an integral part of it (such as Portland, Fig. 2.2.8), or only for some special areas or projects. It was popular in the American cities because zoning had failed to manipulate architectural design and to manage its impacts on the public realm. But discretionary design review was widely criticized for being a negative mechanism rather than a positive encouragement to 'good design' (Lightner 1992). Its implementation focused only on the provision of public space, rather than the quality of it, resulting in some defensive, isolated and an exclusive characters (Loukaitou-Sideris and Banerjee 1998). It was too time-consuming, lacked skill support, was inefficient for urban betterment, lacked justice, and needed radical improvements (Scheer 1994) (to be expanded in the next section). These criticisms have helped the American cities to further improve their design review practices.

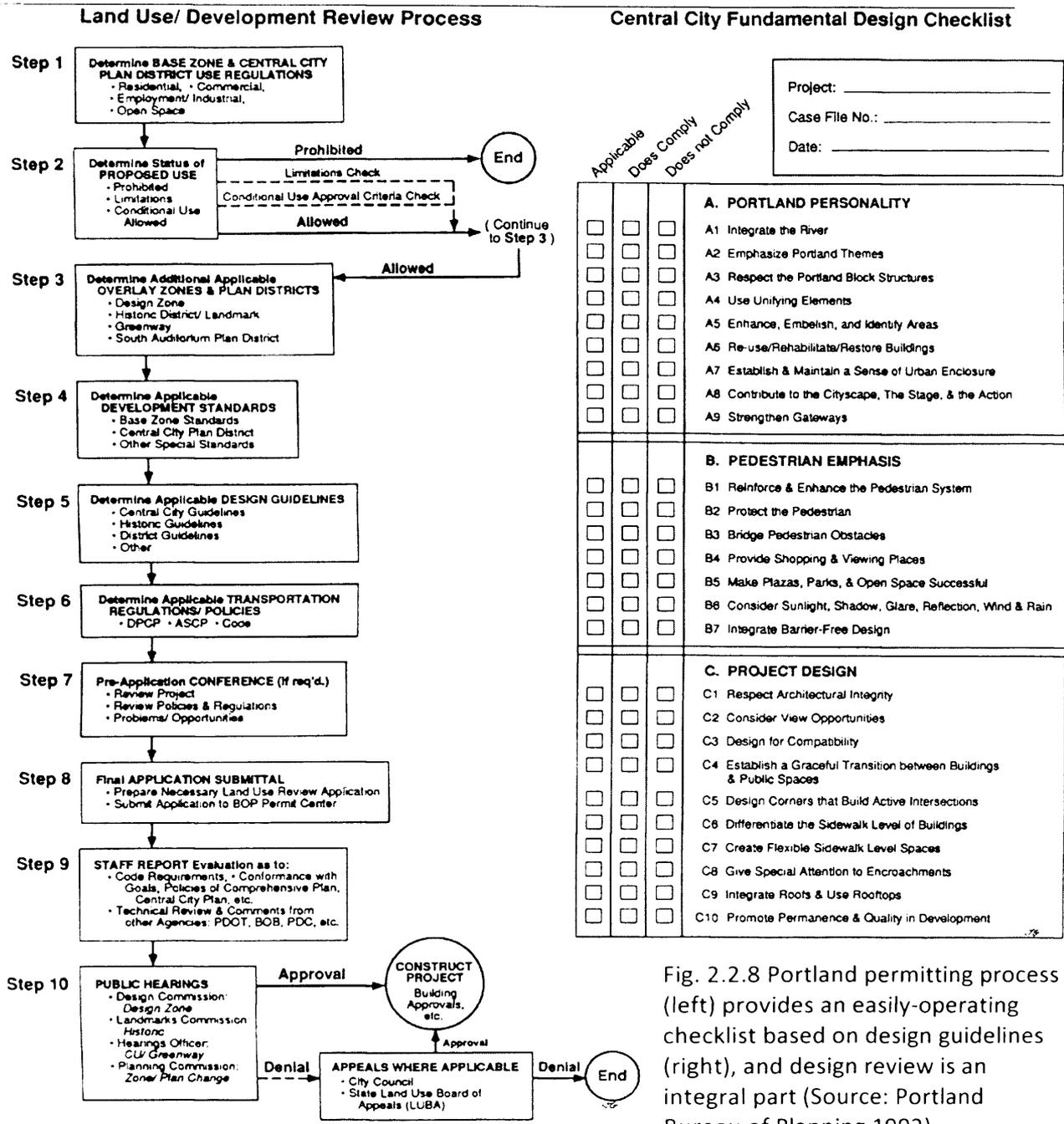


Fig. 2.2.8 Portland permitting process (left) provides an easily-operating checklist based on design guidelines (right), and design review is an integral part (Source: Portland Bureau of Planning 1992).

2.2.2.4. More specific guidelines, incentives and the form-based codes

Since the 1990s, more administrative controls have been adopted by the American cities to repair their urban fabrics, to better accommodate the incremental change and to achieve better urban form, a higher quality public realm and more recently, sustainable development. This is achieved by the adoption of some more sophisticated

design guidelines and design review, as well as the rediscovery of the form-based codes (FBCs) pioneered by the New Urbanist⁷ movement to replace conventional zoning.

Administrative control tends to be more effective for design control than the discretionary design review (Nasar and Grannis 1999), and this has been the trend for the development of the American design guidelines. Firstly, the new generation of urban design plans/guidelines are now better absorbed and embedded in zoning to better improve the zoning mechanism. For example, Omaha's urban design plan was based on the traditional neighbourhood design principles with development feasibility studies, and was developed with the local business and community with strong political support (Barnett 2006). Moreover, this urban design plan was later translated into the local zoning and subdivision codes (Omaha by Design 2009), as a means of making urban design regulatory. Meanwhile, design review only takes place for the projects not in line with the regulation. Secondly, incentive methods are still used to fund the public benefits, but in a more predictable manner. Chicago now is leading the way in developing sophisticated incentive programmes in planning, especially for its adoption of the 2004 zoning ordinance which encourages underground parking and filling the aboveground parking spaces with occupiable space using floor-area bonuses. Its mayor also promotes the city as 'the greenest city in America' and makes sustainable architecture a desirable goal. The city uses the Leadership in Energy and Environmental Design (LEED) certifications developed by the Green Building Council to champion sustainable architecture, advocating it as a new marketing point for developers (Becker 2006).

⁷ New Urbanism movement was originated in critiques of centreless and sprawling suburban development. The movement learns from the European traditional urban form and promotes mixed-use, transit-oriented, compact form, walkable environment (400 metres rule), attractive public realm, narrow streets and others, most of which were promoted in 1960s by Jacobs (1961) and Lynch (1960). The Congress for the New Urbanism promotes a harmony in the public realm, continuous urban frontage for uniformity and a sensitive contextual design (www.cnu.org). A significant kind of FBCs like the SmartCode regulates the building type location, ranging from rural preserve to urban core (www.smartcodecentral.org).

Another strand of urban design development in the American cities is the rediscovery of the form-based codes (FBCs). FBC started from Plan Unit Development⁸ in the suburbs with the early success in Seaside, Florida in the 1980s, promoting the design ethos of New Urbanism. It is now slowly penetrating inner city areas (Fig. 2.2.9) and sometimes applies to the whole city like Miami (www.miami21.org). Different from design guidelines which are advisory and need lengthy design review, FBC can be regarded as a new generation of zoning ordinance, and can be self-operative (Fig. 2.2.10). It has a stated purpose of shaping a high-quality public realm to promote healthy civic interaction. Modern FBCs develop the design vision with the community and translate the illustrative plans into diagrammatic plans and codes (Talen 2009). The coding is normally grouped by street type, location, and building type (Dover 1996). It abandons the floor-area ratio, omits direct labelling of uses, and regulates the building height as well as the public realm interfaces. Uses are identified for each building type and labelled on a cross-section diagram. Street types and landscape standards are also coded. In some specific locations such as special retail districts and historic districts, a higher level of control may be enforced including architectural standards (Katz 2004). But these codes are not necessarily rigid, and they only specify the simple rules and leave other elements for adaptation, innovation, and cultural diversity within a framework (Talen 2009).

⁸ Planned Unit Development in the last few decades emerged from suburban districts using a masterplan. The lot configuration and net density inside the district is judged in light of the overall effect. It can be more compact, have more open space and accommodate more diversified households (Dover 1996).



Fig. 2.2.9 Section of the 2020 *Los Angeles Downtown Plan* (Source: Katz 1994), addresses the extensive physical changes (in red) and the social and economic ones, guiding the incremental downtown development. A development code is provided to replace the existing zoning code.

| LOT OCCUPATION | |
|-------------------------------|--|
| a. Lot Area | 5,000 s.f. min.; 70,000 s.f. max. |
| b. Lot Width | 50 ft. min. |
| c. Lot Coverage | |
| - 1-8 Stories | 80% max. |
| - Above 8 th Story | 15,000 sq. ft. max. Floorplate for Residential & Lodging 30,000 sq. ft. max. Floorplate for Office & Commercial |
| d. Floor Lot Ratio (FLR) | 8 / 30% additional Public Benefit |
| e. Frontage at front Setback | 70% min. |
| f. Open Space Requirements | 10% Lot Area min. |
| g. Density | 150 du/acre max. * |
| FRONTAGE | |
| a. Common Lawn | prohibited |
| b. Porch & Fence | prohibited |
| c. Terrace or L.C. | prohibited |
| d. Forecourt | permitted |
| e. Stoop | permitted |
| f. Shopfront | permitted (T6-12 L & T6-12 O only) |
| g. Gallery | permitted by Special Area Plan |
| h. Arcade | permitted by Special Area Plan |

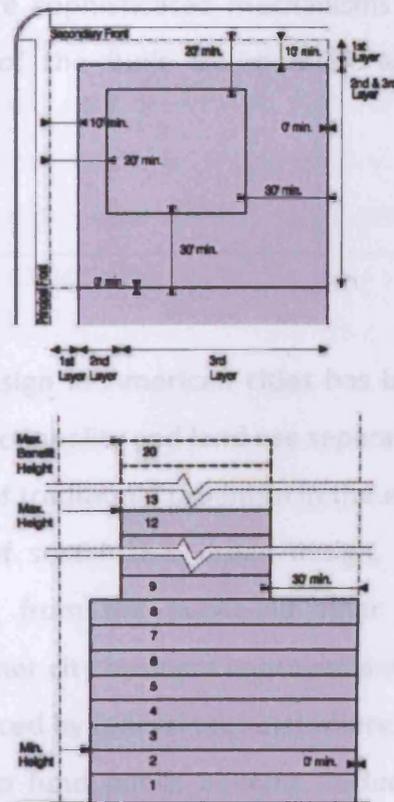


Fig. 2.2.10 Miami's new zoning code, uses New Urbanist's transect idea, and applies to the whole city including the downtown with detailed configuration on the built form, land use, public space and landscape standards (Adapted from The City of Miami 2009).

It is worth noting here that as the mainstream urban design thinking in American cities, New Urbanism's promotion of public transit, and car-accessible but still pedestrian-dominant environment, contributes to environmental sustainability. Its promotion of mixed-use, mixed-income and mixed-tenure development especially in the inner city area has the potential to support social sustainability.

Although American cities continue to update their public realm guidelines and incentives for urban developments, the private sector still has the dominant power to shape the built environment. Especially for some large projects, local governments justify the projects mainly by their economic contribution rather than their physical improvements, and normally do so with limited public participation (Fainstein 2006). Public spaces relying on the funding of the private sector are often 'inadequately designed, built, and maintained to truly serve the public' (Kiefer 2006). The lengthy development/design negotiation for profit-driven development may cause delay and subsequently the delay of the public benefits. More sophisticated mechanisms are therefore needed to better improve the quality of the built environment while accommodating economic development.

2.2.2.5. Summary

In sum, over the years, the conception of urban design in American cities has been changed from the 'modernist' vision of efficiency, functionality and land use separation in the first half of the 20th century to the promotion of traditional urbanism in the early 1960s, and eventually to the current promotion of sustainable urban design. The development climate has been radically changed, from the public-led inner city reconstruction (federal funded 'slum clearing' and inner city business improvement) in the 1950s and the 1960s, to a neo-liberal climate (forced by federal tax cuts) where the local governments depend on the private sector to fund public benefits, including public realm improvements. The mechanism to implement urban design has also been changed accordingly. Design control starting with a volumetric control to regulate land use, to dictate built forms and to protect private property values, has later been

re-shaped to facilitate the 'modernist' masterplanned inner city reconstruction. When the neo-liberal climate began to prevail in the late 1970s, urban design was promoted as a kind of public policy with the help of design guidelines, design review and incentive zoning to facilitate private development and to extract public benefit including the improvement of the urban environment as well as the supply of public space. More sophisticated design control has been further developed since the 1990s absorbing the sustainability obligations and the practical challenges, to make urban design more regulatory than advisory, with the further development of design-oriented codes. But the struggle between improving the environmental quality (public benefit) and accommodating private development is on going.

2.2.3. Conclusion

It is obvious that these two countries have taken different paths to the development of urban design as public policy due to the differences in their political systems, planning systems and the development climates, but there is some convergence. In terms of the conception of urban design, the British cities moved from elevational controls to urban design quality (contextual design), and eventually towards sustainable communities; the American cities moved from the 'modernist' 'scientific' rigid zoning control to the promotion of the value of the traditional neighbourhoods with some considerations of sustainability. It is worth noting here that the British government's advocacy on urban design in the 1990s and the 2000s is more or less in line with the New Urbanist's principles – the mainstream urban design thinking in the American cities. A comparison by Tiesdell (2002) of New Urbanist principles and the contents of English residential design guidance shows that they have obvious common roots. They both support more compact and higher-density development, mixed-use developments and mixed communities, they prefer street-oriented housing, traditional (European) urban forms and interconnected movement networks, they focus on pedestrian experience, and they accommodate the car but seek to prevent not allow it from dominating the city (Fig. 2.2.11).

| CNU Charter principle | English guidance convergence | CNU Charter principle | English guidance convergence |
|--|-------------------------------------|---|-------------------------------------|
| The neighbourhood, the district and the corridor | N/A | Physical definition of streets and public spaces | Substantial |
| Compact, pedestrian-friendly & mixed-use neighbourhood | Limited | Integration with surroundings | Limited |
| Walkable neighbourhoods | Substantial | Safety and security | Substantial |
| Mix of housing types and price levels | Substantial | Car-accessible but pedestrian-dominance | Substantial |
| Transit corridors | N/A | Pedestrian-friendly streets | Substantial |
| Higher densities | Substantial | Local architecture and landscape | Limited |
| Location of civic, institutional and commercial activity | Limited | Civic buildings and public gathering places | Limited |
| Guiding change | Limited | Environmental design of buildings | Limited |
| Provision of parks and conservation of open land | Limited | Conservation of historic buildings and landscapes | Limited |

Fig. 2.2.11 New Urbanism and the English residential design guide, shows evidence of convergence in their contents (Adapted from Tiesdell 2002).

In terms of the mechanism to deliver urban design, both of the countries have shown their attempts to increase the sophistication of their planning or zoning tools to ensure the public benefits (including the quality of public realm) when facing the challenge from the neo-liberal development climate and the local resource and skill deficits. The British local authorities have tried to inject more certainty into their discretionary planning system by producing better design policies and guidance, introducing design codes for large development sites and tightening the building regulations to deliver sustainable development, all with the help of internal design review. The American municipalities have used design guidelines, design review and refined zoning to inject more flexibility to its system and to ensure the environmental quality.

These histories show the Anglo-American cities' obvious struggles and attempts to supply public space, to improve public realm and to promote sustainable development in the neo-liberal development climate. The Chinese government now is also committing itself to a market-driven development strategy, and the local governments are facing a lack of financial support from the central government to maintain their

public services. Boosting land development has been treated as a remedy to increase the local income and as a means to gain political promotion by local politicians. Therefore, the neo-liberal ideology may be stronger in Chinese cities than in Anglo-American cities. Developing urban design as public policy in Chinese cities is a more challenging task. How Chinese cities conceptualize urban design and how the Chinese discretionary planning control with its basis on zoning can deliver the design objectives will be explained in Chapter 5.

2.3. Developing urban design towards better public policy

Urban design's economic and political challenges and its historical evolution both point to the need to develop its public policy role and to achieve a win-win situation in promoting economic development and social cohesion. For this purpose, efforts should be made to develop urban design as a stronger regulatory framework for securing the public interest in private development and to enable the development industry to recognize the value of urban design. The former has been recently elaborated by Punter (2007) by proposing a set of challenging international best practice principles for design review. This section reviews the relevant literature that might in time assist the development of Chinese practices.

2.3.1. The international aspiration on best practice of design review

Anglo-American design review developed apace in the late 1980s and the early 1990s, but it faced numerous critiques. These critiques which emerged in literature, but also in local practices, have helped to reshape and improve design review and provided basis for developing better practice. Design review is a case-by-case review mechanism for the local government to negotiate public goods from private development. It acts as an integral part of the British system of development control, but was criticized as being too reactive, political, and lacking skilled support, public participation and appropriate guidance (Punter 1987). As an 'add-on' element in zoning control in most of the American cities, design review was also criticized as being too time-consuming, lacking adequate skill support, inefficient at deriving betterment, too personal in its critiques, obliterating design freedom and lacking justice (Fig. 2.3.1) (Scheer 1994). It is obvious that the critiques of design review are similar in both countries even through their planning systems are very different, and that they are also applicable in other countries where design review is used to improve the quality of private developments.

- ◆ * Design review is time-consuming and expensive.
- ◆ * Design review is easy to manipulate through persuasion, pretty pictures, and politics.
- ◆ Design review is being performed by overworked and inexperienced staff.
- ◆ Design review is not an efficient mechanism for improving the quality of the built environment.

POWER

- ◆ Design review is the only field where lay people are allowed to rule over professionals directly in their area of expertise.
- ◆ * Design review is grounded in personal – not public – interest.

FREEDOM

- ◆ Design review could be a violation of the First Amendment right to free speech.
- ◆ Design review rewards ordinary performance and discourages extraordinary performance.

JUSTICE

- ◆ Design review is arbitrary and vague.
- ◆ * Design review judgments are not limited.
- ◆ * Design review lacks due process.
- ◆ Design review is difficult to protest on aesthetic grounds.

AESTHETICS

- ◆ Design review is reluctant to acknowledge that there are no rules to create beauty.
- ◆ Design review principles tend to be abstract and universal, not specific, site-related, or meaningful at the community scale.
- ◆ Design review encourages mimicry and the dilution of the authenticity of place.
- ◆ Design review is a superficial process.

Fig. 2.3.1 The controversial issues in design review (Source: Scheer 1994 pp.4-9)

* not fully applicable to the UK practice, due to the differences in the planning system.

There is a convergence in the solutions to these problems regardless of the particular planning system. In response to these critiques, academics and practitioners have been searching for good practice exemplars (Punter 1999b, 2003) and suggesting better practices (Blaesser 1994; Lai 1988). After long term observations and researches into the urban design practices from Northern America, Australia and Western Europe, Punter (2007) proposes a set of best practice principles to promote good design within the planning system. It draws together the lessons and good practices in design review internationally, and broadens the scope from discretionary design review to the development of a more sophisticated regulatory system of design control. Punter's synthesis of the best practice has four groups of ideas including 12 detailed principles (Fig. 2.3.2):

- ◆ A strategic design vision to a locality needs to be developed with the local community, and the local authority needs to provide a corporate programme and to embed the design vision into the statutory plans to help design review;
- ◆ Wide range of actors and instruments need to be harnessed to promote good design and social inclusion, with a better integration of zoning and planning;

- ◆ Generic urban design principles need to underpin the public design intervention, embracing sustainability and contextual analysis to prescribe mandatory outcomes but also supporting design innovations;
- ◆ A review process of fairness, efficiency and effectiveness needs to be established to base the design decision making.

Principles for Progressive Urban Design Review

Community Vision

1. Committing to a comprehensive and coordinated vision of environmental beauty and design (Brennan's Law) (Lai, 1988, p. 426).
2. Developing and monitoring an urban design plan with community and development industry support and periodic review (Lai, 1988, p. 429).

Design, Planning and Zoning

3. Harnessing the broadest range of actors and instruments (tax, subsidy, land acquisition) to promote better design (Lai, 1988, p. 430–431).
4. Mitigating the exclusionary effects of control strategies and urban design regulation (Lai, 1988, p. 430)
5. Integrating zoning into planning and addressing the limitations of zoning (Lai, 1988, pp. 431–432).

Broad, Substantive Design Principles

6. Maintaining a commitment to urban design that goes well beyond elevations and aesthetics to embrace amenity, accessibility, community, vitality and sustainability (Scheer, 1994, p. 9).
7. Basing guidelines on generic design principles and contextual analysis and articulating desired and mandatory outcomes (Blaesser, 1994, p. 50).
8. Not attempting to control all aspects of community design but accommodating organic spontaneity, vitality, innovation, pluralism: not over-prescriptive (Lai, 1988, p. 428; Blaesser, 1994, p. 50)

Due Process

9. Identifying clear a priori rules for urban design intervention (Lai, 1988, p. 425; Scheer, 1994, pp. 6–7).
10. Establishing proper administrative procedures with written opinions to manage administrative discretion, and with appropriate appeal mechanisms (Lai, 1988, 427; Scheer, 1994, pp. 3–4).
11. Implementing an efficient, constructive and effective permitting process (Scheer, 1994, pp. 5–6, 7).
12. Providing appropriate design skills and expertise to support the review process (Scheer, 1994, pp. 4–5; Lai, 1988, p. 431).

Fig. 2.3.2 International aspiration for good practice in urban design control. These principles are largely derived from academic critiques of American design review practices developed between 1988 and 1994, and have been refined in studies of actual planning and design review processes in case studies across the world (Source: Punter 2007).

These ideas can be regarded as the international aspirations that a sophisticated design control system should aim for. These aspirations are briefly reviewed here.

2.3.1.1. Community vision

In these 12 principles, design visioning is regarded as a necessary foundation for design control. On the one hand, the requirement of a comprehensive and coordinated design vision emerges from the legal challenges to the American design review practice. The basic idea is that local authorities should demonstrate that their pursuit of design quality is not limited to planning practice, but covers other regulatory activities and in its own developments (Lai 1988 p.426). In this regard, the government should bring together all its levers and mechanisms to raise design standards in infrastructure and public realm improvements, before it imposes design control on private development. On the other hand, the requirement of community involvement reflects the democratization of planning and design, being a crucial means to legitimate urban design as public policy. Particularly in the USA, aesthetic concern alone cannot initiate the use of the police power to regulate the private development, unless the vision is shared by the community as a whole (Lai 1988). Therefore, a mechanism for public participation in design visioning and plan making needs to be established.

Vision here is not the detailed layout of the city, but a broad and clearly articulated aspiration of how the city will be like and will work in the next 10-20 years. It needs to be developed based on the appraisal of the local market conditions and realistic growth projections. In this regard, the development industry needs to be involved to support the visioning and plan-making process. In the meanwhile, this vision needs to clearly define some of the most critical public goods such as public space and public services. Punter (2007 p.173) argues that once a vision is established, it needs to be embedded in a statutory plan, and elaborated in more detail with design codes, design guidance or other forms of policy responding to the tools of the relevant planning system.

From the political economic point of view, the 'vision' of a locality is contested by different interest groups such as local politicians, developers and the general public. How this 'vision' is translated and implemented through the planning system and the

urban development process is the result of the power-plays between these key interest groups (Bentley 1999).

2.3.1.2. Design, planning and zoning

Planning and zoning tools are both useful to the delivery of design quality. They help the local governments to negotiate better environmental objectives (Lai 1988 pp.431-432), by using compensable regulation, eminent domain, public subsidy, tax-incentive, planning negotiation based on design guidance (Punter 1999b), incentive zoning based on design guides (Barnett 1974), and landownership powers (DCLG 2006b). Some of the instruments can be understood as a trade-off between the public benefits (such as good design, community facilities and amenities) and the private financial gains (such as additional floor space). But the difficulty here is that a lot of these instruments are normally out of the control of the planning authority (Lai 1988 pp.430-1), and the design quality is too easily sacrificed to other political/economic objectives of the local authority such as road improvements and affordable housing provisions (Punter 2007 p.176). The challenge is how a locality can identify and develop the possible ways to achieve its environmental objectives while accommodating economic growth, through the use of zoning, planning mechanism, land power and other tools available.

Punter (2007) identifies a key issue here for all forms of planning and development – how to mitigate the exclusionary effects of new development. In designing the built environment, social inclusion can be promoted by encouraging access for all, avoiding the gentrification effects, producing a real mixed environment (including land use, user groups, activities and tenure terms), providing affordable housing and low-cost housing, as well as providing public transport and walking/cycling infrastructure. Most of these are included in the generic urban design principles (see Fig. 2.2.2 and Fig. 2.2.11).

Punter also stresses that zoning and planning can learn from each other to better balance the issues of certainty and flexibility, and to better promote good design (2007). On the one hand, zoning mechanism has the value of clear control. The injection of discretionary processes in zoning enables it to adapt to specific circumstances. On the other hand, the discretionary nature of planning can learn from zoning to develop more design-sensitive requirements for building form, using more detailed and contextual design guidance and even design codes.

2.3.1.3. Broad, substantive design principles

Choosing the right principles to underpin design intervention is regarded as another crucial priority for design control. As public policy, urban design in a broad sense is legitimated by its potential contribution to the community, and should 'embrace social and environmental dimensions of design' rather than solely focus on architectural external appearance (Punter 2007 p.182). Therefore, the commonly agreed urban design principles such as permeability, legibility, mixed use/tenure, robustness, sustainability and others (see Fig. 2.2.2 and Fig. 2.2.11) should underpin the public design intervention. Although they emerged from the reaction to the 'modernist' design and are based on European and American traditional urban form, they are by far the most developed basic principles in the field. In addition, the much new sustainability principles have to be embraced in design intervention, including the matters of compact development, accessibility by public transport, community involvement, biodiversity, energy efficiency, environmental protection and sustainable drainages (Fig. 2.3.3). Countries may have different traditions on their built environment, but these principles are arguably universally applicable and can be adapted into the local cultural and environmental context.

| | (NEIGHBOURHOOD) DESIGN PRINCIPLES | | | | | |
|---|-----------------------------------|-------------------------|--------------|-----------|-------------------|--------------|
| (SUSTAINABILITY) OBJECTIVES | Stakeholder involvement | Increase local autonomy | Connectivity | Diversity | Response to place | Adaptability |
| Social | | | | | | |
| 1. (to enhance local) community | ● | ● | ○ | ○ | ○ | ○ |
| 2. (to increase) equity | ○ | ○ | ○ | ● | | |
| 3. (to promote) healthy living | ○ | ● | ● | ○ | | |
| 4. (to improve) safety/security | ○ | | ● | ○ | | ○ |
| 5. (to enhance freedom of) choice | ○ | ● | ● | ● | ○ | ○ |
| 6. (to increase) local decision making | ● | ● | ○ | | ● | ● |
| Economics | | | | | | |
| 7. (to promote) wealth creation | ○ | ○ | ● | ○ | | ○ |
| 8. (to promote) employment | ○ | ● | ● | ○ | | ○ |
| Environmental | | | | | | |
| 9. (to enhance) environmental quality | ○ | | | ● | ● | ○ |
| 10. (to promote) wildlife and countryside | ○ | | ○ | ● | ● | |
| 11. (to safeguard) natural resources | ○ | ● | | | ● | ● |
| 12. (to cut) greenhouse gas (emissions) | ○ | ● | ○ | ○ | | |

Fig. 2.3.3 Matrix of neighbourhood design principles to achieve sustainability (Source: Barton et al. 2002 p.13). Black dots mean strong connections between neighbourhood design and sustainability.

Having the design vision based on the design principles is not sufficient to exercise effective design control. Those generic urban design principles should be translated into detailed guidance (Blaesser 1994 p.50), with thorough local contextual appraisal, and expressed in mandatory or desirable terms (Punter 2007 p.185). Therefore, context and site analysis are the crucial conditions for successful urban design and should be carried out before the application of the generic design principles in both design policy making and the review of project. To avoid vagueness, mandatory regulations in design policy/guidance/plan should be spelt out to help the developers, designers and control officers to understand and interpret the policy/guidance/plan, and to produce more predictable design outcomes.

But the slippery nature of design suggests that a rigid system may not be sufficient to improve the product (Scheer 1994 p.6), and that design review should not stifle design innovation but support ranges of design solutions to enrich human settlements (Blaesser 1994 p.50; Lai 1988 p.428). Punter (2007 p.182) stresses that sometimes a brilliant design solution to a specific site violates the guidelines, and design review needs to accommodate and promote such innovation. Design competitions could be one way to achieve innovative solutions, but it has weaknesses in its cost, and the complex issue in sponsor, client and user expectations need to be resolved in practice (Nasar 1999).

2.3.1.4. Due process

Punter (2007) further stresses the important role of the due process in design control. A lot of the criticisms of urban design described by Scheer (Fig. 2.3.1) come from suspect administrative procedures, especially those which are too time-consuming, too political, not in the interest of the public and arbitrary. To establish a fair design review process, Scheer (1994 p.6) suggests an 'orderly discretionary' decision making process, so that the design decision can be made consistent and nonarbitrary. Lai's suggestions are particularly helpful in this matter by seeing the system of design control as a system of law (Lai 1988 p.426-7). In this system, the clearly articulated design guidelines can act as the 'civil law' to provide priori rules for design intervention. In the meanwhile, wherever the precise policies or design guidelines are missing, he suggests that administrative procedures can compensate. The administrative rules should require written records of design deliberations and meeting minutes to form the 'common law' for design review. At the same time, the appropriate design appeal system (including third party appeal) should be developed to complete this system.

The process of design review should also be efficient and effective. In this regards, first, pre-application discussion to negotiate the major issues of the proposed development is particularly helpful, including the ones in design (Punter 2007 p.191). This enables the applicant and the local authority to reach an informal agreement on the key

development principles. More importantly, it establishes an agreed design direction at the early stage and avoids the danger of total re-design late in the planning application process. Second, the effectiveness of the process also depends on the review service, providing practical suggestions for design improvement (ibid.). Third, a periodic review of the administrative process is needed for a progressive improvement on the service. This can take the form of reviewing design review between private and public designers, between the public and politicians, and preferably in an open forum between professionals and the lay public (ibid.). Fourth, effective design control relies on a strong design skills in the public sector. Using an expert design panel is one solution in this regard, and it has been broadly adopted to advise on design improvement in many localities. But Punter (2007 p.194) argues that the development of in-house skills should take the priority, to fundamentally improve the day-to-day service, but the problem is local government's resources to finance the employment of highly skilled officers or design training are increasingly limited as public authority budgets are squeezed.

2.3.2. Championing good design as the desirable goal

The above good practices in urban design review can be adopted internationally, but they always need to be adapted to the local culture, property market and politics. But focusing on the public sector's regulatory activities alone cannot guarantee a good design outcome. Market demand should be another realistic consideration. Some researches in the British context have proved that when the economic value of urban design is appreciated or the demand for quality designed projects is forecasted, the developers are willing to invest in it (Carmona et al. 2002). This is a more effective means to improve the design quality than purely addressing the regulatory role of the public sector. Bentley (1999 p.205) comes to the similar view and suggests that users and designers can launch a common movement to heal the current design crisis given their shared common ground of aims and values. High quality of urban design (better designed public realm, environmental quality and low running costs) needs to be

championed as desirable goals by the market so that the developers can see the demand for it and the value of it, and subsequently invest in it.

2.4. Conclusions

This chapter has briefly reviewed the political economic of urban design, the Anglo-American history in developing urban design as public policy and their current best practices in design review. Firstly, as globalization and neo-liberal practices drive the current urban development, the public value of urban design is under threat, and a good balance of delivering public value and commercial value of urban design should be sought under the current political economic conditions.

Secondly, the brief history shows that the political economic conditions have been changing the role of urban design, from a tool to facilitate total redevelopment to a guide of incremental urban change. Urban design has been developing from the concerns of external appearance to a kind of environmental and socially responsive public policy. It integrates with the relevant planning and zoning tools to secure the public interest in private development. In detail, a discretionary planning system like the British one embeds urban design into development plan policies which are predominantly land use based, but then produces design guidance, masterplans, design briefs and codes, to introduce more certainty into the system to guide day-to-day development control and to embed design review in the process. A regulatory system like the American one refines its blunt zoning mechanism, by producing better urban design oriented comprehensive plans (or master plans) and urban design plans, revising the zoning ordinance, even replacing with form-based codes or creating 'discretionary zoning'. More local discretion is injected into zoning by public-private negotiation, community participation and design review as an external peer review mechanism to better development.

A question is raised subsequently on how urban design can be promoted as better public policy in practice. The controversies surrounding the operation of the Anglo-American design review provide some hints to the answer. From the public regulatory point of view, the key issues such as community vision, zoning and planning

integration, adapting the right design principles and due process of review are believed as essential to safeguard public interests in private development, and are crucial to make design review sophisticated. These 12 detailed practical principles are arguably adaptable to different political systems and development realities. From the market point of view, championing good design as the desirable goal in the development industry can also help to create some more socially and environmentally responsive designs. It is noted that there is no fixed form of perfect system of design review, but a system should learn from practice, and constantly refine itself according to the local and political economic conditions, to demonstrate its ability to protect the public interest which legitimates it as public policy.

Given the hybrid discretionary zoning-based planning system in China, the Anglo-American experiences provide good lessons for China to learn. But given China's rapid urbanization process, distinct pro-market central control political structure, and the unprecedented globalization, two questions are raised here. How is China developing urban design as public policy? And what are the opportunities and constraints, compared to the Anglo-American experiences. These questions are addressed in Chapter 5, 6 and 7. Attention now turns to developing the methodology to this research.

CHAPTER 3. FRAMEWORK FOR DESIGN CONTROL RESEARCH

3.1. Development models and design control research

This chapter develops a conceptual framework by which to understand the complex decision making process in urban design, which is sometimes referred to as the 'form-production process' (Bentley 1999), the 'politics of urban design' (McGlynn 1993), or 'implementing urban design' (Carmona et al. 2003). Scholars have been developing and adapting these models to better illustrate the complexities of property development, but each model has its limitations in application. Gore and Nicholson (1991), Healey (1991), and Ball (1998) have surveyed different research approaches on property development, and define five broad model approaches as below:

- ◆ *Equilibrium models*, based on neo-classical economics consider that economic signals (usually supply and demand) structure development activity (Healey 1991).
- ◆ *Event-sequence models* (Healey 1991), or sequential descriptions (Gore and Nicholson 1991) which treat development activities as a series of consequential stages of events to manage the development process. A typical application is the 'development-pipeline model' by Barrett and others (1978) which divides development activities into three main stages: 'development pressure and prospects', 'development feasibility' and 'implementation'. These models identify the potentially important events within the development process in various degrees, but they still lack the ability to explain how a particular form is affected by individual actors and interests.
- ◆ *Agency models* (Healey 1991), or behavioural or decision making approaches (Gore and Nicholson 1991), emphasizes the roles and interests of individual 'actors' or 'players' and how they utilize their strategies to make decisions in the

development process. But using an agency model alone fails to reflect the broader economic and socio-cultural factors (or structures) that help to determine a certain decision.

- ◆ *Structure models* (Healey 1991) or production-based analyses (Gore and Nicholson 1991), based on Marxist economics and urban political economy, focus on the power relations of capital, labour and landowners to organize the relationships and dynamics within the development process. These models have been extended by Healey (1992) using Institutional analysis.
- ◆ *Institutional models* (Ball 1998), use institutional analysis derived from various disciplines, including mainstream economics, politics and planning. Among these, Healey (1992) incorporates agency and structure approaches to explain the resources, rules and ideas that shape the actors' interests and strategies, which in turn determine the actors' power relations and their decision making in the development process.

These models all have the potential to help design control research, but the event-sequence models and the structure-agency models are the most appropriate ones to understand design decision making. These two kinds of models shed light on the procedural aspects and the actor-agency aspects of design development, so that the design decision making can be fully understood. The reason why other model approaches are ruled out is either because they are less developed in the design field, like the equilibrium models, which are largely concerned with the economic aspects of land development; or because they (particularly the institutional models) have probed deeply into political and economic discussions on land development and become too remote from the urban physical environment. The following review discusses how event-sequence models and structure-agency models have been used and potentially can be used in design control research.

3.2. Events in design development

3.2.1. Urban design in the land development process

Event-sequence models provide useful tools to understand specific land development processes. These models consider the land development process as a series of consequential events or management stages. The development pipeline model (Fig. 3.2.1) developed by Barrett and other researchers in 1978 has been broadly discussed in land development process research (see Adams 1994; Gore and Nicholson 1991; Healey 1991). This model logically organizes the events in the whole development process and summarizes the complex land development process into three broad categories: the external factors in the boxes inject development pressure and prospects in the first pipeline, for which the planning application marks the end point; the second pipeline involves the development of feasibility studies; the final pipeline looks at development implementation, construction and disposal.

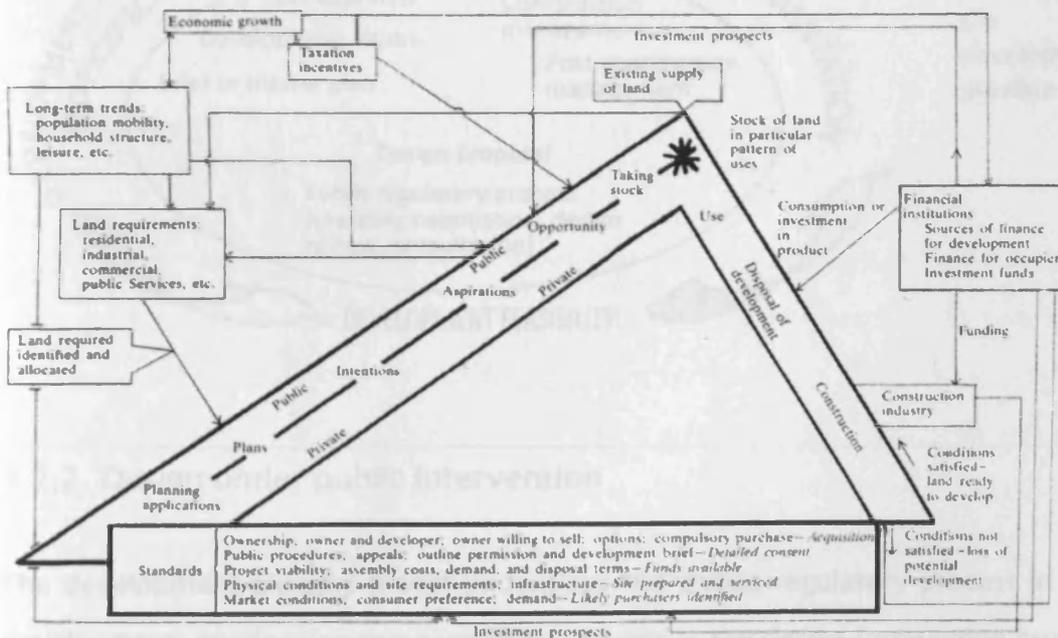


Fig. 3.2.1 Development pipeline, an event-based model (Source: Barrett et al. 1978).

Although the development pipeline model cannot explain why development takes the form it does (Carmona et al. 2003 p.215), it helps to explain how design is formulated at every stage of land development. Following this model, Carmona and other academics (2003 pp.215-9) further analyse the design activities within these three stages of private development (Fig. 3.2.2). Broadly speaking, at the first stage, when market demand is anticipated, the developer starts to develop a 'vision' for a potential site and may start to use designers to translate this 'vision' into a development brief or a concept plan. At the second stage, development feasibility studies are carried out, including surveying the site's physical conditions, developing alternative design proposals, and going through the public regulatory processes (negotiating with the planning authority on design matters, going through design review, or carrying out public consultation, etc.) to obtain a planning consent. At the final stage, after getting the planning consent, some design issues remain to be resolved at the construction management stage, to ensure the design vision and quality is achieved and costs are kept under control.

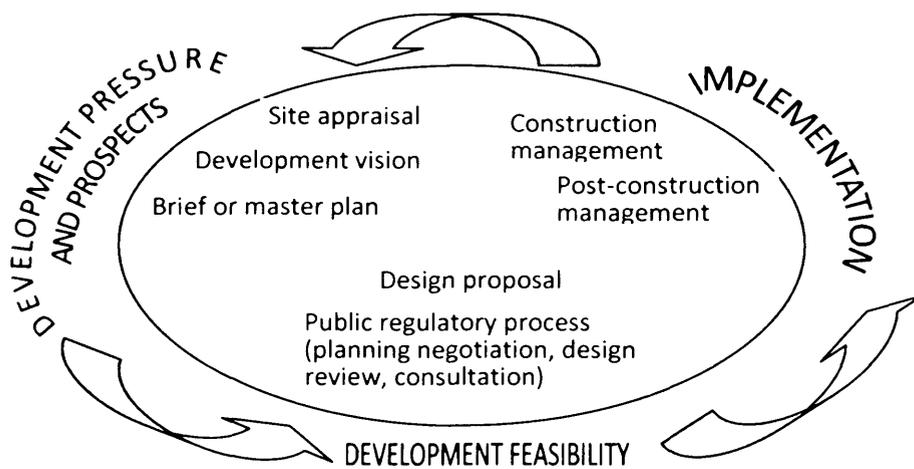


Fig. 3.2.2
Design
development in
the
development
pipeline

3.2.2. Design under public intervention

The development pipeline model underplays the public regulatory process in design development, overlooking some important events in the design formulation process. It is considered in this thesis that tracing the events in the general development process is useful, but that more attention should be paid to identify the key events that mark

public intervention in private development design, i.e., the planning system and its established regulatory processes. Understanding how a particular planning system is operated and where it impacts most on design development is crucial in this regard. With regards to the planning status of the development project, three broad stages can be defined in the public regulation process, including pre-planning policy formulation, planning regulatory process and post-planning monitoring (Fig. 3.2.3).

| Stages | Public activities to design | Design results |
|------------------------------------|---|---|
| Pre-planning | Anticipate development pressure; Promote development opportunities; Provide 'vision'; Prepare tools to secure 'vision': planning policy, design guidance, development brief, master plan and design code; Negotiate with potential developer. | For proactive local authorities, design 'vision' is to establish, the quality of the proposed development (density, uses, form, infrastructure, character of public space, etc.) is guaranteed. |
| Formal planning regulation process | Planning negotiation; Public or/and political consultation; Design review; Permitting procedure. | The design of the individual development is approved and quality of the public space approved. |
| Post-planning | Monitoring, management and enforcement; Dealing with planning appeals. | Development outcome; |

Fig. 3.2.3 Three stages of public intervention on land development design (Adapted from Carmona et al. 2003 p.215)

3.2.2.1. Pre-planning stage

At the first stage of pre-planning policy formulation, proactive local authorities anticipate development pressure or try to promote development opportunities, and start to formulate a 'vision' for the development by various means. Depending on the established planning system, the tools for 'vision development' include contextual and site analysis, planning policy, design guidance, development/design brief and, if the site is large and complex, perhaps even a masterplan and design code.

When a potential developer is identified, discussions or negotiations between the potential developer and the local authority are likely to take place before the formal planning application. Some important design decisions are often made at this stage

before an individual planning application is made, such as matters of transportation and infrastructure services, the character of the public space and even some aspects of the potential development. From the private perspective, in these early stages, the developer is also engaged in the process of buying or obtaining the land, borrowing money, thinking about potential tenants/investors and prospective buyers, local market conditions, and the design objectives. Discussions with the local authority are part of the developer's feasibility study. Nevertheless, when facing design-agnostic developers, careful preparation of a set of planning/design requirements at the pre-planning stage helps local authorities to strengthen their negotiation position and improves their chances of achieving better design in the planning stage.

3.2.2.2. Formal planning regulatory process

The second stage is the formal planning regulatory process to negotiate and determine a planning application, including the design proposal. The events taking place at this stage usually follow the local authority's working procedure, embracing formal application presentation, public consultation, the informal procedure of appraisal, consultation with specialists, and negotiation with other controllers including highway engineers, housing experts and others (Punter and Carmona 1997 pp.83-4). Economic and socio-environmental impacts of the scheme are assessed in due course.

Due to the precise nature of their zoning and planning controls, many American municipalities treat the permitting process as a 'checklist' process. The process follows the zoning ordinance and the local design guidelines which provide a clear set of parameters for the proposed development, although in practice many elements are subject to negotiation (Fig. 2.2.8). The British process relies on planning negotiation and planning officers' discretion with the help from design guidance/policy and design specialists to advise the local politicians who make the decision (Fig. 3.2.4).

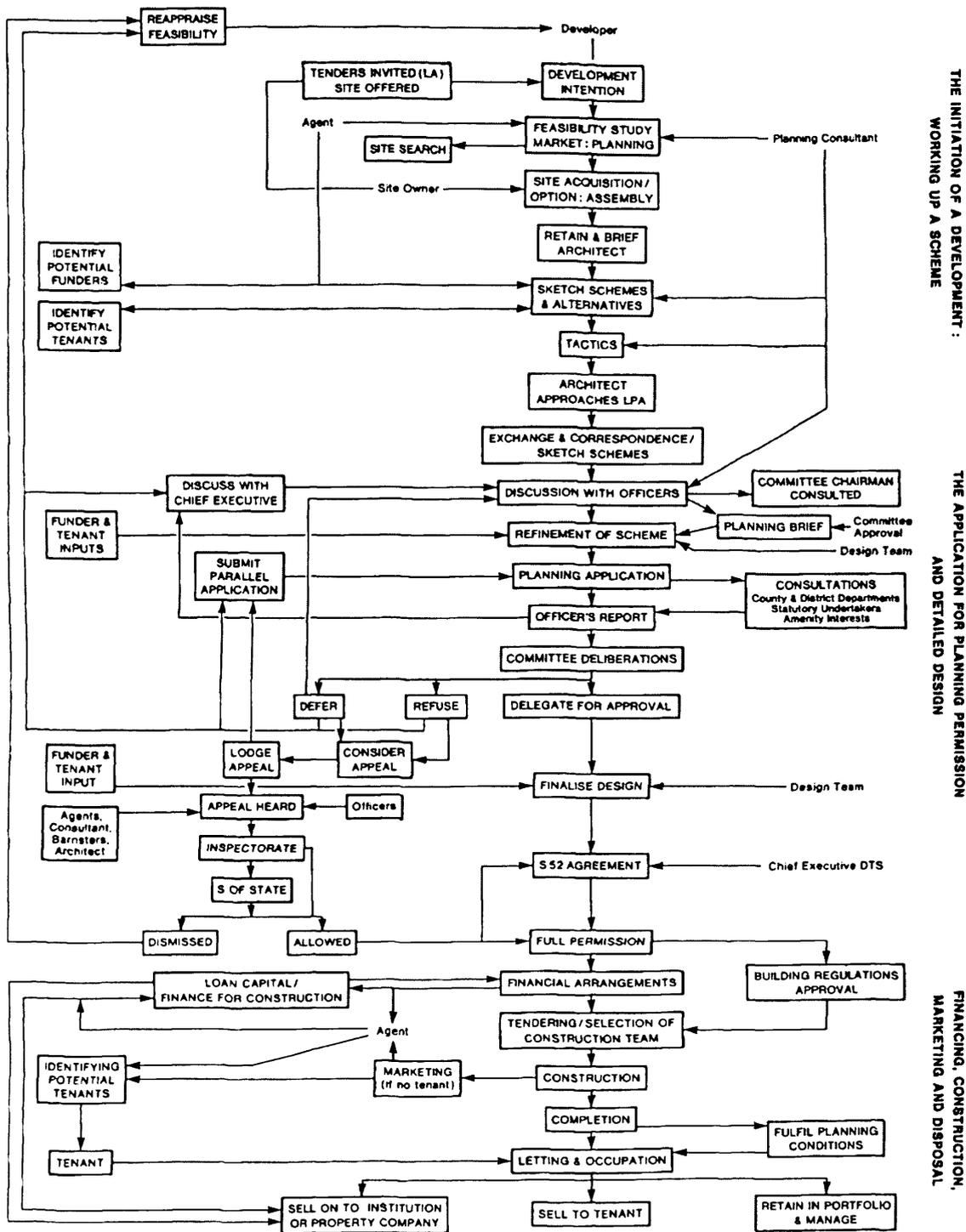


Fig. 3.2.4 Development review process in the UK (Source: Punter 1986 p.199). This Reading model describes a more holistic process of consultation and evaluation, and incorporates this into a wider consideration of the detailed deliberations of a developer.

Design review as a major part of the planning process is of particular interest. It determines the effectiveness of the public intervention on private project design, particularly on the issues of how it is organised, what relationship it has with the planning process, and to what degree the review report/result is taken into account

when making planning decisions. In practice, design review can be an integral part of the development control process, or a parallel process (Fig. 3.2.5). While being an integral part of the planning process (as in the UK), the design review outcomes are only one of the planning officer's 'material considerations' (alongside the economic, land use, social and political issues, and legal agreement over 'community benefits' or planning 'gain'). The US model tends to make design review a parallel process, or a discrete stage of planning, often with highly-skilled designers or articulated lay persons to offer intelligent comments (Punter 1999b). But the differences between the two systems are reducing as Britain develops a range of national, regional and local design panels to advise on design matters.

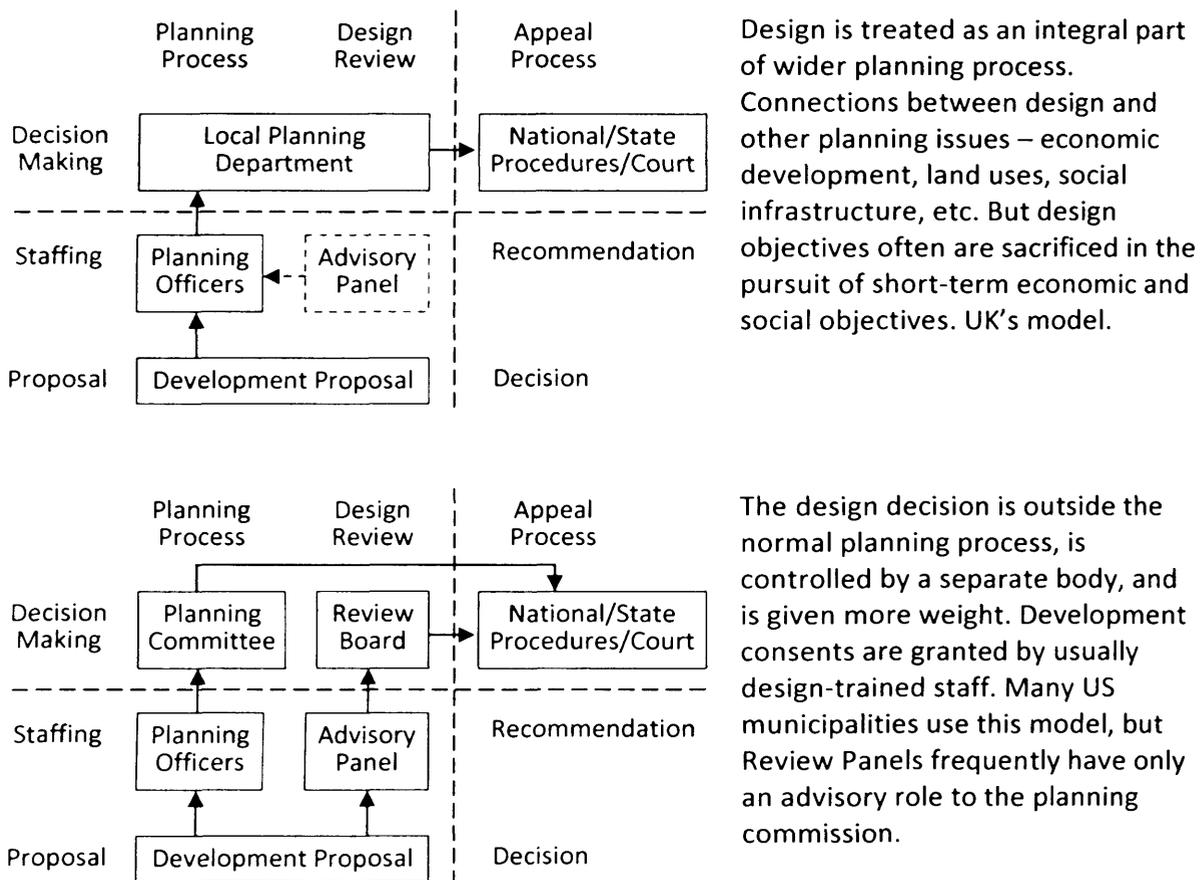


Fig. 3.2.5 The relationship between design review and planning process (Adapted from Carmona et al. 2003 p.253)

It is worth noting that the extent to which design review reports/results is taken into account in making the final planning decision is both a technical and a political issue. The degree to which design review reports/results influence the final planning decision

is subject to professional assessment and the particular priorities of the local politicians, and sometimes developers' political lobbying. Political backing on design control is therefore crucial for successful practice. This will be expanded on later when discussing different actors' roles in the process.

3.2.2.3. Post-planning

In the last stage, post-planning, the local authority should monitor the development to ensure it delivered the permitted parameters. If the application is refused, the planning authority may need to prepare for an appeal. In the UK, planning appeals are available only to developers whose applications have been refused permission (They can also appeal against non-determination). The appeal process establishes precedents for future planning decision making, and acts as a mechanism for the central government to influence local planning practice by ensuring that local authorities follow their advice. But in other countries with administrative planning systems, third parties also have the right to appeal against a permission if they can find reasons why it might have been illegal in substantive or procedural terms (Punter and Bell 2000). Such an appeal will be operated by a legal tribunal (Europe) by a local authority board (of professional or politicians), or an independent 'inspectorate'.

To sum up, event-sequence models help researchers to understand the design formulation in different development/regulatory stages in both private and public sectors. But using event-sequence models alone cannot fully reveal the reasons behind the development form formulation. As Bentley (1999) argues, the determination of the built form depends on the relationships and power-play between different actors, and the following section will discuss the agency approach to design control research.

3.3. Agencies in design development

3.3.1. Structure-agency approach in design development

In design control research, structure-agency models provide a useful means to understand why a particular form of development was designed, who made the decision and what the reason is. In the development process, agencies or actors are normally referred to as those who 'define and pursue their strategies, interests and actions', including landowners, developers, investors, professional advisers and those 'regulators' in the public sector (Adams 1994 p.65). In many circumstances, structure means 'the organization of economic and political activity and of the prevailing values that frame individual decision-making'. It is the combination of actors' internal and external resources, rules and ideas which in turn determines their roles, strategies and interests in the land development process (Healey 1992).

In terms of design, Knox and Ozolins (2000 p.4-5) suggest that the design process for a development can be understood as the involvement of a variety of 'actors' or decision makers with different goals and interpretations of market demand. They interact with each other and constitute an organizational framework for the evolution of the built environment. In fact, academics writing about urban design have used the structure-agency approach to explain the complicated relationship between the actors when making design decisions in the built environment (see, for example, Bentley 1999; Carmona et al. 2003; Punter 1986; Tiesdell and Adams 2004).

3.3.2. Agencies' powers on the design of the built environment

How much power do different agencies have to influence the design of the built environment? Bentley (1999 p.28) uses the phrase 'form-production' to explain the activities of land development and sees it as a 'battlefield', within which the outcome

is determined by power-plays between many actors who are 'plotting and scheming' to use their power and money to achieve their ideal built form. He argues that in the capitalist market economy, the resource-rich developer has the absolute power to determine what to build, and the design professions and regulatory bodies try to utilize their limited power to negotiate better design. In detail, McGlynn (1993) produces an interesting diagram to explain who controls what design elements (Fig. 3.3.1). The Powergram reveals that the power to decide the form of the built environment is highly concentrated on the supplier side, such as landowner, funder and developer. Design professions and the public have a wide range interests in the built form, but lack the power to influence it, or can only shape it in very prescribed and limited ways (e.g. highway regulations).

| Actors | Suppliers | | Producers | | | | Consumers | |
|---|------------|--------|-----------|-----------------|-------------------|------------|-----------------|----------------|
| | Land owner | Funder | Developer | Local authority | | Architects | Urban designers | Everyday users |
| | | | | Planners | Highway engineers | | | |
| Street pattern | - | - | ○ | ○ | ● | - | ○ | ○ |
| Blocks | - | - | - | - | - | - | ○ | - |
| Plots - subdivision & amalgamation | ● | ● | ● | ○ (in U.K.) | - | - | ○ | - |
| Land/building use | ● | ● | ● | ● | ⊕ | ○ | ○ | ○ |
| Building form - height/mass | - | ● | ● | ● | - | ⊕ | ○ | ○ |
| - orientation to public space | - | - | ○ | ⊕ | - | - | ○ | ○ |
| - elevations | - | ○ | ○ | ● | - | ⊕ | ○ | ○ |
| - elements of construction (details/materials) | - | ○ | ● | ⊕ | - | ⊕ | ○ | ○ |

| | |
|---|--|
| Key: ● Power—either to initiate or control. | ○ Interest/influence—by argument or participation only |
| ⊕ Responsibility—legislative or contractual | - No obvious interest |

Fig. 3.3.1 Powergram in urban design (Source: McGlynn 1993)

On individual developments, actors interact with each other and trade off different criteria. Carmona et al (2003 pp.219-28), propose five factors which help to understand the actors' involvements, such as project time-span, financial objectives, functional design, external appearance and contextual design (Fig. 3.3.2). Their model shows that actors on the demand side have a long-term interest in the development and are very conscious about the design issues; while those actors on the supply side often only have a short-term interest in the development and less interest in the

design issues, or are only interested in the financial performance of design. They argue that the final design outcome depends on the motivation, interactions and differential power of actors. Healey's notion of 'structure' is then expanded as clients' requirements, market conditions, site limitations, public sector's requirements, rent difference in different locations and other short-term objectives (Carmona et al. 2003 p.220). The following review discusses how actors interact with each other in this structure.

| DEMAND SIDE | Time scale | Financial strategy | Functionality | External appearance | Relation to context |
|---------------------|------------|--------------------|-----------------|---------------------|---------------------|
| INVESTORS | Long-term | Profit-max | Yes (financial) | Yes (financial) | Yes (financial) |
| OCCUPIERS | Long-term | Cost-min | Yes | Yes (marketing) | Yes (connections) |
| PUBLIC SECTOR | Long-term | Neutral | Yes | Yes | Yes |
| ADJACENT LANDOWNERS | Long-term | Protect value | No | Yes | Yes |
| GENERAL PUBLIC | Long-term | Neutral | Yes | Yes (edge) | Yes |
| SUPPLY SIDE | | | | | |
| LANDOWNER | Short-term | Profit-max | No | No | No |
| DEVELOPERS | Short-term | Profit-max | Yes (financial) | Yes (financial) | Yes (financial) |
| FUNDERS | Short-term | Profit-max | No | No | No |
| BUILDER | Short-term | Profit-max | No | Yes | No |
| PROPERTY AGENT | Short-term | Profit-max | Yes | Yes (financial) | No |
| ARCHITECT | Short-term | Profit-max | Yes | Yes | No |

Fig. 3.3.2 Motivation of development actors (Adapted from Carmona et al. 2003 pp.221-2). This figure illustrates that the actors on the demand side have long-term interests in the land development, and the actors on the supply side have short-term and profit-oriented interests.

3.3.2.1. Developers

Developers (or more accurately speculative developers) are short-term profit-motivated, with an interest in design but largely limited by financial boundaries (Carmona et al. 2003 pp.220-3). Depending on the circumstances, the developer may be interested in the construction contract, in project management, in 'selling on' the permission or the completed development, or in retaining the project for self use or

leasing (Punter 1986). Generally, developers' interests lie in the gap between the value of the completed development and the cost of the development (the site acquisition, finance, professional advice, construction costs, etc.), that is to say in their profit. In most cases, the amount of floor space developed dictates the developer's profits, and it is therefore the most contested element in many of the design/planning negotiations.

Although speculative developers' design motivations are largely dependent on the preferences of the investors or occupiers, generally they seek opportunities to cut the design and construction costs to increase the short-term financial return. In some circumstances, they may be the investors or occupiers as well. In this case, their role would change fundamentally and require greater attention to the long-term performance of the development, which has huge effect on design. Both investor-developers and companies developing buildings for their own use (custom development) are far more likely to invest in good design.

The concept of 'opportunity space' suggested by Tiesdell and Adams (2004) is useful to explain developer's interest in design (Fig. 3.3.3). They argue that market conditions, public regulation and site constraint together affect developer's opportunity space. From the design control point of view, the first two elements are most relevant. Firstly, developers gather the knowledge from real estate agents and from their market experiences, knowing what their prospective tenant wants. In a general market condition, developers want some standardized and tested products for their tenants to appeal to a wide range of occupiers and to reduce the risk (Punter 1986). Developers also tend to be flexible with design in order to meet changing circumstances such as buildability, cost efficiency, visual impact (corporate image), and management implications (running costs) (Rowley 1998). Some elements of better urban design can result in high costs, and some do not. If higher costs occur, developers need to make sure the potential occupiers will appreciate it and are willing to pay for it. Otherwise, they are unlikely to supply it because of the financial risk. When the market is competitive, the developers tend to take much more care over design and to provide more value-adding elements. When there is no competition, the developer tends to

provide basic (average in quality) products to achieve his financial gain, and a situation of 'producer sovereignty' prevails (Tiesdell and Adams 2004).

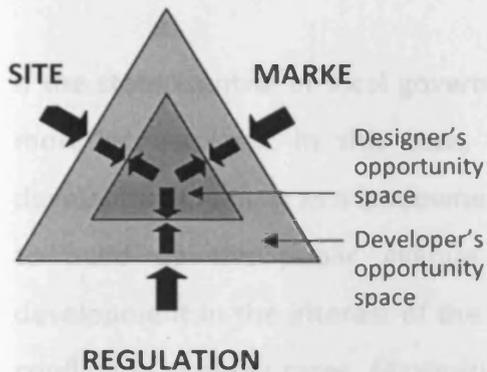


Fig. 3.3.3 Three external forces define the opportunity spaces for developer and designer (Source: Tiesdell and Adams 2004 p.33).

SITE – moving towards the centre represents a more constrained site; MARKET – moving towards the centre represents a more competitive market; REGULATION – moving towards the centre represents a more demanding regulatory context.

Secondly, in the Tiesdell and Adams model, public regulation affects developers' opportunity space. In most cases, local government's anxiety to attract investments to finance the public goods puts private developers in a strong position in planning negotiation. But when a political decision is made to tighten public regulation (i.e., restricting development in 'greenfield' sites, raising the building energy performance standards, or imposing tougher review on the design impacts on the public spaces), the developer's opportunity space is subsequently reduced. The developer then needs to pay more attention to the relevant planning and design requirements, comply with the design guidance, and perhaps to rely more on their professional design advisers.

3.3.2.2. Landowners

Landowners' objectives in development are normally short-term and financial. They are mainly interested in releasing the land for development when their estimated price is met (Adams 1994). Landowners can influence the city development outcomes in three ways: (1) influencing the spatial pattern of land development, by deciding size and location of the land parcel (Knox and Ozolins 2000); (2) influencing the nature of the development by attaching conditions on land disposal, forming development partnership or using design code (Knox and Ozolins 2000); (3) maintaining a long-term interest in the development by leasing the site rather than selling it (Carmona et al.

2003 pp.223-4). Some landowners take a long term interest in design quality, especially if they live in the locality or own other properties in the vicinity and have a stake in the future development, or an emotional attachment to the area.

If the state (central or local government) acts as the land owner, the issue would be more complicated. In this case, the state has dual roles and interests in land development. One is as a landowner to maximize the financial return from leasing land to build up the public avenue. Another is to challenge/regulate the private development in the interest of the general public. These two roles have proved to be conflicting in many cases. Maximizing the land value by relaxing the public regulation can seriously damage public good and local planning strategies (Booth 1996; Cuthbert 1995). But sometimes the public landownership can also be used as a crucial means to secure the public good such as imposing more design-conscious regulations, seeking social or environmental benefits, or directly providing amenities and/or infrastructure.

3.3.2.3. Designers

Architects and urban designers' interest in a development is normally short-term in getting their design service fees. But they can be considering longer-term impacts of the project, as they may use the completed project as an advertisement for their firm (Carmona et al. 2003 pp.229-32). Tiesdell and Adams (2004) suggest that designers have opportunity space as well, and this is constrained by the same factors that developers are facing, but is also constrained by how developers react to these factors (Fig. 3.3.3). Generally, designers respond to the market signal and form a unique selling point, to draw up an acceptable scheme for developers (Bentley 1999). They have the freedom to interpret the developer's brief, but at the same time they are constrained by the developer's requirements for market-tested standard forms, minimizing the costs, and generally producing the rentable/sellable floor space that the market needs. If the design task is challenging, such as when facing a major site constraint or strict public regulation, the designer would be given more opportunity space to minimize the constraints and to meet the relevant public regulation by

drawing up some innovative design. Some skilled and influential designers are even used by developers as the 'lubricators' in the planning process by using their skills and prestige to bend local regulations (McNeill 2007).

3.3.2.4. Planning officers

Planning officers are in the frontline dealing with day-to-day planning applications and directly negotiating with developers on behalf of the local authority. They are expected to use their professional expertise to achieve the well-defined local planning objectives. In dealing with planning applications, for example in the UK, planners are expected to do the site and policy analysis, review the application, instigate public consultation, obtain specialist advice (design specialist, conservationists, highway engineers and others), negotiate design improvements, define implementation conditions (phasing, planning gain, reserved matters and others), and finally make the planning decision with dedicated power or recommend to planning committee for a decision (Carmona et al. 2003). This requires the planning officers to have interactive and collaborative skills to draw different interests together, and to be equipped with the skills to assess design and to advise on potential improvements. In making planning decisions, the relationship between local politicians and planning officers is important as they can affect the planners' confidence in negotiations, and determine the extent to which local politicians heed planners' advice. In terms of design control, highly skilled planning officers backed by strong political support, would be the ideal situation. However, more usually, tight local budgets that emanate from neo-liberal governance make it difficult for the local authorities to improve their in-house design skills (Punter 2007 p.195).

3.3.2.5. Local politicians

As the decision-makers in local authorities, local politicians are accountable to the electorate, making the final decision according to their political hierarchy (Savitch and

Kantor 2002). As has been discussed in Chapter 2, local authorities are now performing new roles to attract inward investment to boost local economic growth and to ensure the provision of public goods through planning agreements or impact assessments. In most cities, economic development is the priority of the local political agenda and land developments are welcomed. This is because cities need investments to build up their tax revenue, and they welcome the physical improvements and new occupiers attracted by the new developments, and expect the developers to contribute more public amenities. In return, local politicians are likely to relax some aspects of the public regulations to stimulate land development, sometimes as the result of the developer's political lobbying.

Local politicians' interest in design is in line with their political objectives, but they are normally inexperienced in design matters and frequently design illiterate. They recognise and support the 'image upgrade' of the cities as a marketing point, but often fail to recognize the social and environmental value of good urban design. The situation seems to be worsened in the neo-liberal governance climate where 'iconic' design for place promotion is a common phenomenon (Kaika and Theielen 2006; Sklair 2005, 2006). Politicians don't always interfere with the planning issues, but only do it on the locally significant projects. If the planners' or experts' advice is considered as the barrier to land development, this advice is likely to be ignored by local politicians (Charney 2007) and a political environment of anti-design control is easily created locally. But exceptions exist in that some design-aware local politicians have provided strong political support for public design intervention, such as in New York in the 1970s (Barnett 1974).

3.4. Conclusion

To conclude, event-sequence models and structure-agency models derived from the land development research are extremely helpful for design control research. The former provide a clear framework to understand the evolution of a project design from the 'visioning' stage to design negotiation and further to design implementation and construction. For design control, the events in public regulatory process are of particular interest, including how the design criteria are established in pre-planning stage at policy or masterplan level, how design conflicts are resolved through planning and design review/peer review processes, and how the design outcome is ensured in construction and management. However, to understand why the development takes the form it current does, structure-agency models provide a better approach. They enable researchers to explore the power relations between different actors with different strategies, interests and actions, according to the structure formed by their resources, rules and ideas including the ones in design. A detailed research framework needs to be established based on these two kinds of models for a better understanding of design control in a certain locality.

CHAPTER 4. RESEARCH FRAMEWORK AND METHODOLOGY

4.1. Research design

The research strategy was designed according to the nature of the research objectives and questions. As stated in Chapter 1, **the purpose of this research is to provide empirical evidence to explain how Chinese cities have been developing urban design as public policy under current political and economic conditions, to identify the strengths and weaknesses of the evolving system, and to provide recommendations for practical improvement.** A set of specific research questions were subsequently formulated:

1. How is urban design as public policy integrated into the Chinese planning system?
2. Whose vision underpins urban design practice? And by what means?
3. What instruments have been used by planners to promote good design?
4. What design principles have been used to underpin design decision making?
5. How effective is the regulatory process in promoting good design?
6. How do the political and economic conditions influence urban design practice, and whose design interests have been served in the development process?
7. What is the quality of design outcome of Chinese urban developments?
8. What measures are possible to help achieve better practice and design outcomes?

In designing the research, the first step was to set the context with a review of the Chinese system of planning and design, which would also facilitate the generalization of the research findings. The second step was to select a national 'exemplar' – Shenzhen – as a case study and explain its sophisticated design control system. The third step was to reconstruct the selected 11 commercial office development

'embedded' case studies to reveal the complexities of Shenzhen's approach to urban design, different development situations, and their design outcomes. The fourth step was an overall evaluation looking at the international aspirations of good practice in design control, and the final step was to make some practical suggestions on improving the existing Chinese practice (Fig. 4.1.1).

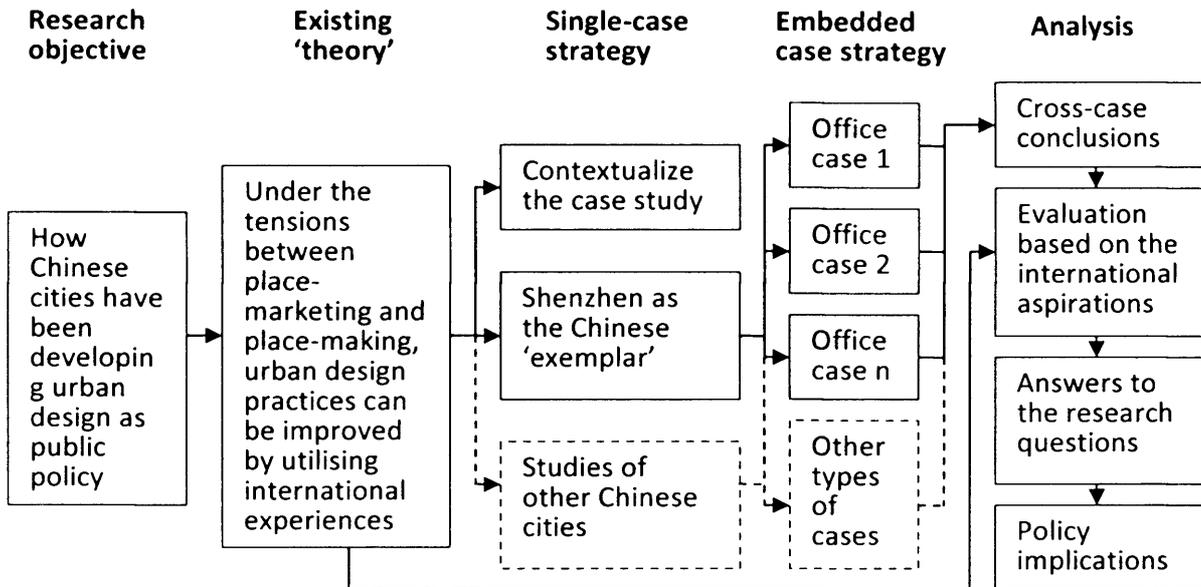


Fig. 4.1.1 Research design

4.1.1. Chinese planning and design, and the case-study context

To commence the empirical research, a general historical review of Chinese planning and urban design was carried out (Chapter 5). On the one hand, it reviewed the urban form making ideologies through significant historical periods. This includes the traditional Confucian and *Fengshui* design ideologies, as well as the Socialist design traditions extant prior to the market opening-up. These constitute the cultural background of the Chinese urban design, and they continue to exert some influence on current practice. The historical analysis provided the background for an analysis of planning and design practice in post-reform China, providing a political and economic analysis of China's unprecedented land development process, and reviewing some typical characteristics of Chinese urban design against this unique background. It explains the role of urban design in the current planning practice framework, and also

explains the necessary cultural, political, economic and institutional backgrounds to development, planning and urban design. This analysis is important in its own right, as a return will be made in the conclusion to the question of how China might best develop appropriate urban design practices. But it also provides the context for the study of Shenzhen as an 'exemplar' of good practice. The value, utility and methodology of a case study approach are now explored.

4.1.2. A single-embedded case study

4.1.2.1. A single-case study

Given the nature of this research, a case-study approach was developed as the research strategy for the following four reasons. It helps explain how and why design decisions were made, with a focus on the contemporary urban design practice, without requiring the researcher to participate (Yin 2003 pp.3-9); It provides the opportunity to explore the contextual conditions, which can help this research to generalize the research findings; It can provide some in-depth explorations of institutional activities and decision-making processes which shape development; And the case-study approach also allows the researcher to evaluate the actual design outcomes.

Previous research has demonstrated the value of using a case-study as the strategy for urban design research. For example, Jacobs' critique (1961) of 'modernist' planning and her promotion of the traditional neighbourhood were based on her observations of particular places in New York City; Barnett's advocacy (1974) of urban design as public policy was based on New York's experience; Loukaitou-Sideris and Banerjee's research (1998) on the place-making in American downtowns used case studies from San Francisco, Los Angeles, and San Diego to underpin their arguments; Punter's extensive research on revealing and assessing the urban design aspect of planning was dominated by case-study strategy, such as his studies on Bristol's design control to

office development (1990), on the American Design Guidelines (1999b), on Vancouver's urban design achievements (2003), and on Sydney's urban design experiences (2005).

For this research, a single-case study was proposed, selecting a city with particularly sophisticated processes and controls – Shenzhen – to reveal the leading edge of contemporary Chinese design control. Although multiple-case studies in several Chinese cities might better illustrate the general approach to urban design in China, given the time and resource constraints, exploring practices and design outcomes in a single city was more practical and manageable. Studying an individual city also allows a deeper and more comprehensive understanding of the administrative decision making traditions, the local economic environment, and the evolving practices within it. The succession of projects within the city through time provides an opportunity to observe how the particular city has 'learned' from its own practice.

The choice of Shenzhen matches some pre-conditions for a single-case study synthesized by Yin (2003 pp.39-42). Firstly, it is both a 'unique case' being an 'exemplar' at the leading edge of urban design practice and a 'representative case' utilizing the framework of the Chinese planning system. Shenzhen was one of the first cities in China to use urban design for city marketing alongside Shanghai, Beijing and others; it was the first Chinese city to establish local planning legislation to systematically regulate the processes of plan making and decision discretion. It was also the first Chinese city to legitimate urban design in the local planning system. Shenzhen's experiences are also experimental, providing solid examples of innovation in national policy making, such as privatizing public land, and planning management innovations. Secondly, it is a 'revelatory case', in which the researcher had a unique opportunity to access information previously not available to other researchers. In this regard, the researcher was previously involved in a practical research project – *The Effectiveness of Shenzhen's Urban Design Control*⁹ – commissioned by Shenzhen's

⁹ This project lasted from 2004 to 2005 discontinuously. The objectives were to evaluate the effectiveness of the urban design control in Shenzhen, to recommend practical improvements and to prepare for the making of Shenzhen's *Architecture and Urban Design Standard*. But the change of the senior officials in the planning authority

planning authority. This provided crucial contacts for data collection and was beneficial in terms of Shenzhen's relatively open political climate and its eagerness to promote urban design. Shenzhen's planning officers tend to be more available to be interviewed and willing to provide the necessary information for comprehensive urban design research.

Therefore, the research strategy was to develop a set of case studies of individual developments in order to explore **how Shenzhen has been developing urban design as public policy**. The same advantages of the case-study approach were employed to explore the actual design control decisions, building up a detailed picture of the city's practices and their design outcomes. So a multiple-case study approach was 'embedded' in the single-case study.

4.1.2.2. An 'embedded' case study

In deciding the suitable cases for in-depth enquiry, it was acknowledged that different types of developments have different development traditions and different responses to the market. To enable the chosen cases to have a certain degree of replication and to reduce extraneous influences (Yin 2003 pp.47-8), this research focused on commercial office development. One reason for this choice is that commercial office buildings are at the cutting edge of Chinese private commercial land development and are key elements in the shaping of physical urban space. In many cases, they are the most visible structures in cities with high profile, 'iconic' and globalized architectural design. However, they also create the greatest tension as regards the quality of urban design and public amenity. The number of commercial office developments has been increasing in Shenzhen, as the result of the city's promotion of the service sector. There is a wide range of projects from completed developments to those still in the planning process, and from city/district centres to non-central locations, to choose

subsequently suspended this project. A few case-studies were completed, and they mainly concentrated on the design outcomes. They were dominated by residential developments with two commercial office projects. The latter cases were included in this research with further explorations into their development histories by the researcher.

from. The succession of these projects fully reflects the city's evolving practice over the last two decades.

4.1.2.3. Criteria for choosing the embedded cases

Selecting appropriate cases is crucial to successful case-study research. The selection tried to cover a wide range of commercial office developments based on three criteria. Firstly, they needed be completed within the last five years or still be in the planning process to reflect recent practice. Secondly, the preference was to include not only completed projects for the ease of post-construction evaluation, but also ones still in the planning process to provide opportunities to observe live planning processes and the contemporary situation. Thirdly, to build up a full picture of Shenzhen's practice, the cases needed to cover both central and non-central locations, both masterplanned and individual developments. Apart from the normal projects which went through streamlined development processes, some 'abnormal' cases like unlawful developments and appeal cases were also examined to look at where the processes broke down.

At the beginning of the research, through internet research, discussion with planning officers, and reviewing the planning authority's archives, 28 potential cases were identified (Appendix 2). Not every case could be fully investigated due to the time and resource constraints, the availability of the interviewees and the lack of other case-related information. After the initial data collection, the cases without enough information to illustrate the design evolution were excluded, leaving the ones with full histories and the ones where the majority of the key actors could be interviewed. Eventually, 11 development projects in Shenzhen were completed according to the above selection criteria (Appendix 3).

To reveal the development/design history of each case study, research approaches adapted from previous property development and urban design/design control research were utilised (see Chapter 3). The event-sequence model was adopted to

reveal the evolution of design development, starting from the preparation of the planning conditions/urban plan, to the process of land leasing, to different stages of design developments and design reviews, and eventually to the development outcome. The structure-agency model was used through interviews to explore the key actors' motivations, values, and constraints, and to reveal the political and economic impacts on the design processes and outcomes. During the fieldwork, a narrative case study database was developed to document the histories of each of the design developments.

This database is included in Appendix 4. Each project development background, planning and design negotiations, and design outcomes are described, with case evaluations presented. The inclusion of Appendix 4 provides a basis for systematic replication and consistency of approach to each case-study so that the research findings and the final analysis in Chapter 7 and 8 can be checked back through careful readings of each individual case history, and the evidence fully evaluated.

4.2. Fieldwork strategy and research methods

4.2.1. A 'snowball approach' and mixed methods

In reality, to collect the suitable and relevant data based on the above criteria was not a straightforward process. A 'snowball approach' mixed with different kinds of research methods, was used both to identify the suitable cases and to build up the case database. This approach generated a large amount of relevant data from various sources continuously. It broadened the idea of asking one interviewee to recommend another (Babbie 2007), by regarding all the available sources as the potential 'informers' to identify the next interviewee or particular document for further enquiry. By using this technique, the fieldwork research established a chain of informers and documents for data collection. Such mixed research methods can increase the accuracy of research data and better reflect the complexity of the nature of project development (Alexander et al. 2008). In this research, the methods used to collect the data included participant-observation, documentary review, interview, and design evaluation.

4.2.2. Participant-observation

In this research, the 'snowball approach' started from participant-observation in Shenzhen's planning authority. The reasons for doing participant-observation was because it enabled the researcher to gain more insight in the field to enhance the quality of the data, and to develop a 'membership' role in the studied communities (Angrosino and Mays de Perez 2000). In this process, the researcher established a moderate level of participation to balance the roles of 'insider' and 'outsider' (Spradley 1980), and disengaged from the discussions and negotiations of those projects which had become case studies.

Benefiting from the previous collaboration with Shenzhen's planning authority, the researcher was easily accepted as a participant-observer. In return, the researcher was required to assist some of the staff's daily work tasks without pay, such as to facilitate design reviews for some planning applications, to help the planning officers to prepare design review reports, and to join in the discussions of some of their emerging urban design projects or masterplans. For this research project, in the first two years, the researcher participated in this role twice for three months each time, during the summers. This was an extremely valuable opportunity to use the planning authority's rich resources to help the development of the case database, to review the project archives, to identify potential interviewees and to carry out interviews to the planning officers. Two immediate benefits from participant-observation are explained.

The first benefit was the ease of case selection. In the participant-observation process, some potential office developments were identified through reviewing the planning authority's archives and discussions with the planning officers (accompanied by internet research and news archive review). Once the potential cases were identified, they were kept in a preliminary database, which was to be completed through the subsequent stages of data collection.

Another benefit of this participant-observation was that it provided opportunities to observe project design review and sometimes design negotiations. In the fieldwork, the researcher observed some 15 meetings involving design negotiations/discussions for various projects. In these meetings, the researcher acted as an outsider to observe the participators' behaviours and interactions. These meetings normally took place between the planning officers, developer's representatives and the architects. But sometimes, urban designers, the developers themselves and even the local politicians were involved. From their detailed discussions, the participants' interests and influences as well as their design concepts were revealed. Note taking was the major technique used to record these meetings. Any useful information about the design development and the roles of the key actors was recorded in the case database.

4.2.3. Documentary review

Documentary review is an important method for planning research. In this research, information on Shenzhen's general political and economic conditions, as well as its general approach to urban planning and design, was collected mainly by documentary review. These documents included the local newspaper, the local government's statistical publications, and planning authority's publications on the administrative regulation, local plans and other relevant materials.

In developing the case database, documentary review was a vital means of finding and examining the project design development process. Because the Chinese planning permitting process is the design control process, the evolution of the project design can be recorded in significant detail by the planning permitting process. Participant-observation in the planning authority provided the researcher unlimited access to most of the official records, such as project archives (including drawings and maps), reports, correspondence and meeting minutes and memoranda, which revealed the project's planning history and the important discussions during planning negotiation. Another source for revealing the history of some projects' design developments is the planning authority's series of publications on the Futian CBD's planning and design (Huang 2002; Li 2002). Although these publications are slightly outdated, they provide some useful in-depth views of the planning authority on some specific projects.

4.2.4. Interview

Interviewing was the best way to explore different actors' roles, interests and powers in controlling design. Face-to-face interview was preferred in this research to use drawings to note the detailed design changes and to find out different actors' inputs into different design elements.

Finding the right informers was critical to the success of interview (Fontana and Frey 2000). They were identified through documentary review and discussions with the planning officers. The developers, project architects, planning case officers, the relevant urban designers and local politicians were all targeted for interview. But from time to time, certain key actors were difficult to contact or interview. Some architects, developers or urban designers were from another city or overseas, and some case planning officers no longer worked in the planning authority. Where this was the case, alternative interviewees were identified to gather their perspectives on those key actors' interests and opinions at the time of design development. These alternative interviewees were normally recommended by planning officers, project architects or even urban designers during interview. Developers were normally not available for interview due to their tight schedules or their lack of interest in this research. As an alternative, their representatives or some senior managers in their corporations were interviewed. For the same reason, interviews with local politicians were not always secured, but planning officers were able to explain some of the politicians' concerns on design. In this research, the researcher interviewed nine planning officers, six architects, seven urban designers, three developers and their representatives, and two real estate agents. Some of these individuals were interviewed several times on different development projects.

These in-depth interviews were semi-structured to allow the interviewees to focus on some established questions, and to accommodate some open-ended results for a greater breadth of data (Fontana and Frey 2000). Interviewees were asked two sets of questions, most of which were open questions to allow the interviewees to respond in the way they preferred (Simmons 2008). But not all the questions were asked of the same interviewee, instead, only those deemed relevant. The first one was a set of general questions (Appendix 1), developed according to the research questions. In the fieldwork, these questions were explained in detail so that the interviewees fully understood the focus of the enquiry.

The second set of questions was for individual development projects. Initially, a set of standard questions were established for the purpose of exploring the key actors'

interests and powers in design development, revealing the whole story of the design development, as well as their evaluations to the development (Appendix 1). They covered all the design stages and tried to tease out the factors which affected design decision making at each stage – the preparation of the relevant urban plans, the process of land leasing, the application of land use control, architectural design control and building control, as well as the post-planning events. Other more specific questions regarding the particular case were added as necessary. The interviewees were also asked to supply the project-related drawings and maps wherever possible.

For every development project, the more available the interviewees were, the earlier they were interviewed, and usually, after documentary review, the interviews took place in this sequence: case officer – urban designer – architect – developer. The data collected from each research action was recorded in the case database narrative. By this means, it could inform the next research action to complete and validate the data.

Apart from formal interviews, informal interviews with the planning officers were carried out frequently during the participant-observation, whenever it was convenient. These interviews took the form of chatting, as the researcher tried to tease out planning officers' conception of urban design, their attitudes in some development projects, and sought to find out some key informers.

4.2.5. Design evaluation

The evaluation of the design outcome was an important means to assess the effectiveness of design control. Larice and Macdonald (2007) conclude that such place-related research is likely to be empirical and phenomenological with large amount of field observation and environmental behaviour methods. A lot of place related research used field observation of the social life within the surrounding settings, such as Whyte's research on small public spaces (1980) and Gehl's research on how people used public spaces (1987). But if the development is not yet completed or not yet occupied, this method could not generate any meaningful data. Within the

selected 11 development projects, there were only two of projects fully completed and occupied. Therefore, alternative methods had to be identified to evaluate the design outcome without the need to observe how the people use the building/space.

The generic urban design principles discussed in Chapter 2 (Fig. 2.2.2) provide a useful means for this assessment. These principles are intended to promote urban design's public value, and are widely accepted. In the absence of other relevant criteria, they were considered to be the most useful for the design assessment. In assessing the project design, no matter if it was still in the drawing board or it was completed, attention was paid to the site, the form of the development, its relationship with its surroundings, the public space, the street, the potential activity support, parking and transportation strategy, the pedestrian experience, and the relevant sustainability/energy efficient designs against the generic urban design principles.

The researcher undertook site visits for all the 11 case studies in the morning and in the afternoon, observing the urban design qualities. This systematic observation was carried out according to the key issues derived from the generic urban design principles: how the building is related to the street; how the ground floor is used; how the public realm is the enclosed and supported by active land use; how (would) the people use the public space; how the landscape design contributes to the quality of public realm; how easily the pedestrian can access the site and building; how the development is serviced; how the micro climate is like; how the site is connected with public transport; how the development fit into its neighbours in terms of form, height, elevational design, and land use; what is the development's visual impact to the city. Photo taking and note taking were employed to record the physical conditions of the site, its context and the development's impacts on the public realm and the human activities. The results of the evaluations have been documented in Appendix 4 under the 'Design Outcomes' section of every case study, using site photos or drawings with evaluation annotations to mark the project's successes and failures in design terms.

4.2.6. Research constraints

Researching the detailed land development process in China is always difficult, especially when it embraces the political process, developer-politician relationships and the transparency of public decision making. First of all, the lack of transparency in public decision making keeps the process known only by a small amount of people (local politicians, some senior officials and the developers), and discourages interviewees from revealing the details of the process. This problem was much greater if the local politicians had personal interests in a particular land development. Then even the junior planning officers might not understand how a particular decision was made, to say nothing of the general public. This was why some planning officers could not provide convincing answers when asked about the rationale behind the change of the key planning parameters. In this case, their most frequent answers would be that 'the urban plan has decided it' or 'because it has been approved by the Planning Committee'. But why it had been approved could not be explained.

Difficulties also arose from the lack of investigative research tradition in China and the interviewees' suspicions of the researcher's motivations. Interviewees, especially the developers and some planning officers, were reluctant to answer the sensitive questions directly (such as the issues of leasing public land at negotiated price and some significant increase of floor space). Speculative developers tended to take a more defensive approach in interview. They tried to avoid the exploration of their relationships with the local politicians and some of the senior planning officials, which in many cases were their reasons for winning the planning permissions. When asked about land leasing, some planning officers preferred to answer that 'It was not my responsibility. So please ask someone else.'

These difficulties forced the researcher to be 'unobtrusive' and devious when proposing some sensitive or difficult questions. Most of the time, questions needed to be restructured in the field to raise the interviewees' interests and to gain their trust, so that they would talk freely more and offer more usable information. Although the researcher was not able to really explore the raw decision-making process, this

technique provided at least some hints as to what was really happening in negotiations. In this case the triangulation approach offered considerable help in validating the data collected and completing the case database, which in turn revealed a more comprehensive picture of the decision making process.

Due to the time and resource constraints, this research did not include any interviews or questionnaires to explore the users' preferences on the design outcomes of the development projects. Instead, it used site evaluation to assess the design quality based on the generic urban design principles. If these interviews or questionnaires could have been carried out, the evaluation of the design outcome could have been deeper, and the public value of the current design outcomes could have been explored more thoroughly. It also might have revealed more about the applicability of Western urban design principles in Chinese design practice.

4.2.7. Ethical issues

Finally this research fully acknowledged the issue of research ethics. According to Christians (2000), codes of ethics in social science should be emphasized. In collecting the data, the interviewees and the planning authority were informed of the nature and consequences of this research; all personal data and commercially or politically sensitive data were concealed; and prior to tape recording, photography and material copying (including design materials), permissions from the interviewees or the relevant owners were sought before the actions were taken.

4.3. Summary

In summary, this chapter first justifies the choice of single-embedded case study as the research strategy. In detail, it explains that Shenzhen is the 'exemplar' in China in promoting urban design. Its experience can be generalized to reflect the practices in other Chinese cities and it leads the way forward. Furthermore, for the ease of data collection and the ease of generalization, the embedded cases only include commercial office developments. At the same time, the criteria for selecting the office development projects are also discussed.

This chapter also explains in detail why particular research methods were chosen and how they were applied in the field. Participant-observation in the planning authority was the overarching method used, due to its convenience, to carry out other research actions and to observe the design negotiations. Documentary review was the preferred method used to identify the potential cases and to develop the preliminary case database, according to the planning permitting sequence. Semi-structured interviews were carried out with the key actors to explore their interests and powers in design decision making, and to complete the case database. Design evaluation was carried out using the generic urban design principles, to assess the effectiveness of design control. How the difficulties in data collection were addressed has also been explained.

CHAPTER 5. A REVIEW OF CHINESE PLANNING AND DESIGN

Academics divide the evolution of Chinese planning and design into three to seven periods, depending on the scale and the level of detail of the study. To describe the pattern and process of morphological change in Chinese cities, Gaubatz (1999) divides the change into three periods: the pre-1949 city, the Maoist city 1949-78 and the emerging Chinese city. To describe the change of the role of planning in China, Zhang (2002) treats the changes after the Chinese liberation in 1949 as a 6-stage process: 1949-52 recovery from the war; 1953-58 industrialization and Socialist education; 1959-65 self-sufficiency policy with the dissolution of the coalition with the USSR and terminating planning activities; 1966-76 Cultural Revolution and 'planning is useless'; 1977-91 the 'Open-up' policy and 1992-now speeding up reform and larger scale of urban transformation. Xie and Costa (1991) conclude four periods of urban design practice in Socialist China from 1949 to 1991 as: reconstruction and rehabilitation (1949-52), the First Five Year Plan period (1953-57), political and economic instability period (1958-76) and post-reform era (1977-91). Whitehand and Gu (2006) see the trend of transformation of the Chinese urban form as traditional stage (pre-1842), early modern stage (1842-1949), Socialist stage (1949-78) and post-reform stage (post-1978). This latter division is particularly helpful in this research. It provides a basic idea of the change of urban form in Chinese cities over time, and the political, economic and ideological conditions of every specific period.

This review briefly illustrates the evolution of the Chinese urban form over time as well as the power and ideologies behind the changes. A brief review of the Chinese design tradition (feudal era), post imperial era planning (1910s-1940s) and Socialist China (1949-1978) planning is provided. The planning and design in post-reform China (1979-now) is then explored in more detail to reveal the current practice and its role in land development. By doing so, this review illustrates the unique Chinese design tradition with regard to urban form with its roots in the feudal era and the Socialist

ideology, and identifies the general impacts of the market, the influences of political and legislative forces on urban form and urban design in post-reform China. It provides the context for the Shenzhen case study, showing where it adheres to or deviates from Chinese practice at large.

5.1. Planning and design before the Socialist market reform

The approaches to urban form before China's market-reform have had deep impacts on the urban design ideology in the post-reform era. The most important roots are the Confucian and *Fengshui* traditions in feudal China, the early imported 'modern' planning in the Republican era of the 1910s-1940s, and the Socialist ideology after the Chinese liberation in 1949.

5.1.1. The Chinese design tradition and its origins

China has a long city building history, and some of the ancient ideologies of city design and construction are still influencing current urban design practice. During the few thousand years city building history, the form of a Chinese city was designed and constructed according to the philosophy, military purpose, political ambitions and building technology at the time. Many scholars believe that the ancient Chinese urban form was heavily influenced by the Confucian ideology of rigid administrative, family and social hierarchies, and the *Tao* ideology of the relationship between the human being and the nature (sometimes called geometry principle or *Fengshui*) (Dong 1989; Wang 2005; Whitehand and Gu 2006). The former ideology was broadly expressed in the layout of most of the imperial capitals in north China and the latter was used in the site selection of new cities and had more influence on the layout of south China cities. Confucian philosophy focuses on *Li* principles (morality, hierarchy, conformity, right action and rational). It was strongly promoted by the federal rulers to strengthen their power of control. This philosophy was soon adopted in city building, with a

symmetrical gridiron street system and north-south orientation, and with street dimensions that refer to the administrative hierarchy (Dong 1989; Wang 2005). The earliest description of the Chinese urban form is in a craftsman's handbook *Kaogongji* (the Artificers' Record), a part of *Rites of Zhou* drafted in the Spring-Autumn period (770 – 476 BC). It describes the ideal city as a rectangular walled one, with three sets of north-south and west-east streets connecting the city gates in four directions, with temples located in the west and the east and with the royal palace located in the south and market to its back (Fig. 5.1.1 left).

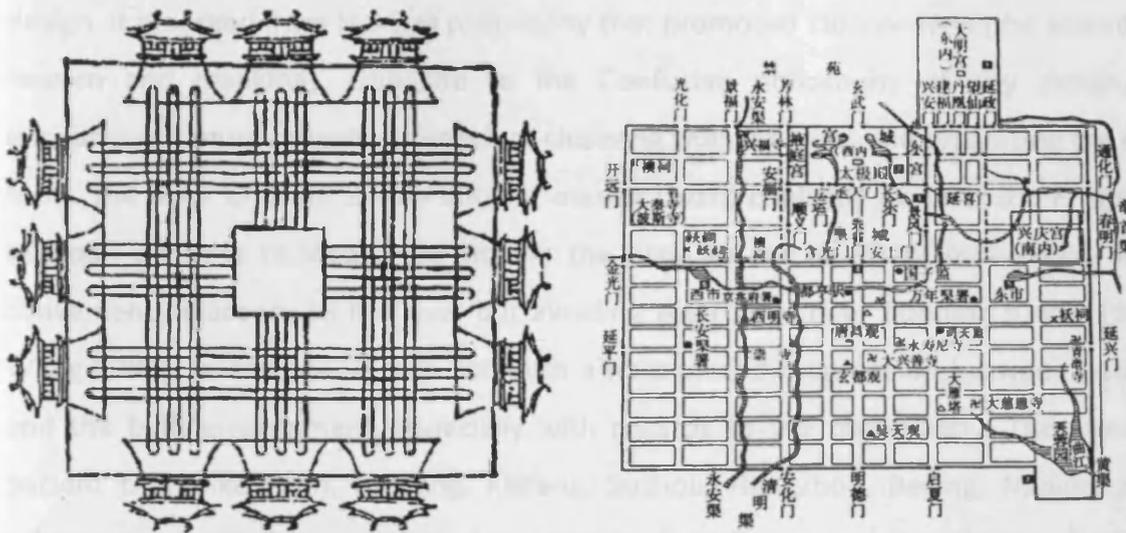


Fig. 5.1.1 The Confucian design ideology. Left: the imperial capital city in the Zhou Dynasty (1066 – 256BC) – the classical prototype of an ideal Chinese city (Source: Nie Song Dynasty (960-1279)); Right: the Chang'an plan designed by Yu Wenkai in 582, witnessed how the Confucian philosophy was adopted in the city form, with symmetrical and gridiron layout out, royal palace dominant in the middle, housing and work places mixed in various areas, and trades designated particular districts (Source: Wang 2005).

This ideology and city form had a heavy influence to the design of ancient Chinese capital cities. Most of the ancient cities in north China followed this model, and the size of the city was determined by the administrative hierarchy. These feudal Chinese cities put the government buildings in the prominent points of the plan (normally in the centre), with some necessary functional buildings such as Confucian schools and temples in other crucial locations. The peak of the adoption of this ideology was the Chang'an plan of the capitals of the Sui Dynasty (581 - 618) and the Tang Dynasty (618 - 907) (Dong 1989) (Fig. 5.1.1 right). The Chang'an plan was rectangular in shape,

surrounded by the city wall. The layout was strictly symmetrical using a north-south central axis, with the royal palace located in the middle-north, to emphasize the power of the ruler. The West Market and East Market were located in the middle of the west end and east end. The whole city was governed by a gridiron street system, with temples scattered within. Canals and streams were running through the city for water supply and drainage purpose. Ma (2002) argues that, this special arrangement reflects strong central control.

Fengshui (Geomantic principle) was another tradition of the ancient Chinese city design. It emerged from the *Tao* philosophy that promoted *Tianren Heyi* (the accord of heaven and mankind). Opposite to the Confucian philosophy of city design, it encourages a more organic approach of choosing sites for cities and organizing the city form. The book of *Guan Zi* (the book of master Guan) explicitly explains the *Fengshui* rational, which is to locate the city on the plain to the south of mountains, with convenient adjacency to the river but avoiding the risk of river flooding (Dong 1989; Wang 2005). In essence, it is to establish a harmonized relationship between nature and the built environment, especially with regards to the topography. The famous ancient cities like Xi'an, Luoyang, Kaifeng, Suzhou, Hangzhou, Beijing, Nanjing and others were located according to this principle. *Fengshui* was once understood as the cosmological philosophy to interpret the relationship between the heaven, ruler and the earth (Ma 2002; Wu 1995). It uses the ancient auguries and the understanding of the celestial bodies to design building monuments, worship places and government buildings. But this branch of understanding is normally considered superstitious (Wu 2001), with relatively less impacts on city planning today.

These two traditions are witnessed in some contemporary urban design in some Chinese cities. For example, in preparing Shenzhen's Comprehensive Plan in 1984, China Academy of Urban Planning and Design (CAUPD) proposed Shenzhen's future city centre – the Futian CBD to the south of Lotus Mountain, south facing Shenzhen River, which reflects the ancient *Fengshui* philosophy, with a hope to bring prosperity to the city (Song 1997). The later detailed design of the CBD adopts a gridiron road system, with a central axis and Civic Centre in the middle to strengthen the

government's ruling power, which reflects the Confucian philosophy of hierarchy. These ideologies influence many government-led masterplan projects, but do not have much impact on the contemporary individual private commercial developments, as will be explained in Chapter 7.

5.1.2. The post imperial era 1910s-1940s

After the Opium War, at the beginning of the twentieth century, 'modern' planning concepts were seen in China introduced by the Western planners and the Western-trained Chinese specialists (Esherick 2000; Zhang 2002). During this period, although most of the traditional Chinese cities were developed spontaneously, some cities in the Republican era in the 1910s-1930s adopted various approaches for modernization (Esherick 2000), and the foreign occupied cities utilized a 'modernist' planning rationale in designing their urban form, influenced by the planning ideologies of their host countries (Dong 1989; Wang 2005; Whitehand and Gu 2006). Apart from some Western-style buildings, these practices had only marginal impacts on the current urban development, due to the outbreak of the civil war and the later adoption of the Socialist ideology.

In the Republican era, the large cities under the Nationalist Party control were remaking and modernizing themselves in various ways for different objectives. Firstly, Stapleton (2000) documents that Chengdu in the 1920s, a city in the hinterland, along with some other cities, was campaigning for more activist urban administration and construction. The built environment professionals there advocated planned development with better and cleaner streets, sewers, toilets, parks, and trees. Guangzhou and Tianjin in this period had similar programmes of demolishing the old city walls, widening roads, putting new urban infrastructures with the helps of American planners (Cody 1996). Secondly, the tourism industry was promoted in historical cities like Hangzhou and Beijing through various means including planning. Wang (2000b) discusses how Hangzhou responded to Shanghai's middle-class's recreational needs in the 1910s, and created a cultural tourism industry around the

scenic West Lake, by repackaging the 'new modern comforts' of sophisticated lifestyle and aesthetic tastes. Dong (2000) documents how Beijing commodified the city with historic preservation and retained the local identities to promote tourism, when it ceased to be the national capital in 1928. A third example was how the Nationalist Party planned Nanjing, the new national capital, in the 1920s to reflect its ambition to create a 'modern' nation and to legitimate its leadership to the country (Musgrove 2000). For this purpose, the foreign-trained architects and American advisers studied the famous capitals in the world at that time, and considered the ideal form of the new capital was to combine the Beaux Arts neoclassical forms with the grandeur of China's architecture.

In the foreign controlled cities, 'modernist' planning with Beaux Arts influence was adopted. For example, Qingdao was controlled by Germany (1897-1914) and Japan (1914-45), Dalian was ruled by Russia (1898-1904) and Japan (1904-45), and Harbin was occupied by Russia (1896-1932) and Japan (1932-45). The planning ideologies with their roots in Beaux Arts tradition were imported by the host countries and applied to these cities (Dong 1989). One prominent example is the Changchun plan prepared by the Japanese during their occupation in the 1930s. The plan was to exhibit Japan's leadership in Asia. It was designed by Japanese planners to reflect the powerful and scientific vision of the Japanese-controlled state of Manchukuo (Buck 2000). It drew on the early-19th century plan of Paris, putting grand public buildings in prominent locations, connecting using circular-radial network with axial and diagonal avenues, strewing large scale greenery, and overlaid with gridiron plan (Fig. 5.1.2). The plan also involved functional zoning and state regulation of construction, together with the latest concept of the neighbourhood unit (Lu 2006 p.24). But this 'grand plan' was criticized as vehicle-oriented, causing pedestrians difficulties when crossing the streets, and ignoring the everyday functional requirements of the general citizens (Guo 2005).



Fig. 5.1.2 The new Changchun plan prepared in 1933. 1. Chinese Eastern Railway settlement. 2. South Manchurian Railway settlement. 3. Commercial District and former walled town. 4. Unity Plaza. 5. Uncompleted Imperial Palace. 6. Obeying Heaven Avenue with principal government ministries. 7. South Lake Park. 8. Planned New South Station. 9. Airfield. 10. Horse racetrack and golf driving range. 11. Nanling Sports Grounds. 12. Emperor's actual residence. 13. Industrial suburb. Many of the elements were never built (Source: Buck 2000).

But due to the (inter-)national conflicts and the outbreak of the Civil War, the implementation of 'modern' planning concepts was limited, and development control activities did not exist as the government was the major developer. But some of the planning ideas had profound impacts on the later practices. For example the neighbourhood unit concept influenced the housing form in Socialist China and even the current residential site planning (Lu 2006).

5.1.3. Socialist China 1949-1978

After the liberation in 1949, and using Soviet experts' suggestions, the Chinese communist leaders and planners considered urban planning as the means of realisation of the nation's economic development programme. The planning ideology was dominated by the Socialist concepts (Xie and Costa 1991) with the economic condition of resource scarcity (Lu 2006) and short-term industry investment (Yu 2004). Different stages of urban developments in this period illustrate how China was adopting the Socialist ideology of a central-planning, centrally resource-allocated and

production-first economy, and how this ideology resulted in the Socialist built form in China (Fig. 5.1.3).

| | <i>National events</i> | <i>Urban planning</i> | <i>Urban form</i> |
|-------------|--|--|---|
| 1949 -52 | Founding of PRC; reconstruction; helps from USSR; from consumer-cities to producer-cities. | Soviet style central-planning system; construction institutions from central to local levels; industry first and then agriculture; centralised direction with private sector autonomy. | Slum area upgrading; neighbourhood units to solve housing shortage; rapid urban expansion. |
| 1953 -57 | Socialist Education; heavy industry first. | The First Five Year Plan; Soviet trained planners; industry in cities; central resource-allocation. | Industrialization rather than the quality of life; low cost superblocks; company town. |
| 1958 -65 | Dissolution of the coalition with the USSR; 'Great Leap Forward'. | Planning serving the communist society; central resource-allocation; re-emphasizing production rather than consumption; going to the countryside movement. | Micro-district and neighbourhood unit concept imported from Soviet Union; hierarchical residential system; not much urban construction. |
| 1966 -76 | Cultural Revolution; isolation. | Central resource-allocation; Ceasing planning activities. | Not much urban construction. |

Fig. 5.1.3 Urban forms in Socialist China (Adapted from Xie and Costa 1991; Zhang 2002)

In the first three years of liberation, the new Socialist leadership regarded the old commercial and economic centres previously developed by the Nationalist regime as parasitic, and decided to transform the consumer-cities to producer-cities (Xie and Costa 1991). Though the ideology was changed, the basic physical forms in this short period did not change significantly and remained similar to those in pre-war China. On the other hand, to solve the housing shortage problem, the concept of the neighbourhood unit was adopted to build large-scale residential development (Kwok 1981). But the concept's spirit to strengthen social democracy and community bonds was largely lost when transformed into Chinese practice (Lu 2006).

In the first Five Year Plan era of 1953-1957, the Chinese communist leaders imported the Socialist mode of production-led urban development and promoted the livelihood of the labouring masses (Xie and Costa 1991). Following this ideology, the Chinese planners prepared the national five-year plan to allocate functions to cities, to decide on developmental priorities, and to control the rate of urban growth (Wang 2005).

Soviet-style company towns with production quarters and living quarters were also introduced with the help of Soviet planners to boost the industrial production (Fig. 5.1.4 left). In terms of the built form, the Soviet superbloc approach was seen as the most economical and feasible approach for residential development. At the same time, seeking 'Socialist grandeur' in urban design and architecture was the main design characteristic of this era (Xie and Costa 1991).

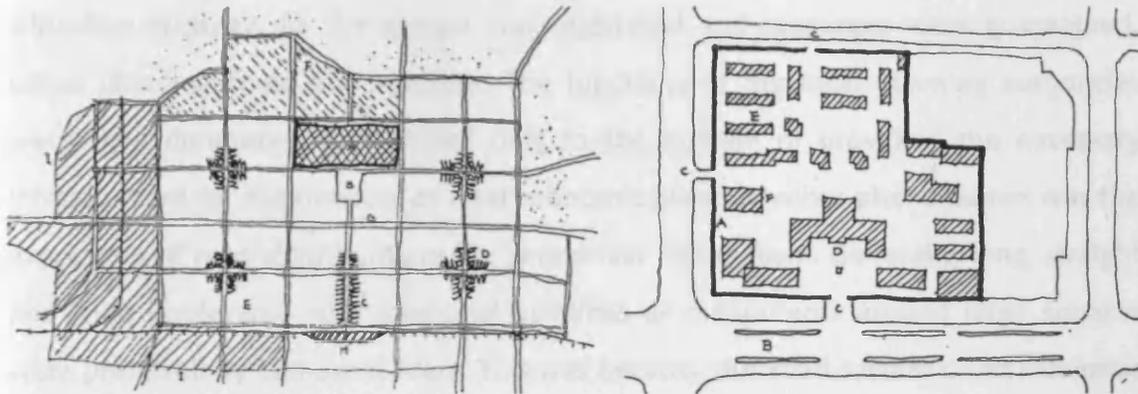


Fig. 5.1.4 Socialist urban form. Left: Socialist company towns with wide boulevards, squares for mass gatherings, monuments, government compounds and commercial centres located along both sides of the major boulevards, 'match-box-shape' buildings and closed-yard-style construction units; Right: closed-yard-style work unit (Source: Xie and Costa 1991)

After 1958, China was experiencing political and economic instability (The Great Leap Forward, 1958-1960; Economic Recovery and Adjustment and the Third Five Year Plan, 1960-1966; and the Cultural Revolution, 1966-1976), without much development activity. In the late 1950s and the early 1960s, the coalition with the USSR broke down, and production was reemphasized as the top priority as the planning ideology to serve communist society. In terms of the building form, standardization and equalization in housing provision and layout were adopted, with the imported Socialist concept of 'microdistrict' (Lu 2006). A hierarchical residential system was subsequently formed with residential group, neighbourhood cluster, microdistrict, and the satellite town or larger residential district.

With regards to urban design, two phenomena were of particular interest in Socialist China. One was that work units dominated the urban form (Logan 2002; Lu 2006; Wu 2002; Wu et al. 2007; Xie and Costa 1991). They emerged from the 'Socialist military

camp' to boost industrial development in the 1960s and the 1970s (Xie and Costa 1991). Work units were gated enclosures, with internal circulation systems and provision of social services (Fig. 5.1.4 right). From the administration point of view, work units were the driving force of urban development in Socialist China, with resources allocated from upper tiers of government or units (Lu 2006; Wu et al. 2007). Therefore, development control in the Western sense was not required in the Socialist cities, due to the pure central-plan planning system, and the top-down resource allocation strategy. As the project was registered and resources were guaranteed, urban planning could not interfere. The functions of the local planning authorities were then diminished and limited only to the domain of providing the necessary infrastructure for the national or local economic plans. Another phenomenon was the expression of central authority in the 'modernist' urban form. Generally, long, straight and wide boulevards with memorial buildings or monuments around large squares were preferred by Chinese leaders. This was because this road system could maximise the use of limited urban land, and it would cost less to accommodate the same amount of traffic (Xie and Costa 1991). Another important reason was that the grand boulevard could express the superiority of socialism and act as a symbol of a 'bright Socialist future'.

As the result, the cities in Socialist China were occupied by large isolated urban blocks and monumental open spaces divided by broad urban roads for vehicles. This design ideology continues to dominate urban design thinking in China now, with the strengthening of some of the Socialist design philosophy and the political control tradition, even although the market economy is introduced. This phenomenon is very evitable in Shenzhen, which will be explored in Chapter 6 and Chapter 7.

5.2. Planning and design in post-reform China

Urban design in post-reform China is developed with a unique urban development background. To facilitate the detailed discussion of urban design control in China, this section sets out to provide a political, economical, social, ideological and institutional context. First it briefly reviews the political and economic background of Chinese urban development, under the conditions of marketisation, globalization, land privatization and devolution. Second, it reviews some typical characteristics in urban design and urban form revealed in the literature. Third, it explores the role of urban design in the current Chinese urban planning system.

5.2.1. Urban development and urban planning in the reform era

In post-reform China, the adoption of market economy and the partial reform of the governing strategy have had profound impacts on urbanization and urban development. The reform brought dramatic changes in economic terms, with the average annual increase rate of GDP of 9.8 from 1979 to 2007, 10.3 from 1991 to 2007, and 10.2 from 2001 to 2007 (National Bureau of Statistics of China 2008). At the same time, urbanization has been adopted as the national development strategy, with the rise of urbanization level from 17.92 percent in 1978 to 43.9 percent in 2006 (National Bureau of Statistics of China 2008), more than a 25 per cent increase in 30 years (Fig. 5.2.1). Statistics also show the construction industry had an average annual growth rate of 10.1 percent from 1979 to 2007 (National Bureau of Statistics of China 2008). In particular, since the early 1990s, real estate has been one of the most profitable industries in China (People's Daily Online 2005).

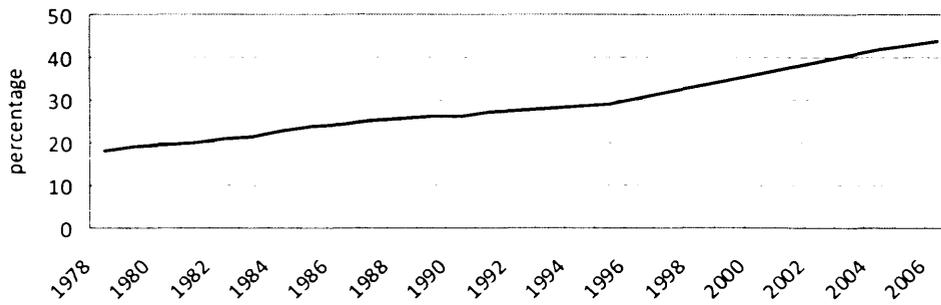


Fig. 5.2.1
Urbanization
rate in China
(Source:
National
Bureau of
Statistics of
China 2008).

The background for current Chinese urban development is unique. The decision making power and economic power has been partly decentralized at the local level; the usage right of state-owned land has been allowed to be privatized; some state-owned enterprises (SOEs) and urban housing units have undergone privatization; globalization came to China in the manufacturing sector, service sector and even financial sector. But one condition is fundamental, and this is the fixed nature of the political regime with its absolute central control character. Under these particular conditions, we now examine how urban development has been actively promoted by the 'growth coalition' of local governments and advantaged elites, and how these conditions further focuses planning tools on economic goals, but neglecting its major public functions.

The literature provides insights into how these conditions boost urban development. Firstly, the shortage of subsidies from the central government forces local governments to seek additional funds for their given responsibilities of local economic and social development (Logan 2002; Wu et al. 2007; Zhu 1999). In the 1980s, the reduced state subsidies from the central government nearly bankrupted local governments. The constitution was amended in 1988 to allow state-owned land usage rights to be transferred commercially, and the *City Planning Act 1990* (Standing Committee for the National People's Congress 1989) devolved land use planning control to the municipal level. Chinese local governments then could make better use of their land resources and planning control to sell land to provide local revenue and to boost economic development. Logan (2002) explains this process as one where the local governments displace land development costs to public building companies or end users, and in turn, speculate on the value of prepared sites. At this point, the

leasing of state-owned land and the commercial land development compensated for the local government's 'rich-in-land and poor-in-cash' situation and dramatically transformed the Chinese cities.

Secondly, land development adds to the economic performance of the local economy, which can be used for political promotion (Zhu 1999). Consequently, property boomed from 1992 due to developers' speculation and local government's strong desire to generate local revenue. All kinds of new development districts have been initiated by local governments, such as industrial parks, Central Business Districts (CBDs), high-tech development zones, eco-towns, cultural industry parks and others, but all ending up with plain real estate development (Zhang 2008). Foreign investment in commodity housing partly facilitated this growth process (Wu et al. 2007), with more than a third of the foreign direct investment going into the real estate sector in the middle 1990s (Logan 2002). At the same time, urban redevelopment also took place, contributing to local growth. Zhang and Fang (2004) consider that the current Chinese inner-city redevelopment has similar characteristics to the urban renewal movement in the US in the 1950s and 1960s, with the local elites (local politicians, SOEs and property developers) forming a 'growth machine' to use the decentralized state power to pursue profits in the rising real estate markets.

Thirdly, contrasting with the thriving development industry, the everyday life of the local communities is not a major concern in the urban (re-)development process. Social polarization is increasing in many aspects of social life. For example, although the booming privatized housing market plays a major role in stimulating economic growth, housing inequity, especially for the immigrant workers and low skilled workers, is significant (Wu et al. 2007). Although inner-city redevelopment is improving the urban environment and regenerating the local economy, gentrification and inadequate compensation are intensifying (Zhang and Fang 2004). This lack of concern about the impacts of the development process on social life can be explained as the result of an immature Chinese civil society due to the tight social control exerted by the government (Friedmann 2005), and as the outcome of the unsophisticated planning mechanisms (Ng and Tang 1999). The recent adoption of the *Town and Country*

Planning Act 2008 (Standing Committee for the National People's Congress 2007) to tighten up the development control function, the *Administrative Permission Act 2004* (Standing Committee for the National People's Congress 2003) to regulate governmental decision making and the *Real Right Act 2007* (National People's Congress 2007) to protect private property right will hopefully generate a more accountable governing climate. It is too early to draw conclusion about the impacts of this new legislation on the planning system, but some speculation follows.

It is worth noting that Shenzhen's growth has been even more radical than the national average level, and these three conditions' impacts on urban design practice are very strong. These will be explored in Chapter 6 and Chapter 7. Here, the focus is to explore how these conditions impacts the Chinese urban form and design control in general.

5.2.2. The current urban design practice in China

China's rush to modernization materializes in its urban built forms. The local governments demand for speedy urban modernization and development with the common slogan of 'a new look for the city in one year, and astonishing changes in three years'. In terms of design, China's approach is resolutely 'modernist' (Mars 2008; Ong 2008), a result of both the Socialist legacy and capitalist globalization. This section reviews the common urban design phenomena in contemporary Chinese cities from five angles, and serves as the background and comparisons to the discussion of Shenzhen's practice in the subsequent chapters.

Firstly, Chinese cities are committing themselves to the creation of 'urban spectacles' for place-promotion. Local politicians believe that constructing urban spectacles can increase the city's (inter-)national recognition, and thereby attract inward investments and political favours from the upper tiers of governments (Gaubatz 1999; Wu et al. 2007). In the 1990s, nearly 50 Chinese cities established their development goal as

becoming an ‘international city’¹⁰ in one or two decades (Xu 1995), although only Beijing, Shanghai and Guangzhou could achieve this end (Zhou 2002)¹¹. The urban forms of Manhattan, Hong Kong and other ‘international cities’ are considered as the aspiration for a ‘modern’ Chinese city (Balfour 2002; Zhang 2002). For this purpose, local politicians promote the development of skyscrapers, megastructures, wide avenues, and large scale real-estate developments (Wang 2008b; Zhou 2008). Large cities in China have become the international laboratory for the world’s top architects’ and planners’ experimental architecture and urban planning concepts (Wu et al. 2007). Iconic buildings designed by ‘signature architects’ are welcomed in Chinese cities to promote their local status, their visual prominence, and to serve as the local new symbols.

For example, in Beijing, the new ‘icons’ – the National Theatre (Fig. 5.2.2 left) and the Oriental Plaza are both next to the Forbidden City. The former is a large and simple design with a lavish budget, but criticized as a piece of formalism and alien to the historic character (Peng 2000). The latter was built as a large high-rise shopping complex with the local politicians’ hope to ‘modernise’ the city (Chan and Ma 2004). The new headquarter for China Central Television (CCTV) (Fig. 5.2.2 right) was designed to have a massive visual impact on the ancient city. The local politicians accepted the designer’s argument that this project compensates for Beijing’s lack of a contemporary ‘icon’ (Amelar 2004). These projects all contrast with their surroundings with hopes that they will serve Beijing’s ambition as an ‘international city’. Shanghai is also utilizing an ‘international approach’ to its urban environment. The Pudong masterplan resulted from an international design consultation and features a vast boulevard from the CBD with a straight line ending in the Pudong Centre Park. Office buildings are located on the two sides with empty streets in between. But the new CBD

¹⁰ The term of ‘international city’ has no international putative standard or agreed definition. But it reflects the urban function of a city in the world level, with global control and coordination functions in the new international division of labour, like London, New York and Tokyo (Friedmann 1986; Zhou 2002).

¹¹ Zhou (2002) analyses the distribution of the 500 largest foreign-funded industrial corporations, foreign telecom and computer companies, foreign funded financial institutions and the number of international flights and foreign tourists in the major coastline Chinese cities, to find the top cities in China’s urban system, and identifies Shenzhen, Tianjin, Qingdao, Dalian, and Nanjing as the other large cities with high degrees of internationalization.

is too dispersed, lacking the dynamic intensity that Tokyo, New York or London offer (Balfour 2002).

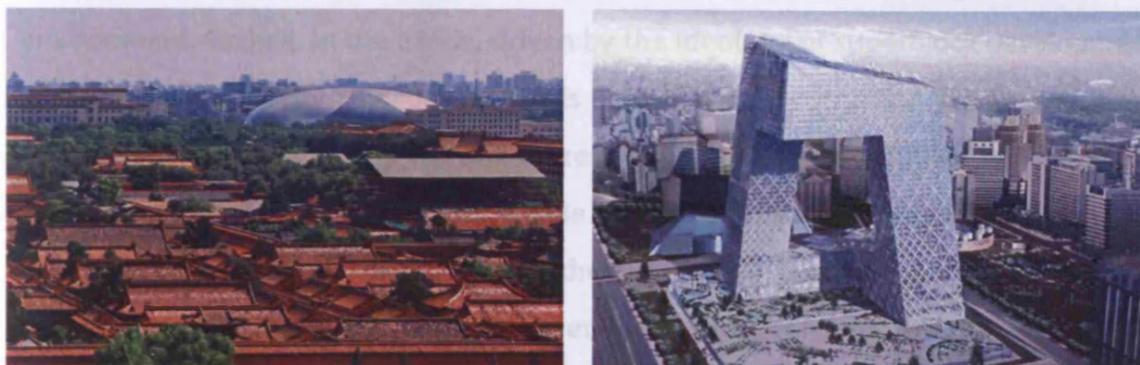


Fig. 5.2.2 Beijing's new icons. Left: National Opera House with the Forbidden City in the foreground; Right: CCTV features an unusual structure.

Secondly, 'modernist' and consumption-oriented built forms replace the original urban fabrics of low-rise, high density and permeable living quarters such as Beijing's *Hutong* and Shanghai's *Li'nong*. Wang (2007) documented that Beijing was losing one *Hutong* per week in 2007, leaving only 33 per cent of them preserved. The sites of these original neighbourhoods are now occupied by large scale iconic structures, commercialized space, high density tall buildings, and highly engineered and high capacity roads. But these new developments have been erected without any concern for their context and have subsequently created 'isolated urban islands' destroying the quality of public space (Shi 2008). Observing Beijing's careless urban development, Xu (2005) also condemns the lack of respect for street life and street culture in these development approaches. Highly commercialized pedestrianized streets have been developed in the central areas of Chinese cities, constructing images of consumption and economic success. But Zacharias (2002) criticizes the planning approaches to these pedestrianized areas as demonstrating a lack of concern for a dynamic social environment, and diminishing the creativity that is essential for global competition.

Thirdly, the over generous road standards disable the city and prevent it becoming a viable place. Soon after the market reform in the early 1980s, the first thing for the Chinese local government to do was to renew the urban infrastructure, especially in transport and road network. The slogan of 'not behind the times over the next twenty

years' has been the objective of many infrastructure projects. Ong (2008) observes that in the large cities like Beijing and Shanghai, six- to ten-lane arterial roads cut through the heart of the cities, damaging the urban fabric and eroding the pedestrian environment. Beijing, in the 1990s, driven by the ideology of superblock development, made it a high priority to widen its roads with a certain hierarchy, grade-separation, and high-capacity as a way to modernize the city (Abramson 2008). Wang (2008b) witnesses the negative impacts of the wide and sparse road system on Guang'an Street in Beijing, which dramatically reduces the economic activities of the former retail centre, due to the lack of interaction between the shopfronts in both sides of the streets.

Fourthly, large gated residential developments are booming as a distinct urban form, inheriting the superblock idea and replacing the former enclosed work units. These gated communities are often beautiful inside and act as a club for middle-income citizens, but at the same time are usually fortified against the muddled surroundings. This superblock morphology is criticized as diminishing the quality of public space between the communities and creating problems in linking the projects into a cohesive whole (Ong 2008). Abramson (2008) explains that the city's preference for this particular urban form is partly due to the ease of land assembly. Monson (2008) further argues that local governments can limit their investment in the infrastructure and let the private developers provide the interior roads and utilities by enclosing a large piece of private land. At the same time, local authorities can also guarantee their income by approving the usage rights in a single transaction. From the residents point of view, Goix and Webster (2008) argue that this is the private demand for a collective service when the public sector fails to provide it. But it is also clearly a device to ensure social segregation and exclusion of low income households.

Last but not least, China's rapid economic development has heavy social and environmental costs, but efforts have been made recently to develop China towards a more sustainable economy. Sustainable development has been the national strategy in China with the adoption of the national Agenda 21 in March 1994. In 2007, China established National Climate Change Programme (the first one in developing countries)

with the target to reduce energy consumption by 20 per cent in every unit of GDP by 2010 based on the 2005 level (Xie 2009). In the current economy stimulus package of 4,000 billion Yuan, investments are made in energy conservation, pollution reduction, ecosystem protection, technology renovation, and more relevant to this research, to develop energy-efficient and environmental-friendly housing with a 400 billion Yuan budget. These initiatives come with the environmental legislation support, partnership working (private-public and domestic-international) and research and development programmes. In practice, cities are removing their most polluting factories away from the populated areas, improving waste management, and cleaning the rivers and air. Although still at a small scale, developers are starting to recognize that sustainability technology attracts business opportunities: house builders in north China start to use ground source heating system to warm apartments; natural ventilation in apartments is a strong marketing point; solar hot water systems are welcomed in many households and even factories; office occupiers start to consider the long-term energy running costs of their premises. But the rising car ownership and low-density suburban gated residential development are the major challenges Chinese cities are facing. More seriously, China's understanding of sustainability is still growth-oriented and technology-led, without paying much attention to social and environmental sustainability (Ng 2002b). The concepts of ethical utilization of natural resources and intra- and inter-generational equity are badly needed.

But there are some exceptionally successful planning and design experiences, like Quanzhou, the third most historic city after Beijing and Xi'an in China, documented by Abramson, Leaf and Tan (2002). Although the city has experienced large-scale urban redevelopment, it is still street oriented and respects to its historical context. The cataclysmic redevelopment mode is not an option due to the difficulty to assemble the land. In the redevelopment process, neighbourhood space is preserved on both sides of the streets, and the new buildings infill the gaps to continue to enclose the street. Buildings are built up to the sidewalks, and turn the corners with the street forming perimeter blocks. For the same reason, the original 38-metre road widening scheme was reduced to 24 metres, maintaining an urbane street width. Even in the new development districts with superblock structures, ground level retail along their edge

is favoured. Quanzhou's sensitive (re-)development is due to the fragmented landholdings, difficulty in land assembly and the substantial compensation rights. The unusual degree of participation by civil society also resists mass redevelopment plans. This is because the local politicians hope to keep a good relationship with the large amount of overseas Chinese rooted in Quanzhou, and is also because of the high level of private ownership of the old residences¹². Although the sustainability aspects of Quanzhou's urban development is not extensively explored in their study, it nevertheless shows a rare example of planning success in post-reform China.

But Quanzhou may be a limited exception in the Chinese rapid urbanization process. Due to the convenience to assemble land, most of the Chinese cities are still taking the approaches similar to Beijing and Shanghai. Shenzhen's approach to urban design has inherited some of these general characteristics, such as using urban design and iconic buildings to promote the city, radically replacing a large amount of old buildings with 'modernist' masterplans, carving out large chunks of land for gated residential developments. More significantly, it was developed from 'tabula rasa' with 'modernist' standards, and the superblock-wide urban road structure is more evitable. But as China's market economic experimental ground, Shenzhen has a lot of innovations to promote good design, which will be discussed in the following chapters.

5.2.3. The role of urban design in the current planning practice framework

The previous section has discussed the general approaches to urban design and urban form in the post-reform cities, and the relevant political and economic conditions. This section goes on to explore the institutional aspect of contemporary planning and design. It first explains the urban planning framework defined by legislation, and then analyzes the planning permitting process with reference to urban design considerations.

¹² 90 percent of the old city properties are private-owned, according to Abramson's research. This is a high contrast to the high public ownership in Beijing's old city (90 percent).

5.2.3.1. The Chinese urban planning framework in general

Since the establishment of the planning system, after nearly 20 years' practice, a new raft of legislation has recently been put in place, regulating plan-making, development control, and enforcement. Firstly, the Urban Comprehensive Plan and the Detailed Plan form the two-tier urban plan system. Since the adoption of the first planning legislation, *City Planning Act 1990*, urban planning has been treated as an extended function of economic planning, to realize the local government's economic ambitions through land use planning and development control (Article 1). This is a top-down process, in which the upper tiers of plans such as the Urban Comprehensive Plan inherit the social and economic development objectives defined in the local economic plan; it lays out the land use patterns, infrastructures and other strategic arrangements in the whole planning area. The Urban Comprehensive Plan then sets out the planning parameters (normally the land use, development density and transportation) for the Detailed Plans in the urban districts. The Detailed Plans subsequently are the basis for development control. According to the *City Planning Act 1990*, the Urban Comprehensive Plans are prepared by the local government and approved by the upper tier of government, and the Detailed Plans are prepared by the local planning authority and approved by the local government. The new *Planning Act 2008* extends planning control to rural areas, by adding the Urban-Rural Systematic Plan (similar to the old British structure plan) and the Rural/Village Plan to the system.

While some academics comment that the Urban Comprehensive Plan is too ambiguous to control development (Wu et al. 2007; Yu 2004), the Detailed Plan is more problematic. Lacking process guidance, being prepared and approved locally, the Detailed Plans lack scrutiny in the amendment process, and are revised too frequently (Tian 2007; Wang 2000a; Zhang 2000). The new *Planning Act 2008* seems to provide a promising solution to this problem. It requires public consultation in the making and amendment of urban plans (Article 26). The approval and amendment of the Controlled Detailed Plan now should be reported to the local people's congress (Article 19 & 20). If the lower tiers of plans change the key parameters in the Urban Comprehensive Plan, these changes cannot take place until the upper tiers of plans

allow it to do so (Article 47). The Act also requires the local planning authority to consult the relevant interested parties if the Controlled Detailed Plan is changed. But the effectiveness of these new requirements on development control is still to be tested in practice.

Secondly, the development control mechanism of 'One Permission Note and Two Permits' has been established since the first planning act. The key process is to transfer the main parameters in the Detailed Plans to individual development. But the insufficient coverage of the Detailed Plans, and the unregulated local discretion, often lead to local politicians' seriously violating the plans in the development control process (Ng and Xu 2000; Wu et al. 2007; Zhang 2000). The new *Planning Act 2008* is now trying to fix this problem. It states that no development/land transfer can take place until a Controlled Detailed Plan is in place (Article 37 and 38), to increase the transparency of planning decision making. Furthermore, the *Administrative Permission Act 2004* helps to improve this process. It is the first legislation to regulate government behaviour, and includes fair, transparent and just actions. It requires the governments to act according to laws and other regulations, with a monitoring mechanism. The planning permitting process falls into the administrative permitting catalogue, and this legislation acts as a tool to regulate the local authority's discretion.

Thirdly, planning monitoring and enforcement power was provided by the *City Planning Act 1990* and is strengthened by the new planning act. With this power, the local authority can undertake site inspection during construction, issue stop construction notices or take action to demolish an illegal structure, suing the relevant bodies who breach the law. But illegal constructions still occupy a large proportion of the built-up urban area (Ng and Tang 1999).

Last but not least, other legislation also helps to shape the planning system. The *Land Administration Act 1986* (Standing Committee for the National People's Congress 1986) with the latest revision in 2004 sets up the dual land policy with collectively-owned land in rural areas and state-owned land in urban areas. Urban development can take place only on the state-owned land, with land usage right transferred for a certain

period of time, by administrative allocation (without paying a fee) or leasing (fee paying). The *Real Right Act 2007* is the first legislation to protect private property rights. It requires justified and fair compensation to individuals when using eminent domain in the public interest. It also formally recognizes natural ventilation, daylighting and sunlight access as part of property rights.

By these means, the top-down process of planning control has become more sophisticated by means of the plan amendment process regulation and through regulating the local authority's discretion. Through the protection of private property rights, it is hoped that the planning process will become more transparent and fairer.

5.2.3.2. The role of urban design in development control

Development control in China is carried out by the 'One Permission Note and Two Permits' permitting process (Fig. 5.2.3).

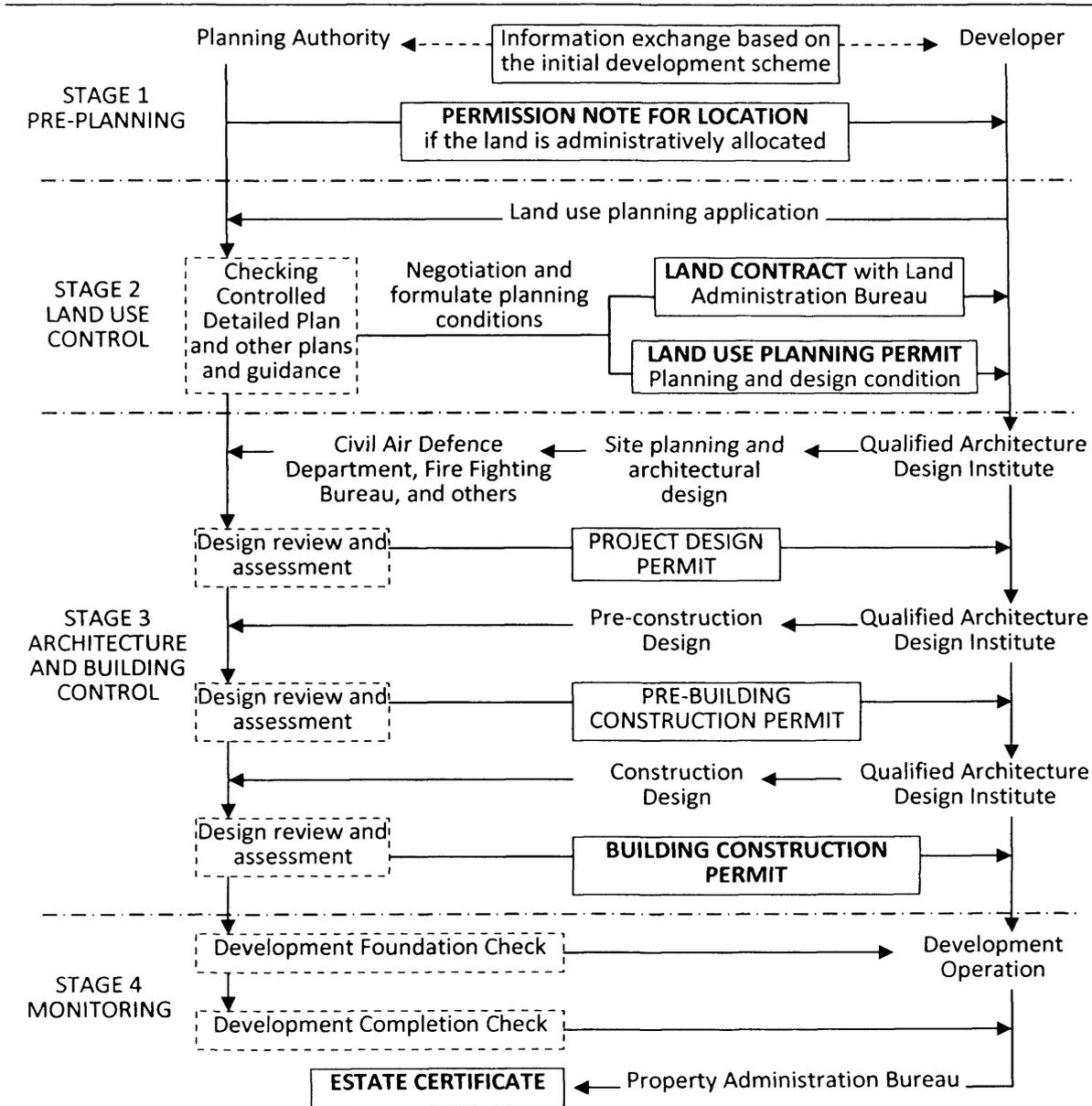


Fig. 5.2.3 Chinese urban planning management process, with the key actions and means of development control in boxes.

The 'Permission Note for Location' is only for special projects with administratively allocated land, such as governmental properties or some state-owned enterprise properties, and is normally not required for commercial developments. The 'Land Use Planning Permit' and the 'Building Construction Permit' are required for all kinds of urban developments. It is a process of condition-issuing and design review, which includes the examination of urban design considerations. For commercial development, it includes four stages of management events, all having urban design intervention opportunities.

Depending on the nature of the development, the Stage One pre-planning event can be different. If the development is carried out by some SOEs, or is deemed as a special project by the local government, even if it is commercial development, the developer needs the approval of the state economic planning agency. It then comes to the urban planning authority for site selection, and gets the 'Permission Note for Location', with which the developer can apply for the funds for the development and can go on to the next stage of application. If it is a normal commercial development, some developers treat it as a part of the feasibility study, and consult or negotiate with the planning authority about the relevant planning requirements on the site, such as the land use intention, building density, building setback and other information. Normally, the key information for exchange is extracted from the Controlled Detailed Plan, using merely land use and density control. But with some more proactive local planning authorities, the negotiation can be the means which define the quality of the public space – the site planning, the form of the development, and its interface with the street or square.

The second stage is the land use control (normally with land administration), and it has two approaches in practice depending on the type of land leasing. The first one is for the developer to apply for a 'Land Use Planning Permit' from the planning authority, then to sign the 'Land Contract' (formally called 'Land Usage Right Certificate') with the Land Administration Bureau. The land usage fee is negotiated with, and is payable to, the local government if the land is not administratively allocated. Planning conditions are at the same time extracted from the Controlled Detailed Plan and other relevant planning guidance, and are attached to both the Permit and the Contract. These conditions are normally the land use, building setbacks and building density which are the key parameters defined in the Controlled Detailed Plan. Some local authorities would add other regulations or guidance on the built form or public space as part of the conditions, which provides a key means for urban design intervention. The second one is for the developer to bid the land parcel. In this approach, the planning conditions for the land parcel are clearly defined by the Controlled Detailed Plan and other guidance such as urban design guide. The developer gets the 'Land Contract' and at the same time agrees the conditions, and later gets the 'Land Use Planning Permit' from the planning authority.

Previously, due to the high development demand, a large number of Permits were issued without an up-to-date Controlled Detailed Plan, and the planning conditions were therefore subject to unregulated planning discretion (Ng and Tang 1999). What was worse, due to the lack of checks and balances, the developers used their personal informal contacts to negotiate with senior planning officers or local politicians for the planning conditions, leading to serious corruptions (Wu et al. 2007). Zhou and Logan (2002) in their research in Guangdong in 1990s, reveal the behind-door negotiation character of land pricing and planning control. Xu and Ng (1998) also reveal that between 1992 and 1996, the mayor of Guangzhou sent more than 2,000 memos to its Planning Bureau to require the planning officials to provide special treatments to various developers. They use the case of Liuhua Lake Park in Guangzhou to further illustrate how local politicians can arbitrarily intervene in urban development. Now, the new planning act makes it clear that no land can be leased for development without the coverage of a Controlled Detailed Plan, which it is hoped to reduce 'behind-the-door' negotiations. In terms of urban design, this stage normally does not involve any review of the form of the development, and the traditional Controlled Detailed Plan does not regulate the building form or the quality of public space. But, some local governments have introduced a revised process at this stage to provide a pro-active control on built environment quality. For example, Shanghai's planning authorities require the developer to submit the site plan to be reviewed before issuing the 'Land Use Planning Permit' (Zhang 2000). So too does Shenzhen.

Stage Three is the architecture and building control. This stage involves the checks for site planning, architectural design and building regulations. It normally involves three sequential steps of applications and design reviews. The developer first employs a qualified Planning Institute to prepare the site planning and architectural design, based on the planning conditions. If the proposed development is over a certain scale or at a certain location, a design competition is required at this stage. The planning authority reviews the design and checks if it is in line with the planning conditions and other relevant guidance, and at the same time consults other governmental departments such as the Civil Air Defence Department and the Fire Fighting Bureau. If the architectural design is deemed acceptable, the developer gets a 'Project Design Permit'

with comments, and moves on to prepare pre-construction design. The planning authority then checks if the pre-construction design is in line with the relevant building regulations and takes the previous conditions on board, and issues the 'Pre-Building Construction Permit'. The developer now can go on to prepare construction documents and apply for the 'Building Construction Permit'. It is worth noting here that, for some locally important projects, these three design reviews can be expanded to an experts' review, depending on the local planning authority's preference.

The last stage is planning monitoring. Right at the beginning of the building construction, the planning authority checks the building foundation to see if the construction is carried out in line with the permitted site plan. When the construction is complete, the planning authority checks if the completed building is carried out according to the permitted construction documents. Once an approval is issued, the developer can put the development on the market. It is worth mentioning here that there is no legal obligation to inform the public or consult the neighbours during the permitting process in the first three stages. Therefore, the public do not notice the development until it is on site, and the appeal process appears to be extremely difficult if they find the new development has negative impact on them. This point will be illustrated in Shenzhen's case studies. Although the new *Planning Act 2008* requires fair compensation if other parties' property rights are affected (Article 50), the problem lack of transparency still exists.

Given the publicly-owned land policy, urban design could be easily injected into the planning system by attaching conditions to planning applications. During the whole permitting process (Fig. 5.2.3), the planning authority can interfere in the design of the proposed development at the first three permitting stages. Before the formal application happens, the authority expresses its preferences; when issuing the 'Land Use Planning Permit', the authority draws the requirements from the relevant Detailed Plan or Urban Design Plan, and formulates the planning and design conditions; prior to issuing the 'Building Construction Permit', the authority reviews and negotiates the design according to the planning conditions and relevant requirements.

Although the conventional design control in China focuses on Stage Three to negotiate/regulate design improvements, cities find that Stage Two of deciding the planning conditions is crucial. But these conditions are mainly extracted from Controlled Detailed Plans, with the focus on the basic land development parameters such as floor area ratio, building density, building height and greening ratio without enough attention paid to the control of urban form (Cao and Wong 2006). These basic parameters can lead to diversified development outcomes, which means there is no certainty about urban form. Therefore, proactive local authorities have paid more attention to the preparation of more sophisticated urban plans and negotiate more design-oriented conditions that could lead to better design outcomes.

Shenzhen has inherited the Chinese planning system with a lot of local innovations. The city expands the two-tier urban plan system into a five-tier one to better deliver the planning parameters from top-down; it has its own local legislation to provide more regulations on planning decision making; its permitting process has been more regulated, transparent and more design-focused. These will be explained in the next two chapters.

5.3. Conclusions

This chapter reviews the Chinese design traditions, such as the Confucian ideology to reflect the feudal hierarchical order in the built form and the *Fengshui* ideology to seek harmony between the human and the natural environment, as well as some Western 'modernism' influence in Republican China. It also traces the Socialist design back to the Soviet 'modernism' influence in pre-reform China, which provoked a preoccupation with 'Socialist grandeur', expressed in superblock, wide urban roads and monumental structures. In Socialist China, due to the top-down resource allocation mechanism, exclusively enclosed work units were dominating the urban form, and development control was not necessary. Some of these design ideologies are still influencing the urban form in post-reform China.

After the market reform, the economic-growth-oriented strategy enables the developers, local governments, investors and other local elites to form 'growth-coalition' to promote radical urban development. The emerging urban form in the post-reform China in the major cities uses urban spectacles to attract investments, guided by the 'modernist' design approaches, disconnected from the local context, and accompanied by sparse and wide road system as well as gated-communities. Together with the immaturity of the planning mechanism, this strategy allows the local politicians to negotiate with the developer outside the formal planning channel, and ignores the democratic and social function of urban planning.

A two-tier urban plan system and 'One Permission Note Two Permits' planning permitting process has been established to guide development control. This development control process is controversial due to the lack of up-to-date urban plan and the unregulated local discretion. However the system is improving with the recently updated legislation. The planning conditions derived from the Controlled Detailed Plan and other guidance as well as the design review in the planning permitting process provide good opportunities for urban design to improve the quality of urban

development. But for a more effective design control, opportunities should be sought in deciding/negotiating the design conditions with more sophisticated urban plans and more transparent decision making process.

From the historical perspective, the contemporary situation represents an evolution towards a regulation-based design control, with a gradual change. Chinese cities are inserting more control locally and developing a more design-conscious planning practice. Some innovative planning/design approaches are emerging, by emphasizing design quality in plan-making, by improving the design conditions and by borrowing external skills to support design review. But how the urban space has been shaped by individual property development at micro scale, how the local states regulate the design of individual development, and how the political economic conditions affect individual development and thus the daily urban environment are still unclear. These questions are answered in Shenzhen's office developments as case studies, by assessing the impacts of the permitting process and actors' roles in the development process.

CHAPTER 6. SHENZHEN AS A DESIGN CONTROL LABORATORY

Shenzhen, a leading Special Economic Zone (SEZ) in China, is a symbol of the success of China's economic reform. It was established in May 1980 by the State Council as a 'test bed' or 'experimental ground' for the market economy, when other parts of China were still centrally planned. In less than 30 years, the city has grown from a small fishing village to a metropolitan city led by service sector and high-tech industry, with the population rising 27 fold¹³ and the GDP increasing 3,470 fold (Shenzhen Statistic Bureau 2008). Its success was due to continuous reforms of many aspects of governing strategies, such as land policy, industrial strategy and, what is more relevant in this thesis, the planning system. Its innovations in planning demanded more orderly use of discretion alongside more process regulations, and advocated design quality in the planning approach. The city has tried to bring more transparency and fairness in decision making to deepen the market reform and to raise the quality of urban environment to attract more investment. This makes Shenzhen a perfect laboratory for an urban design control study in China, as it has pioneered a more quality-conscious control system.

To help evaluate Shenzhen's urban design practice, this chapter briefly reviews Shenzhen's three stages of urban development and its current use of urban design and advocacy of sustainability to promote economic development. It then goes on to discuss the planning reform in Shenzhen with special reference to its impacts on urban design. Finally, the evolution of Shenzhen's design approach to office developments is presented, to contextualize the case studies in the next chapter.

¹³ The data for population in Chinese cities is divided into permanent residents and temporary residents (rule-urban immigrants), and the figure for population used in this thesis is the combination of these two groups, unless noted otherwise.

6.1. Shenzhen's urban development and urban design

Shenzhen is an instant city with a breathtaking pace of development. In 1980, Shenzhen, together with Zhuhai, Shantou and Xiamen in southern China, were designated as SEZs as the 'test beds' for market economy, with their missions to act as a 'window' through which to observe the global trend of development, as a 'training ground' for talents on the Mainland, and as an 'experimental ground' for economic reforms (Shenzhen Museum 1999). It was originally an agricultural county level city, located in the Pearl River Delta in Guangdong Province, sharing the border with the former British colony – Hong Kong (Fig. 6.1.1). Soon after it was set up, the central government provided flexible policies and political support, including charging lower cooperation tax, streamlining administrative control and providing easy access to the domestic Chinese market for SEZ-produced goods, but all without actual resource allocation. As time goes by, China's 'open-up' policy has been applied on a national scale together with China's accession to the World Trade Organisation, and the advantages of the SEZ status no longer exist. Facing these challenges, and with an entrepreneurial spirit, Shenzhen has managed to continue to grow through a number of reforms.

In 28 years, Shenzhen has been transformed from a county-city with 314 thousand population in 327.5 km² area in 1979 to a metropolitan city with four districts (Nanshan, Futian, Luohu and Yantian) in a Special Administrative Zone and two districts (Bao'an and Longgang) outside the zone (Fig. 6.1.1), with 8 million people on 2,020 km² in 2007. In these 28 years, Shenzhen has had an average annual growth rate in population and GDP of 12.6 per cent and 33.8 per cent respectively (Fig. 6.1.2). The agricultural sector made up 37 per cent of the GDP in 1979 but dropped to less than 1 per cent in 1999, while the secondary industries contributing 20 per cent to the GDP in 1979 has increased to nearly 50 per cent nowadays. The tertiary sector's contribution has remained relatively stable, but the actual amount has increased dramatically (Fig. 6.1.3) (Shenzhen Statistic Bureau 2008).



Fig. 6.1.1 Location map for Shenzhen in Guangdong Province and its six districts. PRD: Pearl River Delta.

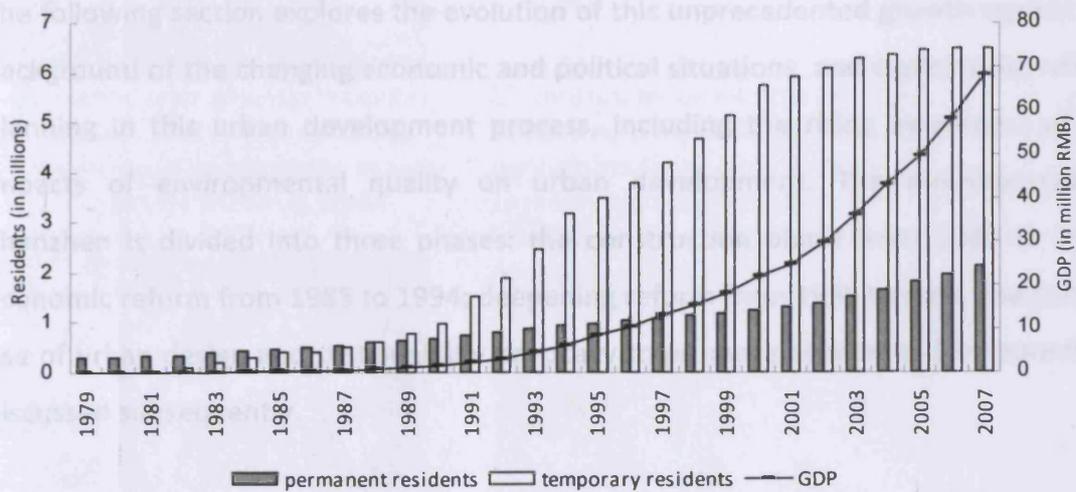


Fig. 6.1.2 Population and GDP growth in Shenzhen (1979-2007) (Source: Shenzhen Statistic Bureau 2008).

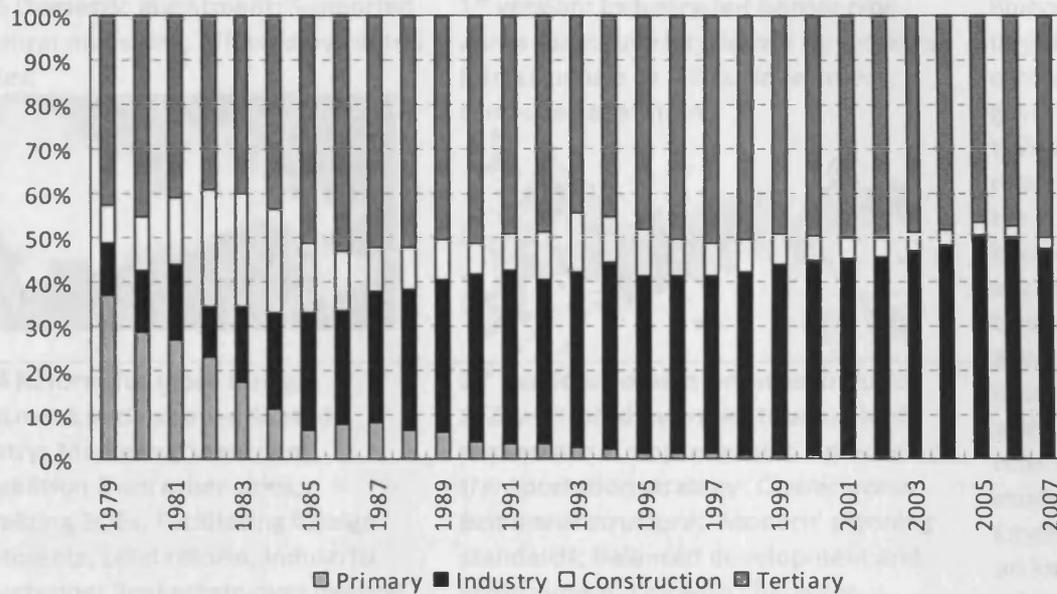


Fig. 6.1.3 Composition of GDP in Shenzhen (1979-2007) (Source: Shenzhen Statistic Bureau 2008).

The following section explores the evolution of this unprecedented growth against the background of the changing economic and political situations, and explains the role of planning in this urban development process, including the rising awareness of the impacts of environmental quality on urban development. The development of Shenzhen is divided into three phases: the construction phase from 1980 to 1985; economic reform from 1985 to 1994; deepening reform from 1995 to now. The current use of urban design and sustainability advocacy to promote economic development is discussed subsequently.

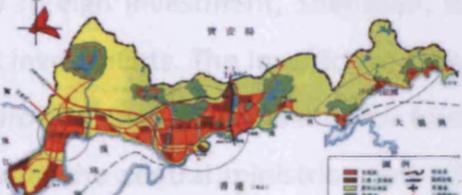
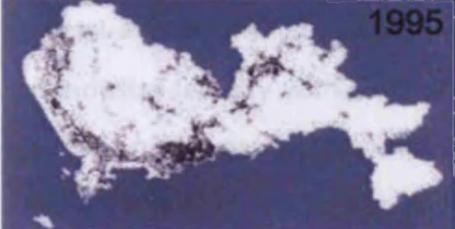
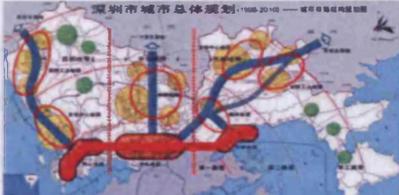
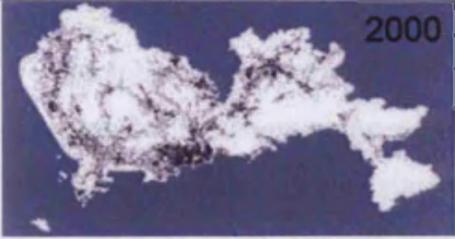
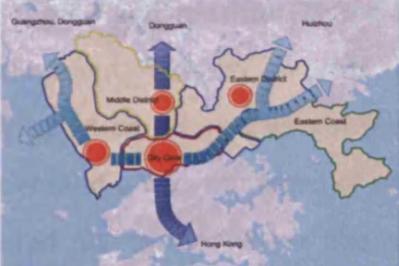
| Economic and urban development | Objectives in Comprehensive Plans | Rationale |
|--|---|--|
| <p>80-85 Domestic investment: Supported by central ministries; Affected by central policies.</p>  | <p>1st version: Industry-led border city: <i>Zones for industries</i>; Homes for workers; Infrastructure to attract investment; Land-use separation.</p>  | <p>Blueprint; targets by central government; Slowly recognising the inadequacies of the blueprint approach in coping with the reforming economy;</p> |
| <p>86-94 Reform for more foreign investment and export-oriented industry: Marketing Shenzhen; Competition from other cities; Liberalizing SOEs; Facilitating foreign investments; Land reform; Industrial restructuring; Real-estate over heating.</p>  | <p>2nd version: Foreign-oriented industry SEZ facilitated by trade, tourism and real-estate: Comprehensive land-use and transportation strategy; <i>Cluster-green belt linear structure</i>; 'Modern' planning standards; Balanced development and environment; city with character.</p>  | <p>Emphasis on local urban development in the regional context.</p> |
| <p>95- Economic restructuring: Promoting high-tech industrial; Boosting foreign investments through improving quality of life; More stakeholders in urban development.</p>  | <p>3rd version: Based on high-tech industry, tertiary industry as the pillar, modern agriculture: three axes development strategy; intensify land-uses; Futian as a world class financial district; decent housing; <i>world-class infrastructure</i>; <i>pleasant urban environment</i>; a cultural city.</p>  | <p>Planning as 'force of production'; Planning is for the public interests and should be legitimated;</p> |
| <p>2000</p>  |  | <p>A vision of a 'world city'; Need for development control.</p> |

Fig. 6.1.4 The evolution of Shenzhen's urban development (Adapted from Ng and Tang 2004). The images on the left are the spatial pattern of Shenzhen's urban development (Source: Urban Planning and Design Institute of Shenzhen 2002a). The images on the right are the four development strategies over time (Shenzhen Municipal Government 1982, 1986, 1996, 2006).

6.1.1. 1980-85: Construction period and the first Comprehensive Plan

Although SEZs were set up to absorb foreign investment, Shenzhen, in its first five years developed mainly with domestic investments. The insufficient physical and legal infrastructure in the new city did not provide enough confidence for foreign investors. The state-owned enterprises (SOEs) from the central ministries and other provinces were attracted to Shenzhen because of low corporate tax and free land (Ng and Tang 2004). With the limited state budgetary investment, these SOEs and some low value-added industries from Hong Kong provided the needed capital and management supports to construct the newly established SEZ. In this construction period, Shenzhen spent a large amount of its budget on infrastructure development, with the peak of 64 per cent in 1985 (Shenzhen Museum 1999). In spatial terms, urban developments were concentrated around Luohu District, just at the border with Hong Kong, as a result of the industrial service clustering close by the newly introduced factories. Industries with low densities were sparsely located along the main transport corridors in the designated industrial zones (Fig. 6.1.4).

Shenzhen's first Comprehensive Plan was adopted in 1982, but it only covered the four Special Administrative Districts. This plan had the mission to support Shenzhen to be an industry-led city with sufficient infrastructure to attract industrial investment. The concept of the garden city and the ethos of the Athens Charter were deemed as the 'advanced' planning thinking soon after the market reform. This plan actively took up this idea, with an emphasis on exclusive zones for industrial developments, plus some land zoned for retail, agriculture, residential and tourism (Zhang 2003). Due to the topographical constraints, the development pattern in this plan was a few development clusters along a linear transport corridor. It was in this very early period that Shenzhen's politicians started to demand a high standard of urban development. For example, 108 experts were invited to comment on the draft of this first Comprehensive Plan, and local politicians wanted to introduce large building setbacks for 'greenbelts' to achieve the environmental quality that they observed in Singapore when they visited in 1983 (Ng and Tang 2004). This blue-print approach seemed to

work well in this early period as the government was the sole developer in urban construction.

6.1.2. 1986-94: Reform period and the second Comprehensive Plan

From 1986 to 1994, numerous reforms were carried out to transform Shenzhen to a more market-oriented economy. This was due to the central government's tightened fiscal policy on domestic investment in 1986 and the potential competitions from the newly established SEZs such as Hainan Province. To sustain the local growth, Shenzhen chose to move towards an export-oriented economy by attracting foreign investment (Ng and Tang 2004). To do so, the local politicians initiated reforms to improve the investment environment, by streamlining governmental administration, de-linking government units from economic enterprises, establishing a land market and even reforming housing. These reforms broke the resource constraints and enabled land to be developed in response to demand. Among these reforms, the most relevant one for urban development was the land reform, which was originally imported from Hong Kong to raise the local revenue. In September 1987, for the first time in China, Shenzhen leased a piece of public land to a local public company, signalling the notion of paying for land usage right in China, although this early practice was based on negotiation behind the scenes (Zhu 1994). In late 1987, the local *Land Management Regulations* were adopted to allow the publicly-owned land to be transferred through negotiation, tender and open auction. Shenzhen's land reform further triggered the amendment of the national constitution on land policy in April 1988, to allow the transfer of land usage right of publicly-owned land.

These reforms directly changed Shenzhen's economic structure. A large amount of publicly-owned land was leased to investors in exchange for local income. As a consequence, real-estate development boomed in the early 1990s, and reached the point of over-heating in 1993. The income from land leasing was directed by the government to invest in roads, infrastructures and ports. With the rising land and production costs, the traditional manufacturing industries were slowly phased out.

Shenzhen soon grasped this opportunity to upgrade its economic structure to replace the low value-added industries with the high value-added ones, and to strengthen the linkage with foreign investment (Ng and Tang 2004). Deng Xiaoping's tour to southern China in 1992 further boosted Shenzhen's growth, and the municipal government decided to shape the city into an 'international city' within 20 years. In 1993, Bao'an and Longgang counties were included as the districts of the Shenzhen Municipality.

In spatial terms, driven by the cluster development structure, more industrial zones and urban districts were initiated and soon matured. With the increase of the land price, some low value-added industries were slowly moving outside the original SEZ, replaced by real-estate developments or commercial uses. At the same time, industrial investments and real-estate developments continued along the main transport corridors. Luohu continued to grow as a super-high density service centre. To further expand Shenzhen's financial services, the Municipal Government decided to develop Futian as the future centre of Shenzhen. Until then, Shenzhen had been a multi-function city with industrial service and with some financial sectors.

Planning at this stage still remained a top-down and blue-print process. In 1985, CAUPD was invited to prepare Shenzhen's second Comprehensive Plan, with Shenzhen Urban Planning Committee (Planning Committee thereafter) set up in 1986 to refine it. The plan was prepared in close relationship with Shenzhen's economic target and defined Shenzhen's function as a place for foreign trade, industry, with other industries such as tourism and real-estate. As with the previous version, this plan only covered the four Special Administrative Districts, inherited the linear city structure with six clusters, reserved land for urban development and advocated high development standards as well as a city 'with character' (Fig. 6.1.4 & Fig. 6.1.5). Futian Central District (Futian CBD thereafter) was initiated in this plan, and was later designated as the new CBD for the whole. To facilitate further urban development, a larger and denser road network was proposed, introducing three west-east arterial roads and 12 north-south arterial roads. As private development was booming, the unchanged top-down planning approach did not meet the requirements of the economic reforms. For example, the population target of 1.1 million by 2000

(Shenzhen Municipal Urban Planning Bureau 1986) was soon surpassed in 1988 (Shenzhen Statistic Bureau 2008). Shenzhen slowly recognized that a reform of urban planning was necessary to keep up with the emerging economy. It is worth noting here that the 'high development standards' advocated in the plan meant sufficient infrastructure construction, wide urban roads and land-use segregation, with a strong 'modernist' characteristic. However, planners started to realize that this approach resulted in the loss of street vitality, human scale and social function of public space, and they called for a more sensitive planning and design approach (Liu and Zhang 1999).

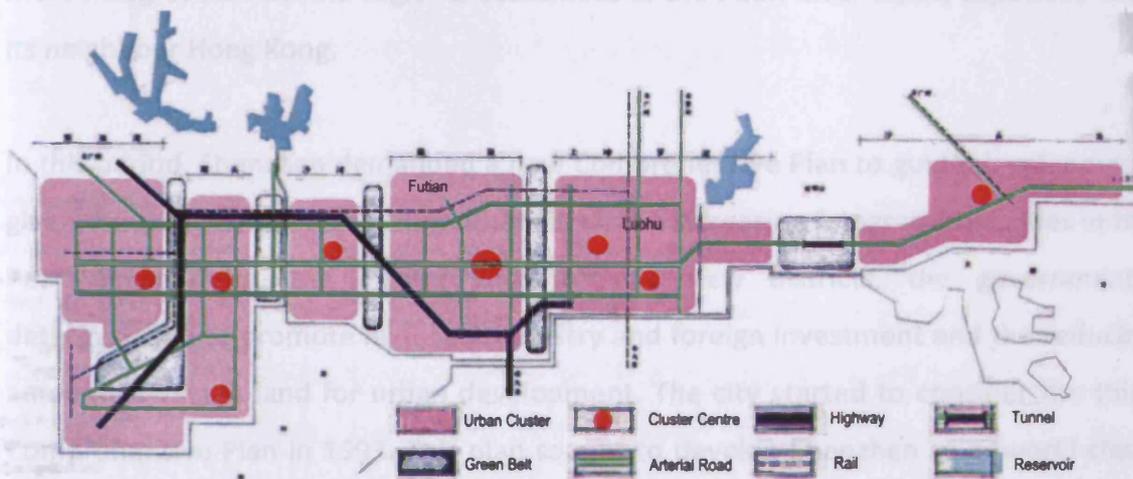


Fig. 6.1.5 Structure of Shenzhen's second Comprehensive Plan (Adapted from Shenzhen Municipal Government 1986)

6.1.3. 1995-now: Building a 'world city' and the third Comprehensive Plan

In the second part of the 1990s, Shenzhen was no longer privileged in terms of attracting investment, given that more SEZs were set up and other cities could provide similar offers. Facing the rising competition from neighbouring cities, Shenzhen needed a new strategy to sustain local growth, and local politicians decided to promote Shenzhen as a 'world city' led by high-tech industry and foreign investment. One of the key means was to launch a 'city beautification movement' (Ng and Tang 2004). This new strategy had a positive result in economic terms, with the foreign direct investment (FDI) increasing from less than 1 billion US Dollars in 1993 to 3.6

billion US Dollars by 2003 (Shenzhen Statistic Bureau 2008). Although the majority of the FDI went into the industrial sector, a large amount of investment also went into transport, communications, real estate, tourism, commerce and infrastructure development (Shenzhen Statistics Bureau 2006). One important legacy of this movement was the awareness of the positive contribution of the environmental quality to attract investment (Cartier 2002). Due to the rapid rise in land value, the traditional manufacturing industries have almost moved out from the old clusters, replaced with commercial developments for offices, housing and retail. Since then, Shenzhen has become an important financial centre in southern China and achieved more integration with the regional economies in the Pearl River Delta, especially with its neighbour Hong Kong.

In this period, Shenzhen demanded a new Comprehensive Plan to guide development, given the rising competition from other cities, the increasing integration of cities in the Pearl River Delta, the incorporation of two new districts, the government's determination to promote high-tech industry and foreign investment and the reducing amount of vacant land for urban development. The city started to consider the third Comprehensive Plan in 1993. This plan sought to develop Shenzhen as a 'world-class' city with the 'environment of Singapore and efficiency of Hong Kong' to promote finance and trade, with prosperous tertiary sectors and led by high-tech industries (Shenzhen Municipal Urban Planning Bureau 1996a). In spatial terms, Shenzhen was divided into three large clusters to enhance the city as a regional service centre. The eastern cluster was to house a high-density industry zone, a port, tourism and related services. The central cluster included Luohu and Futian becoming the service centre to demonstrate the modern image of Shenzhen. The western cluster with traditional industrial zones was to be upgraded for high-tech industrial development (Fig. 6.1.4). The plan advocated intensification of land-use, and aimed to improve the quality of life to attract foreign investments with 'world-class' infrastructure, such as improving housing conditions, social amenities, transportation networks, and educational, recreational and medical facilities (Shenzhen Municipal Urban Planning Bureau 1996a). Boldly, the plan emphasized urban design as a key driver to develop Shenzhen towards a modernized city with international standards.

With the amazing achievement in economic terms in the past two decades, Shenzhen is now facing a lack of vacant land to boost economic growth. At the beginning of the Shenzhen SEZ, the city's major revenues came from the enterprises of various ministries and other provinces. Now, most of the city's revenues are from land leasing and taxation. But as in 2005, Shenzhen has only 232 km² or 20 per cent of land left for urban development. With the current development speed, this land will be fully occupied in five to ten years (Shenzhen Municipal Government 2006; Wang 2008a). This fact reminds the local politicians that income from the land development will no longer sustain the local growth. In 2006, the city published *Shenzhen 2030* urban development strategy, which tries to work closely with Hong Kong for better cooperation to develop a stronger regional economy (Fig. 6.1.4).

6.1.4. The promotion of urban design and sustainability in Shenzhen

To facilitate its urban development, Shenzhen has been using urban design and advocating sustainability to promote the city. The strong political will behind these two instruments has made Shenzhen a city of design 'exemplar' in China. But many academics and practitioners suggest that the current practice is only for marketing purpose, without enough concerns for urban design's public values or on substantial improvement to environmental sustainability.

6.1.4.1. Using urban design to market the city

Urban design has been in a strong position in Shenzhen's political agenda, for the purpose of promoting economic development, especially for service sectors. In a review project carried out in 1988, a British academic suggested the city to use urban design to resolve Shenzhen's problem of 'great in individual building but poor in the community' (Liu 2001). Shenzhen's politicians then started to understand that a better quality of the built environment will improve the quality of life, and will attract more investment that will perpetuate local growth. This led to the city's decision to

construct the city according to 'world-class' and 'modern' standards. This political will has had a strong impact on planning. For example, the second Comprehensive Plan's objective to develop Shenzhen as a 'garden city' and the third Comprehensive Plan's objective to develop Shenzhen as a 'world city' all demanded the input of urban design. In 1994, the planning authority set up the Architecture and Urban Design Department to create a design-literate development control. Remarkably, the political concern with the urban environment has resulted in numerous awards nationally and internationally, including the honorary mention of the Sir Patrick Abercrombie Prize given by the International Union of Architects to Shenzhen Urban Planning & Land Administration Bureau for the Masterplan for Shenzhen City in 1999, due to the high standard of urban development.

Most significantly, urban design has been used as a strong strategy to promote growth and to market the city. A prime example is Futian CBD's urban design process. The new CBD was designed as of the core for service-sectors to transform the city from a manufacturing site to an 'international city' (Cartier 2002). The goal of the CBD construction was to provide convenient, efficient and high quality accommodation for international enterprises, and to provide comfortable and beautiful environments for the people who live or work there (Chen 2001). In 1992, CAUPD was invited to prepare a Detailed Plan for this CBD, with the hope to boost Shenzhen as one of the centres for foreign trade and financial services in China. The road system (100 metres wide) proposed in this plan has been the foundation for the road and infrastructure building of the CBD. The construction of the major roads started in 1993, with original topography flattened and 85 per cent of the infrastructures completed by 1996.

During their visit to Shanghai, Shenzhen's politicians were impressed by Shanghai's approach of using international urban design consultants to design the Pudong CBD. In 1996, an international urban design consultation was carried out for the core area of the CBD and the Civic Centre (the Municipal Building), and the jury chose a preferred scheme from the four prestigious international design firms. The chosen scheme by New York based John Lee/Timchula Architects was dominated by a 250 metres wide grand central park as the axis. The Civic Centre featuring the 'national colour' (red and

yellow) was covered by a 560 metres long 'flying' roof in the symbolic centre of the CBD. Two retail centres were proposed in the south with a second level pedestrian system. An elevated pedestrian system was introduced to link the major retail spaces (Fig. 6.1.6). This design showed the political loyalty of the local politicians, symbolized the city's bright future in economic development, and introduced the concepts of elevated pedestrian systems to allow vehicular traffic to run more smoothly. But some planners were concerned about this 'taller, bigger and broader' approach, for not offering a compact, continuous and humane environment (Huang 2001).

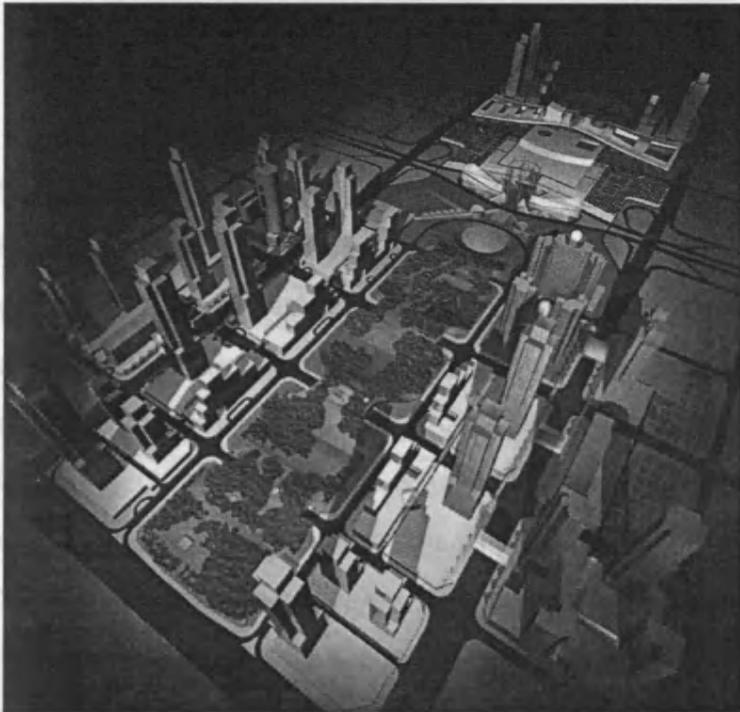


Fig. 6.1.6 The preferred scheme in 1996 Futian CBD urban design consultation by John Lee/Timchula Architects (Source: Chen 2006)

In 1999, Shenzhen decided to carry out a more comprehensive urban design consultation to provide a stronger form for the CBD, including amendments to transport planning and underground development. The scheme presented by SOM with narrower roads, a denser road network, smaller urban plots, and a smaller central park was not favoured by the local politicians and some architectural experts. Instead, the scheme by Obermeyer Planen + Beraten inheriting the 'taller, bigger and broader' spirit was preferred. The scheme provided an 'inspiring image' for the new CBD, with the Chinese tradition of gridiron layout, with fluctuating skylines symbolizing 'dancing dragons', a flying disk for sightseeing, and a sunken water system around the central

park (Fig. 6.1.7). This scheme was praised for providing a powerful 'modern' image for Shenzhen.



Fig. 6.1.7 1999 Futian CBD urban design consultation, preferred scheme, by Obermeyer Planen + Beraten (Source: Obermeyer Planen + Beraten 1999)

But concerns have been expressed about the daily living and working environment. Firstly, some planners considered that the wide arterial roads with generous green strips and building setback reduced the continuity of the environment and the sense and vitality of a CBD. The super high-rise buildings and the large urban blocks were criticized as working against human scale (Wang 2008a). Secondly, in his research on China's new central areas, Zacharias (2002) questions the actual function of the large empty square in front of Shenzhen's new Civic Centre. Thirdly, in a research report in Shenzhen's pedestrian system, the researchers find that Shenzhen has plenty of fast speed urban roads that segregate the city, but the branch roads are not enough to provide a permeable environment (Fig. 6.1.8). Although the branch roads are more than the nation's average level, most of these roads are privatized, gated and not for public use. Public transport also needs more investment (Urban Planning and Design Institute of Shenzhen 2006b). Fourthly, there is a lack of concern with the pedestrian environment. The large urban blocks limit the permeability, and the lack of mixed uses to support the public realm makes the pedestrian environment more unfriendly. Strong evidence for this argument is the continuous use of an extreme approach to separate pedestrian and vehicle. In many cases, this requires a pedestrian bridge or underground footpath for pedestrian connection. Given that the high road standards are unchallengeable, this seems to be the only means to connect the city, but pedestrians are inconvenienced and may find it difficult to find their way around.

| Density | Shenzhen | National | Quality |
|----------------|----------|----------|---|
| Expressway | 0.61 | 0.4-0.5 | Too dense, segregate the pedestrian environment |
| Arterial road | 1.54 | 0.8-1.2 | |
| Sub-trunk road | 0.8 | 1.2-1.4 | Not dens enough to support connection |
| Branch road | 5.75 | 3-4 | Most of the time is not for public use |

Fig. 6.1.8 Road hierarchy comparison between Shenzhen and the national standard (Urban Planning and Design Institute of Shenzhen 2006b), shows Shenzhen has more fast speed urban roads than the national average level, but the limited provision of sub-trunk roads and the large number of privatised branch roads prevent the ease of pedestrian connection.

6.1.4.2. Using sustainability to promote the city

Shenzhen has been advocating sustainable development to promote the city, since China's publication of its own Agenda 21 in 1994. In the same year, for the first time in China, Shenzhen introduced an environmental assessment scheme for land development, in which the planning proposal will be refused if the environmental agency declines the application. Since then, the government has refused nearly 1,000 applications per year based on environmental grounds (Huang 2003). In 1996, the city determined to build a 'green' city to compete for FDI, by strengthening the greening along roads, rivers and seafronts, introducing more greenery into the built-up area, promoting mass transit, strengthening local environmental legislation to protect water, sea and the atmosphere, improving solid waste disposal and noise control (Shenzhen Municipal Government 1996). In 2000, the city committed to 'blue sky, cleaner water, greener fields, more flowers, prettier city, nicer breezes, fresher air and longer lives'. In 2001, the city announced 'measures to implement the sustainable development strategy to enhance the building and conserving of Shenzhen's ecological environment', by developing the right industrial mix, controlling population growth, using renewable resources, and making budgets available to improve urban environmental quality.

Although Shenzhen has been promoting sustainable development since the mid 1990s, it has recorded limited achievements. The rapid industrial growth and demographic change puts enormous pressure on Shenzhen's sustainable development. Environmentally, the city is still facing water shortages, and air and water pollution (Ng 2002a). The meaning of sustainable development in Shenzhen is narrowed down to

greening the city by building parks and high quality landscaping along main roads (Cartier 2002). The city still has a long way to go towards social and environmental sustainability, although it has been the leading city in mainland China pursuing sustainable development (Ng 2002a).

6.1.5. Summary

Shenzhen has been adapting its strategy to promote economic development according to the changing political and economic conditions. Its success in economic terms is owed to its various innovative approaches to manage and to promote the growth. In this process, the city has developed rising environmental standards for the built environment. In its first Comprehensive Plan, it was only targeting to build industrial zones; in the second Comprehensive Plan it initiated the cluster-green belt linear structure to improve the urban environment; in the third Comprehensive Plan, it was targeting a world-class status with high quality of urban living and infrastructure. The change of the environmental strategy reflects the ambitions of its economic strategy. Its current strategies on urban design and sustainable development are for the purposes of marketing the city to attract potential investments. But the public value of urban design and the real environmental sustainability have been underplayed in this process.

6.2. Shenzhen's planning reform and urban design

Planning reform followed far behind the economic restructuring in Shenzhen. As Shenzhen started to reform its land policy, industrial and governing strategy during the second stage of urban development, the planning system remained unchanged. This planning system was later recognised as a barrier to further economic development. The original system defined by the *Urban Planning Act 1990* was an efficient tool to subdivide urban land for leasing with adequate infrastructure, and was able to simplify the development rights into a few parameters to support rapid urbanization. When Shenzhen introduced reforms, developments took place from the bottom-up. Planners realized that this old system neglected development quality, lacked transparency and fairness in decision making, could be amended too easily, and lacked enforcement and monitoring (Wang 2000a). Academics also criticized urban planning as having no teeth in controlling development (Ng and Tang 1999). In a democratic assessment of all Shenzhen's governmental departments in the mid-1990s, the planning authority was ranked as the worst department (Wang 2000a), and it demanded a rule-by-law planning reform to change this situation, providing a direct link to the birth of China's first local planning legislation.

The following section examines the recent reform of Shenzhen's urban planning system and its approaches to urban design, firstly by reviewing how the local legislations and regulations introduced a system of orderly discretion. This includes the establishment of the Planning Committee and public participation mechanism, the tightened approaches to the making and approval of urban plans, and the more regulated planning permitting and plan amendment approaches. It also reviews the introduction of the five-tier urban plan system with the emphasis on the urban design impacts of its two major urban plans – the Comprehensive Plan and the Statutory Map.

6.2.1. Towards a system of orderly discretion

A system of orderly discretion was considered most needed in Shenzhen's urban planning at the beginning of its planning reform. Learning from the experiences of Hong Kong and American cities, and influenced by the concepts of 'accountability, transparency and citizen participation' (Ng and Tang 2004), this system was established by the adoption of the *Shenzhen Urban Planning Ordinance* in 1998, with its latest revision in 2001. This ordinance signals planning practice slowly moving from a simplistic and technical approach to a more process-regulated planning style. It deals with specific issues that can be considered revolutionary in the Chinese planning history (Fig. 6.2.1), which constitutes a system of orderly discretion as discussed below.

-
- Setting up Shenzhen Urban Planning Committee, a semi-governmental organization with over half of the members are non-governmental officials to approve the urban plans and its revisions;
 - The procedure of making and revising urban plans, which involves five levels of plans with the injection of public consultation;
 - A specific section to explain the preparation, approval and implementation of the Statutory Maps, which becomes the crucial plan for day-to-day development control;
 - A specific section to emphasize urban design, which according to the Ordinance should be an integral part of all the urban plans, and can be an individual guidance for specific areas;
 - Land use planning permitting process (development control);
 - Building control and construction control;
 - Enforcement.
-

Fig. 6.2.1 Main contents of the *Shenzhen Urban Planning Ordinance* (Source: Standing Committee for Shenzhen People's Congress 2001)

6.2.1.1. The Planning Committee and public participation

Shenzhen's planning reform was signalled by the empowerment of the Planning Committee to share the planning decision power with the planning authority. The Planning Committee was originally established in 1986 for the review of the second Comprehensive Plan. Its power was enhanced in 1998 when the first *Planning Ordinance* was adopted in Shenzhen. It was established to avoid the making, approval and implementation of urban plans being the internal affairs of the local planning authority, to improve transparency and fairness, and to balance political intervention

in the planning process. Sharing power, the planning authority is now responsible for daily planning decision making and the making of urban plan, while the Planning Committee is responsible for approving the urban plans and their amendments, and also making the final decision for important planning projects. According to the *Planning Ordinance*, the Planning Committee is led by the city mayor, and is constituted by 29 members appointed by the government with more than 15 non-governmental official members (Standing Committee for Shenzhen People's Congress 2001). This is the first attempt in Shenzhen to involve some members from the public to join the planning decision making, and also to monitor the planning authority's decision making to increase accountability.

Public participation has been advocated in Shenzhen, and the city is slowly developing its own practice. When other cities were making urban plans administratively without provision for citizen participation in the 1990s (Ng and Tang 1999), Shenzhen's first *Ordinance* required that the two key urban plans (i.e., the city Comprehensive Plan and the Statutory Map) should go through public consultation for 30 days in the draft stage (Standing Committee for Shenzhen People's Congress 1998). Apart from this bold statement, the *Ordinance* also required the planning authority to publish annual plan-making agenda for public consultation, and regulated that every comment made by the public should be recorded and responded to. This practice has directly influenced the revision of the Planning Act in matters of public participation.

Shenzhen sets important precedents in Chinese planning by using the Planning Committee to share the planning power and by introducing public participation. But the power-sharing ideal is not completely achieved since the politicians and planning authority dominate the Planning Committee. The non-governmental official members in the Planning Committee have a strong background in the development industry, having conflicts of interest in development projects, and not really representing the interests of the public (Zou and Chen 2003). Public participation has been introduced in the plan making process, but there is still no input into the implementation stage. Even in the plan making process, the public are consulted too late to impact on the contents (Xue and Zhou 1999). Shenzhen still has a long way to go to realize

democratic decision making in planning. As the level of public participation in planning is low, it is unlikely that the urban environmental quality will be public-oriented and user-friendly.

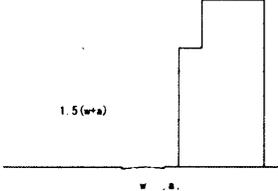
6.2.1.2. Plan making and approval

Another significant planning reform in Shenzhen was the making and approval process of the urban plans, which was guided and justified by some clear written guidance and rules. Shenzhen advocated a decision making process of 'rule-by-law'; thus the government needed to establish some rules to legitimate their decision making. In this regard, the *Urban Planning Norm* provides the technical guidance to guide the making of urban plans, and the *Planning Ordinance* provides the regulation procedure for plan making and approval.

Shenzhen produced the *Urban Planning Norm* in 1990 as the technical guidance to guide the making of urban plans. After more than 10 years' practice, from a comparative study of the relevant technical planning and design guidance in the USA, Japan, Hong Kong, Taiwan and other countries, the *Norm* was revised in 2003 (Shenzhen Municipal Government 2003). It uses a coding method, tailoring the national requirements to local situations, which also makes it easily to apply to the day-to-day decision making. The *Norm* provides guidance on land use, the planning and design of different land use categories (residential, public facilities, industrial, greenery, commercial, transportation, public utilities, underground development and others), environmental sanitation and the prevention of natural disasters.

What is significant for urban design in this *Norm* is its general principle (Fig. 6.2.2), providing detailed (site level) requirements on elevational control, building setbacks and open space. It tries to use an incentive zoning mechanism to encourage the developers to provide more open space – a measure seldom used in China. But this guidance only emphasizes the visual appropriateness principles and quantitative requirements such as building heights, scale of arcades and other numerical

regulations, and it lacks qualitative requirements and broader urban design considerations such as permeability, legibility, variety, robustness and richness (Bentley et al. 1985). The *Norm* also fails to address broader environmental sustainability issues such as biodiversity and energy-efficiency. Nevertheless, this *Norm* provides some necessary guidance on the making of site level urban design.

| | |
|------------|--|
| 8.1 | Building Height Control |
| ... | |
| 8.1.3 | To develop in the conservation areas, an urban design plan and architectural conceptual design should be provided with view corridor analysis, detailed building height design and protection measures. Planning applications in the conservation areas are subjected to the review by the Conservation Panel and Design Panel. |
| 8.1.4 | Building height control along streets and roads |
| 8.1.4.1 | Where there is urban design guidance covering the development site, the guidance is applied. |
| 8.1.4.2 | Along the city secondary roads or high streets, where there is no urban design guidance, when the building height exists 1.5 times of the sum of the street width (w) and the setback distance (a), the building setback on the right is applied. |
| |  |
| 8.2 | Building Setback |
| 8.2.1 | Building setbacks between adjacent sites |
| 8.2.1.1 | New developments should not negatively affect the ventilation, lighting and the sunlight right of the adjacent properties. |
| 8.2.1.2 | Development setback from the site boundaries should satisfy with the followings: <ul style="list-style-type: none"> a. The buildings within both adjacent sites should at least setback half of the required building distance; b. When the development to the south is approved earlier than the northern one, and the development is lower than six-storey, principle a is applied; c. When the development to the south is to be approved earlier than the northern one, and the development exceeds six-storey, the building setback of the southern site should not be less than the one set in principle b; d. When the development to the north is to be approved earlier than the southern one, the setback of the northern site can be half of the minimum building distance. |
| 8.2.2 | Building setback from roads |
| 8.2.2.1 | Development is restricted within the road redlines, expect for public infrastructures. |
| | |
| 8.2.2.3 | The scale of arcades and balconies should follow the relevant guidance. |

| | |
|------------|--|
| 8.2.3 | Other building setbacks |
| 8.2.3.1 | Buildings should setback at least 25 meters from the railways.... |
| ... | |
| 8.3 | Open Space |
| 8.3.1 | Public open space |
| 8.3.1.1 | Public open space includes public squares, public greening areas and water bodies. The size is regulated by the same level of urban plan. |
| 8.3.1.2 | The design of public square should harmonize the contextual environment. The following facilities are encouraged in the square, such as retail gloriottes, security gloriottes, phone boxes, signs, public toilets, rubbish bins, sitting facilities and etc... The greening ratio of city squares should be larger than 40%. Disable access should be taken into account. |
| 8.3.1.3 | The banks of the water bodies should be opened to the public. High density developments along water bodies are restricted, and view corridors to water bodies should be secured. |
| 8.3.2 | Open space within development sites |
| 8.3.2.1 | Open space should be larger than 4 metres in width and 50 M ² in size. The width of square should be larger than 8 metres and the size should be larger than 100 M ² in commercial developments and 200 M ² in others. |
| 8.3.2.2 | Open space within buildings The vertical distance between the open space and the ground floor should be between -5 to 12 metres. The ground floor should be opened to the public. When the ground floor of the building is used as public space, only pillars, elevators, stairs, and other accessories are permitted. The height of the open space should be larger than 6 metres, the width should be larger than 8 metres, the total floor space should be larger than 150 metres and sitting facilities should be provided. ... When the arcades along streets are used as public space, the width should be larger than 3.5 metres and the height should be larger than 3.6 metres... |
| 8.3.2.3 | These open spaces should open to the public and change of use is restricted. |
| 8.3.2.4 | Floor space bonus can be given with open space contribution. |

Fig. 6.2.2 General Urban Design Guidance in the *Shenzhen Urban Planning Norm 2004* (Adapted from Shenzhen Municipal Government 2003)

The approval process of urban plans is clearly regulated in the *Ordinance*. Generally, the local planning authority acts only as a plan making body, which the Planning Committee acts as the approval body or review body, and the public is consulted in the plan making process. Take the Urban Comprehensive Plan and Statutory Map for example. The Urban Comprehensive Plan is prepared by the Municipal Government, followed by a 30 days' public exhibition at the draft stage, then reviewed by the Planning Committee and the local people's congress, deliberated by the provincial government, and finally approved by the state council. After the final approval, the plan should be published via the major media within 30 days. The Statutory Map is prepared by the planning authority and reviewed by the Planning Committee, followed by a 30 days' public consultation. The draft should be amended according to the consultation result, and finally approved by the Planning Committee.

6.2.1.3. Planning application and plan amendment

The system of orderly discretion is achieved in the planning permitting process and the plan amendment process. The planning permitting process in Shenzhen is similar to other Chinese cities, with the 'One Permission Note and Two Permits' system (Fig. 5.2.3). What differentiates Shenzhen's practice from others is its rule-based decision making process, and its avoidance of allowing the planning authority to be sole decision maker in the permitting process. The newly established Shenzhen Municipal Urban Planning Bureau¹⁴ produced two manuals (2004b; 2005a) to guide the planning application process, with clear rules to be followed. These manuals define the functions and the responsibilities of the planning authority and its departments, and also guide the operations of all the administration activities within the planning authority. For the Land Use Planning Application process, the permitting process is made clear (Fig. 6.2.3). The manuals require the case officer to check the urban plan,

¹⁴ Previously, the planning function and the land administration function were under the control of a single authority – Shenzhen Urban Planning and Land Administration Bureau. This combined function helped Shenzhen to achieve efficient decision making in the early years. But this combined power also put the Bureau in the danger of potential official corruption, arbitrary decision making, and demanded a more power-balanced process. Therefore, planning function was divorced from the land administration function in 2004 with the establishment of Shenzhen Municipal Urban Planning Bureau.

initiate the design conditions for the site, get the Bureau Chief in Charge to approve and finally to issue the permit. When the case officer or the Chief feels it is a significant or difficult case, the case will be brought to the weekly Bureau Meeting for discussion. If it involves the amendment of the Statutory Map, the case will be brought to the Planning Committee to review. If the Committee consider the reasons for the amendment of the Statutory Map are justified, the Statutory Map will be amended with a formal procedure, which involves 30 days' public consultation.

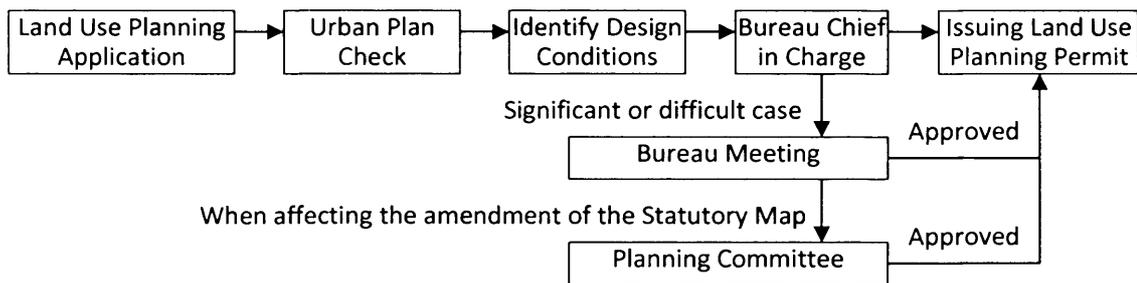


Fig. 6.2.3 Permitting process for the Land Use Planning Application in Shenzhen (Source: Shenzhen Municipal Urban Planning Bureau 2004b).

In terms of urban design, it is worth noting that Shenzhen's approach is a form of design-led planning control. In 1994, as the first city in China to do so, Shenzhen set up an Urban Design Department in Shenzhen Urban Planning Bureau (Liu 2001). It is now called Architecture and Urban Design Department dealing with the two Permits in the permitting process, i.e., the Land Use Planning Permit and the Building Construction Permit. This department has a crucial input into urban design and puts urban design considerations into the early stages of the planning process, using urban design conditions as a means to issue design conditions.

6.2.2. The five-tier urban plan system

Shenzhen brought a new urban plan system to its planning reforms. The two-tier urban plan system defined in the *City Planning Act 1990* was deemed insufficient to meet the needs of development control in Shenzhen. The Comprehensive Plan is a strategic vision for the whole city but it is too vague to guide the making of the Detailed Plan. The Detailed Plan uses simple parameters to control development but it lacks inputs

from economic analysis, environmental evaluation and urban design (Xue and Zhou 1999). To solve these problems, Shenzhen introduced a five-tier urban plan system with the Statutory Map at the core to implement the city's planning objectives (Fig. 6.2.4). The contents of the Statutory Map are similar to the previous Controlled Detailed Plan, with a strong zoning characteristic to control the land use and building density. Between the Urban Comprehensive Plan and the Statutory Map, two more levels of urban plans (i.e., the Sub-regional Plan and the District Plan) have been added to better translate the planning objectives. The Detailed Layout Plan is normally produced by developers for large residential developments, guided by the Statutory Map, as a part of the planning application.

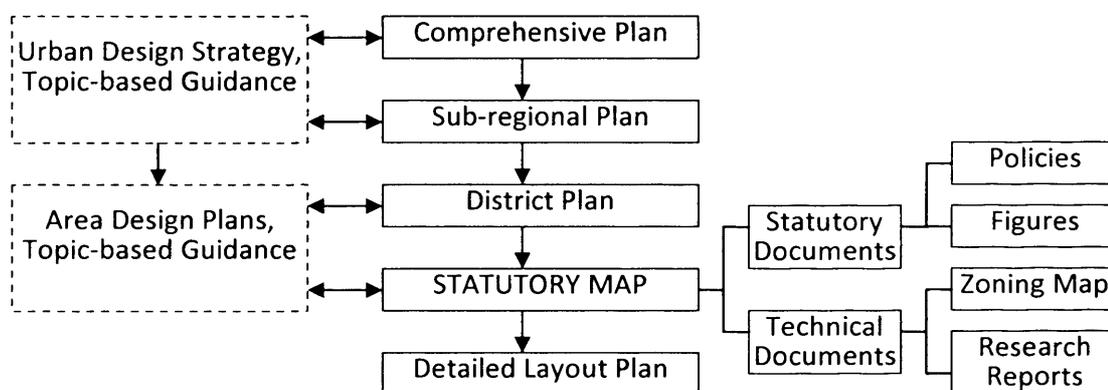


Fig. 6.2.4 The five-tier urban plan system and the relationship with urban design

It seems Shenzhen is producing more urban plans than other Chinese cities do. The budget for planning studies and urban plan making is sufficient, with about five per cent of the land lease income directed to planning expenditure each year (Wang and Li 2000). Taking the Comprehensive Plan and the Statutory Map as examples, the next section explains the contents of the urban plans, and illustrates how urban design is embedded in these plans.

6.2.2.1. Urban macro scale plans

In Shenzhen's urban plan system, the Comprehensive Plan, the Sub-regional Plan and the District Plan are all macro scale plans. The Comprehensive Plan establishes a development strategy for the whole city for the next 10 to 20 years, and the role of the

Sub-regional Plan and the District Plan is to translate this strategy to local areas, and to guide the making of the Statutory Map. In the latest Comprehensive Plan (1996-2010), the government targets are to promote Shenzhen to be an 'international city', by means of integrating the city into the Pearl River Delta region, strengthening the relationship with Hong Kong, producing a sophisticated spatial development strategy, facilitating high-tech industries, improving public facilities and developing a liveable urban environment. To achieve these objectives, policies deal with the traditional planning issues such as land use, transport system, public infrastructures and the locations for important development projects. To develop a liveable city, this plan advocates sustainable development with a pleasant urban environment, by improving the public transport service, harmonising the urban ecological system, and dealing with a wide range of environmental issues such as air pollution, noise, waste disposal and water source.



Fig. 6.2.5 Urban Design Guidance within Shenzhen Special Economic Zone (Source: Shenzhen Municipal Government 1996)

What is more important to this research, the *Comprehensive Plan* established the macro urban design objectives for Shenzhen, including maximizing the physical setting to create a city fronting the sea with mountains as the backdrop; respecting local history and culture in shaping urban spaces; building a 'world city' with creativity and

character; and building a humane society with a strong sense of community (Shenzhen Municipal Government 1996). These objectives are translated into a citywide urban design strategy (Fig. 6.2.5), clearly defining the locations for development nodes, landscape axes, green belts, and the development densities. It has strong environmental considerations such as defining the ecological zones and protecting the natural environment. In terms of design, it defines different character zones and major focal points at the strategic level according to the urban environment, to guide the making of the lower tiers of urban plans and guidance.

The most significant function of the Sub-regional Plan and the District Plan is to interpret the development strategy in the Comprehensive Plan and to guide the making of the Statutory Map. Their contents also follow those in the Comprehensive Plan. Following the development strategy, the Sub-regional Plan and the District Plan provide detailed parameters such as floor space ratios, greening ratios and the total floor space for each of the urban blocks which can be clearly defined in the Statutory Maps. Urban design guidance is also an integral part of these plans. The guidance reflects the principles within the Comprehensive Plan and provides local guidance according to the local situations, to form the local urban design strategy. For example, in Luohu District Plan, the urban design objective is to promote a high quality and attractive urban environment for the old city centre of this 'international city'. Its detailed urban design guidance, applies Townscape (Cullen 1961) and Legibility (Lynch 1960) as the urban design principles to the whole district and to further guide the development within specific locations (Fig. 6.2.6). For instance, to improve the legibility of the city, the guidance uses various instruments such as skyline and street wall guidance, promoting distinctive design by defining different functional areas, carefully choosing locations for high-rise buildings, promoting rhythm along the routes, providing tree planting guidance, increasing the views to and from natural areas and so on. Another characteristic of this guidance is that it goes beyond elevational control and integrates broader aspects of environmental issues such as integrating the natural mountain and water bodies into its open space system with some local guidance.

Urban Design Guidance

2. Building Height

2.1 Principles

To maintain a low density urban environment, it is necessary to strengthen the control on high buildings (≥ 24 metres) and high-rise buildings (≥ 100 metres):

- a. Landmark and focal point analysis should be provided to decide the location for high buildings.
- b. High buildings should not block the strategic view corridors.
- c. Along with mountains and rivers, high building development is restricted.

2.2 Building Height Control

Along the corridors of Honghu Park – People’s Park – East Gate Area, Baishida Development – Huangbei Mountain, and Shenzhen Reservoir – Shenzhen Reservoir Spillway, buildings lower than six storey are preferred...

Along Bao’an Road, Wenjin Road and Aiguo Road, high building development is allowed...

High-rise buildings are only allowed along Hongling Road and Wenjin Road.

...

In Liantang Area and the area along Shenzhen River, low density development is preferred.

3. Legibility

3.1 Road Signs

Road signs should have unitive design. The signs and public art along residential streets should regard the needs of local residents and should be easily recognized.

3.2 Signs in different functional areas

Within different functional area, the image of the area should be designed according to its function. For example, in Luohu Commercial Centre, the image of international city needs to be established by strengthening the characteristic of the modern shopping malls. East Gate Area should strengthen its traditional pedestrian street characteristic...careful design is needed in the entrance of each functional area to strengthen the local character.

3.3 High-rise building

High-rise buildings are the important landmarks of the city, and are preferable to locate at the ends of roads or view corridors. High-rise buildings are preferred in the centre of Sungang Area, the ends of Bao’an Road and Jiabin Road...

3.4 Rhythm along the routes

Rhythmed streetscape can improve the urban image. Along residential streets, attentions should be paid to provide continuous street walls. Along arterial roads, fluctuating skyline is preferred. To enhance the environmental richness, distinctive architectural design is encouraged...

Within the same avenue, same kinds of trees are preferred. Meanwhile, different kinds of trees are encouraged in different avenues to increase legibility.

To form multilayer streetscape, the view corridors from the mountains and water bodies to the inner city area should be secured.

3.5 Focal points along transport routes

The design of focal points along transport routes should regard their surroundings, especially for the crosses of Wenjin Road, Shennan Road and Sun’gang Road.

4. Interface

4.1 Styles and scales of interface

The interface of street and road should be designed according to the function of the road, such as traffic road, residential street and common road. For the traffic roads, it is necessary to widen the field of vision and the landscape design should regard the drivers’ need with strong sense of direction. For the residential streets, the space should be designed according to the human scale and should facilitate walking. For the common roads, especially for Shennan Road, both of the above criteria are applied.

...

5 Open space

To improve the urban environment, it is necessary to protect mountains and water bodies strictly, as well as to promote new urban park development.... to carefully develop Fenghuang Mountain and Wutong Mountain as the tourism areas; to introduce natural scenes into urban area, forming ‘mountain – water – urban’ form.

...

Regarding the urban spatial development strategy, Wei Mountain, Wutong Mountain and Luowu Mountain have been chosen as the strategic viewing points. The view corridors from these points should be well organized and protected.

...

The management of the urban park needs to be strengthened by demolishing the illegal buildings and providing more leisure facilities.

Developing the street – streets and roads are the crucial linkages to open spaces such as greening areas, squares and other natural open spaces. Improvements on the road pavement, public art, street furniture and street vegetation, are crucial to form a harmonized urban environment. To make good use of Shenzhen River and Buji River, it is necessary to improve the banks’ greening, to secure the pedestrian routes, and to strengthen the control on the building height in these areas to protect view corridors.

...

Urban management is a crucial way to maintain the urban environmental quality, which includes restricting parking in the squares and sidewalks.

Fig. 6.2.6 Urban Design Guidance in *Luohu District Plan 1998-2010* (Adapted from Shenzhen Municipal Government 2001)

6.2.2.2. Statutory Map

The Statutory Map is the core document for development control in Shenzhen. Although its contents are similar to the traditional Controlled Detailed Plan, there are four factors differentiating it from the traditional Detailed Plan. Firstly, its 'statutory status' means the Statutory Map should be approved and amended by the Planning Committee with public consultation¹⁵. As has been discussed above, this arrangement makes the planning decision making process more transparent and the local discretion more regulated. Secondly, the spirit of a Statutory Map is to secure the public interest in land development, especially to reserve land for public goods such as roads, infrastructure, open space and others (Gu and Li 2000). It transfers the parameters from district plans to the local level, to provide detailed clarification on land use, development density, relevant public service, transport infrastructure and urban design. To increase its flexibility to face an uncertain development climate, a land use compatibility system is introduced in the Statutory Map, which allows the land uses to be exchangeable when their environmental impacts are similar. Thirdly, the making of the Statutory Map is more evidence-based. A Statutory Map contains regulatory documents which guide development control, and technical documents which are the research reports providing reasons for any particular regulatory arrangements. Fourthly, urban design is a part of the considerations in plan making, and urban design guidance is an integral part of the Statutory Map. This approach to a large degree compensates for the lack of quality control in traditional planning management which uses only a few parameters such as land use and development density to control development.

Taking *Xiangmi Lake* for example, the Statutory Map inherits the strategic vision from the upper tiers of urban plans, and produces development guidance. *Xiangmi Lake* is designated as a tourism resort and a strategic greening area in the *Comprehensive Plan* and in *Futian District Plan*. The strategy for this area is therefore to develop an

¹⁵ 'Statutory Map' is a literal translation. In Shenzhen's context, it is not yet a kind of local law or by-law as comparing with the American zoning ordinance.

environment for recreation mainly with some accommodations for other urban functions (Shenzhen Municipal Urban Planning Bureau 2004d). Within this plan, every piece of land is clearly defined by its boundaries. The land uses, their compatibilities and development density (floor area ratio) of each piece of land are clearly stated (Fig. 6.2.7). The regulatory documents provide practical guidance on various issues, such as land use strategy, development density, public facilities (e.g. educational, medical, and recreational services), road hierarchy and transportation. In the technical documents, justifications of this plan are provided including the rationale to decide the development density, which is largely an environmental beauty concern. Although some planners criticize this pure environmental beauty-driven approach as unsophisticated, with a lack of economic justification (Zou and Chen 2003), it nevertheless expresses the government's eagerness to improve environmental quality.



Fig. 6.2.7 Statutory Map for Xiangmi Lake (Source: Shenzhen Municipal Urban Planning Bureau 2004d)

An important innovation in the Statutory Map is its advocacy of urban design quality. It gives high priority to design issues during the preparation process (Zou and Chen 2003), and provides detailed design guidance for local land development. It is required by the *Ordinance* that urban design should be a part of the Statutory Map (Standing

Committee for Shenzhen People's Congress 2001). In *Xiangmi Lake Statutory Map*, instead of stating vague urban design principles, the urban design guidance is location-based (Fig. 6.2.8). It provides guidance on building height, environmental design standards, view corridor protection and the detailed requirements for street lighting (Shenzhen Municipal Urban Planning Bureau 2004d). However, as with most of the urban design guidance in China, the issues of promoting social equity and bio-diversity are weak.

6. Urban design guidance

6.1 Xiangmi Lake is one of the major tourism attractions within Western Shenzhen, so the development should follow the following principles:

- a. Protect the Xiangmi Lake and its context urban environment, all the development should harmonise the lake's character and keep their own distinctiveness;
- b. Priority should be given to maximising the recreation use when changing the land use in this district. Protect the scale of the tourism area by strengthening the control to the building's exterior;
- ...
- d. Architectural design within the tourism area should have positive effect to establishing the tourism image.
- e. The design of the public infrastructure should regard to the tourism environment.

6.2 The design of the streets within this sub-district should obey the following principles:

- a. Strengthen the landscape design of the interface of Shen'nan Avenue and the main entrance to the tourism area;
- b. Strengthen the creational landscape design in Hongli Road;

- c. Large scale of greening is preferred along Xiangmi Road and Northern Ring Road;
- d. Street lighting is preferred to use gentle lamp-houses. The landmark buildings and the landscape to the tourism area is preferred to use floodlight.

6.3 Architectural and environmental design within this sub-district should obey the following principles:

- a. Strengthen the lake image, by paying special attention to the designs of the surrounding buildings, to maintain the water-related activities;
- b. The closer the buildings is located to the lake, the lower the building height is;
- c. Protect the view corridors to the lake, especially for the view corridors to the Golf Club, Tanglang Mountain, Foliage Park and etc;

- ...
- f. Residential development should be low density with elegant open space, to form the positive outskirts environment to the tourism area;
- g. Architectural and environmental design should obey the original design – European Continental Image;
- h. Careful greening is the preferred form to separate different functional zones.

Fig. 6.2.8 Design Guidance in Xiangmi Lake Statutory Map (Source: Shenzhen Municipal Urban Planning Bureau 2004d).

6.2.3. The outcome of the system

Compared to other Chinese cities, Shenzhen's reformed approach to urban planning is more research-oriented, democratic in plan making and law-based in development control. A well resourced budget enables the planning authority to carry out more

thorough research to deal with local planning issues. The high environmental beauty agenda driven by the 'world city' dream and the awareness of the positive impacts of environmental quality to attract investment in the rising service economy give urban design a strong position in the planning system.

After a few years practice, some weaknesses of the reformed planning system have been witnessed in the current development climate. Firstly, the demand of speedy plan making reduces the time for data collection, which puts the urban plans, especially the Statutory Map, in danger of neglecting existing property rights (Zou and Chen 2003). Secondly, public participation is still an immature exercise, due to the lack of experience and the lack of mature civil society (Ng and Tang 2004). Thirdly, the Planning Committee is not really representative of the public; instead, most members have background in the development industry, creating a conflict of interest (Zou and Chen 2003). Fourthly, the large amount of plan amendment weakens the urban plan, with 85 per cent of approval rate for Statutory Map amendments in the Planning Committee. Fifthly, illegal constructions challenge planning control, and sixthly the planning process still lacks a base in social-economic research (Ng and Tang 2004).

Urban design considerations are integrated and continuous throughout the different tiers of plans in Shenzhen. The definitions of different character zones, the decisions on strategic focal points, and the establishment of strategic view corridors ensure the implementation in lower tiers of plans. The location-based design guidance and the quantitative parameter setting strengthen the design outcome. But the concept of urban design is only partially recognized. As a city-wide planning *Norm*, it fails to state the general urban design principles to cover every aspects of what design review needs to address. The urban design guidance emphasizes visual appropriateness and quantitative requirements such as building heights, scale of arcades and other numerical regulations. But it lacks qualitative requirements and deeper urban design considerations. Some planners consider that Shenzhen's development control is still parameter-driven, and cannot proactively improve environmental quality, in terms of the comfort of the pedestrian environment, or the sense of community. They call for a more quality-driven development guidance (Huang 2003).

6.3. Shenzhen's commercial office development

Shenzhen's commercial office development has boomed from the early 1990s, due to the growth of the high-tech industry and the city's strategy to promote service industries (Fig. 6.3.1). The design approach to Shenzhen's commercial office developments has changed according to different stages of Shenzhen's urban development. It began with providing basic medium-rise, functional and standardized accommodation in the early 1980s, and moved on to a tower form and a 'modernist' 'international style' with the influx of globalization in the late 1980s and the early 1990s, and finally to addressing users' requirement and the quality of public realm from the late 1990s, but without losing its style preoccupations. This section briefly reviews the design approaches in these three periods in terms of space, style and users.

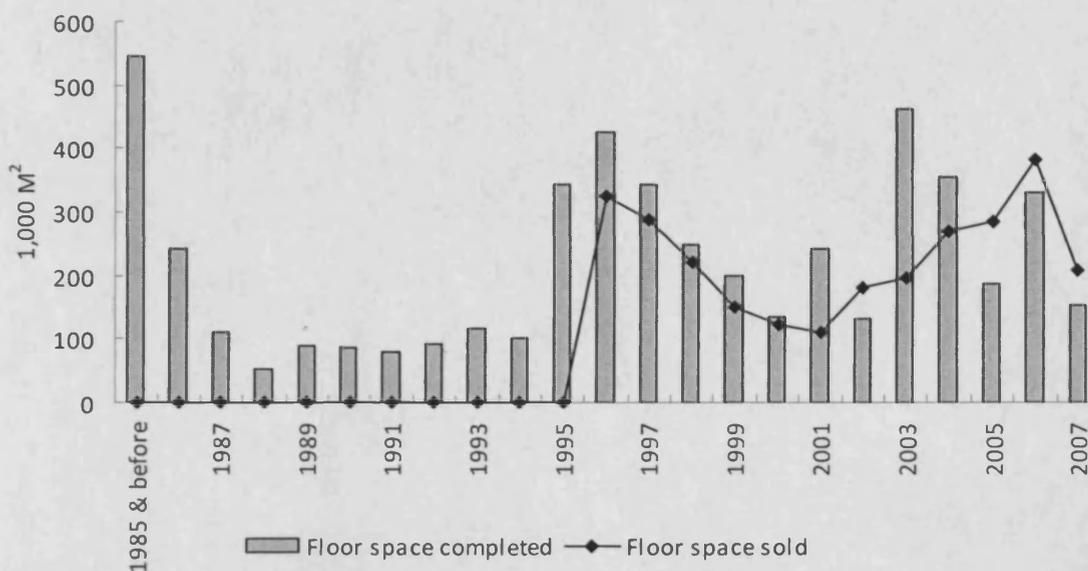


Fig. 6.3.1 Shenzhen's annual commercial office floor space completed and sold. The data before 2005 is from *Shenzhen Real Estate Yearbook* (Shenzhen Statistics Bureau 2006); the data for 2006 and 2007 is from *China Real Estate Database* (State Information Centre 2009). The data for floor space sold before 1994 is absent.

6.3.1. Shenzhen's office development in the 1980s and the 1990s

In the early 1980s, urban developments in Shenzhen were carried out by the government or SOEs. Due to the lack of resources, most of the buildings were developed to fulfil basic requirements. The role of Shenzhen's planning authority at that time was to allocate land for these enterprises or organizations, without exercising 'development control' in terms of urban form or urban design (Ng and Tang 2004). Due to Shenzhen's strategy of promoting industries for export, the office spaces were mainly used for managing production and partly for trading purposes. Therefore, most of the office buildings were developed within the industrial zones with similar forms to the factories or worker's dormitories. They tended to be medium-rise (7-8 floors), functional and standardized, with only some exceptional taller office buildings located close to the production accommodation (Fig. 6.3.2). The quality of the public realm was not a concern.



Fig. 6.3.2 Office for China Electronics Shenzhen Company, located next to its medium-rise workshops and workers' dormitories. It was completed in 1982 and was the tallest building (20 floors) in Shenzhen (Source: Huang 2006).

In Shenzhen's traditional city centre (Luohu District), where the demand to accommodate the foreign or domestic companies was rising, high-rise commercial office developments slowly emerged in this period, with a boom in the early 1990s (Fig. 6.3.1). The Western 'international style' started to appear in Shenzhen, as a result of economic globalization. Shenzhen International Trade Centre, invested in by 38 organizations and enterprises, was appraised as the earliest building of high quality ('Shenzhen Architecture' Editorial Board 1988). It was designed in 1981 by a domestic architectural institute, and completed in late 1985. The local politicians intended to develop it as the tallest building in the country and to use it to demonstrate Shenzhen's economic success. A revolving restaurant was added on the top, with three

observation elevators on the northern elevation, an underground restaurant, an entrance hall music fountain, podium shops and an entrance awning providing a mix of uses and spaces. A large space was left in the front of the building to accommodate the predicted pedestrian flow. But this space was later converted into a large car park (Fig. 6.3.3 left). Again, the quality of the public realm was not an issue. Due to the lack of guidance on building form and public space, the urban developments in Shenzhen's old city centre seemed anarchic, with unregulated high-rise towers scattered randomly (Fig. 6.3.3 right).



Fig. 6.3.3 Shenzhen's early commercial office development. Left: Shenzhen International Trade Centre with the front square occupied by cars; Right: Luohu District in the early 1990s with the Shenzhen International Trade Centre in the centre, shows how the medium-rise buildings in this traditional city centre were slowly replaced by the high-rise offices, hotels and residences (Shenzhen Municipal Government 2004).

In the 1990s, although a formal planning control mechanism was established, it was merely a two-dimensional land use control. Previously, the major source for development control was the Controlled Detailed Plan (or Statutory Map in Shenzhen). Apart from deciding the developable floor space, building height and building setback, these urban plans have nothing to say about the quality of the public realm. The developments resulting from by these plans have been criticized as disordered (Li 2002) and failing to create sense of space and place (Fig. 6.3.4).

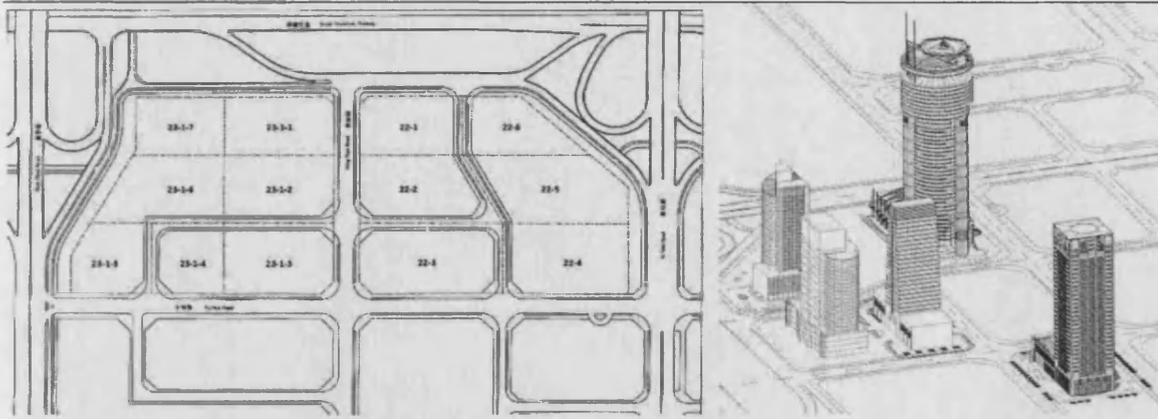


Fig. 6.3.4 Block 22 & 23-1 (Masterplan 2) in the traditional Controlled Detailed Plan, with the objective to subdivide the urban block and to provide land use control to regulate the development density (left). But the lack of consideration on of the built form and the public realm resulted in a chaotic and disconnected urban environment (right) (Source: Li 2002).

6.3.2. Shenzhen's office development from the late 1990s

With Shenzhen's strategy to promote high-tech industry and service industry, the quality of the environment has become a higher profile issue in the local political agenda, as a means to attract investment. In broad terms, the local politicians prefer the forms of global financial districts as signals of economic success. The building forms and elevational designs in Chicago Downtown, Lower Manhattan in New York, La Défense in Paris, Hong Kong Central and London Docklands have been frequently referred to in many urban design studies (Chen 2006; China Academy of Urban Planning & Design 2005).

Shenzhen's planning was reformed in the late 1990s, with more emphasis on the urban design quality of the urban environment. The planning authority started to go beyond land use and density control and to put more efforts into regulating elevational design. More recently, the planning authority has further addressed the form of groups of buildings, the pedestrian experience and activity support in the public realm, as well as parking strategy.

At the same time, due to the market conditions, developers have started to realize the value of urban design quality. Although the developers are still chasing more floor

space and taller towers, the commercial office developments have become more occupier-oriented. More attention has been paid to providing a user-friendly working environment. Energy-efficiency has been rising up the developers' marketing agenda, in order to reduce the occupier's running costs. Mixed-uses within a single development are welcomed by the developer to reduce the investment risk and to maintain a long term interest in the project.

This change of design approach in office development is also partly due to the emergence of a more sophisticated planning system and the changing attitudes (higher standards) of different actors in the planning process. The details of these changes are discussed in the next chapter.

6.4. Conclusions

In less than 30 years, Shenzhen as an instant city has made tremendous progress in its economic development, based on the central government's policy support and the daring spirit of the local politicians to deepen the market reform. Planning has been a crucial vehicle for the city to boost its development. Learning from the international practices, the city has been in the vanguard in China as regards to the reforms of the land policy, SOEs and the planning system. Shenzhen's promotion of urban design and sustainability is for the purpose of attracting investment. Urban design came to Shenzhen in the era of globalization and when the city was restructuring its economy. The municipal government hopes it can improve the quality of life and can raise the city's profile in the regional and international contexts, leading to more investment in the tertiary sector and high-tech industry. However, the public interests in urban design have been sacrificed in this process.

Being challenged by market forces, Shenzhen has been reforming its planning system by introducing local planning legislation to form a rule-based planning control, establishing a Planning Committee to monitor planning decision making, and inventing a five-tier urban plan system to better deliver planning objectives to local levels. The planning reform at the same time has made urban design an integral part of the planning system, both in plan making and in development control. However, the unprecedented speed of the urban development, the immaturity of the new planning system, and the partial understanding of urban design all demand a more sensitive and quality-driven approach in practice.

According to the economic conditions, the design approach to commercial office development has been changed from a very functional and standardized approach to a 'modernist' 'international style' and the idioms of global capital, and recently to more directly addressing built form issues and users' demands. The detailed nature of these design changes will be discussed in the next chapter.

CHAPTER 7. COMMERCIAL OFFICE DEVELOPMENT IN SHENZHEN AND DESIGN CONTROL

This chapter summarises the empirical research. The objective is to find out how urban design quality has been raised through the development control process in Shenzhen recently. For methodological reasons, this research takes the approach of ‘replicable’ case studies (Yin 2003), and chooses 11 commercial office developments as case studies, because these are the most prominent elements in the urban landscape (Fig. 7.0.1).

Each individual case is documented in Appendix 4 with detailed descriptions of their planning and development histories. These include how the relevant urban plan was formulated, how the land was released, how the design was formulated and amended by the key actors (e.g., planners, politicians, developers and architects where it was possible), and how the built projects impact on the public realm.

This chapter examines the design approaches to commercial office developments in Shenzhen from three aspects. Firstly, it uses the event-sequence models (see Chapter 3) to explore the impacts of the reformed planning permitting process on urban design quality. Secondly, it utilizes the structure-agency models (see Chapter 3) to analyse the key actors’ roles in the design-development process. Lastly, it borrows the established ‘post-modern’ urban design principles (see Fig. 2.2.2) to evaluate the quality of these office developments. A broader evaluation of these research findings are presented in the next chapter.

| Case studies | Land leasing | Time to approve | Building height | Floor space | Extra floor space | Design competition | Note |
|--|--------------------------------|--|---|-------------------------|---|-------------------------------|--|
| Case 1 Great China International Exchange Square | June 1994, bidding | 9 years (June 1994 – July 2003) | 202 metres: 27 metres more than permitted | 272.3 57 m ² | 51,396 m ² (23.3% more than permitted) | Three entries | Illegal, embedded governmental property |
| Case 2 International Chamber of Commerce Tower | January 2002 | 9 months (January 2002 – August 2002) | 216 metres as original permitted | 134,000 m ² | 0 | Five entries | Masterplanned, then lease land |
| Case 3 Guizhou Mansion | December 2001 | 18 months (December 2001 – May 2003) | 100 metres as originally permitted | 48,000 m ² | 8,000 m ² (legally increased 15%) | Four entries | Masterplanned, then lease land |
| Case 4 Coastal City – East Tower | April 2002 | 3 years (April 2002 – March 2005) | 100 metres as originally permitted | 59,000 m ² | 0 | Three entries | Masterplanned, then lease land |
| Case 5 China Phoenix Building | June 2001, revised in Dec 2002 | 2.5 years (December 2002 – September 2005) | 110 metres: legally increased 20 metres | 80,000 m ² | 31,300 m ² (legally increased 64.3%) | Two competitions held | lease land, then masterplanned, and revise condition |
| Case 6 Galaxy Central Plaza | previously collectively owned | 15 months (September 2003 – January 2005) | 170 metres as permitted | 122,000 m ² | 0 | Five entries | Constrained site, mixed use |
| Case 7 Holiday Plaza | Land leased before 1993 | 1 year (2004 – 2005) | 100 metres | 58,200 m ² | Reduced 56.8% | Number of the entries unknown | Citizen protest, development right transfer |
| Case 8 Oriental Plaza | N/A | N/A (August 2007 – now) | N/A | 148,800 m ² | N/A | Three entries | Urban design guidance, constrained site |
| Case 9 Kingkey Finance Tower | May 2004 bidding | 2 years (2005 – 2007) | Over 439 metres: legally increased 139 metres | 405,000 m ² | 50,000 m ² (legally increased 14.3%) | No information found | Urban design study |
| Case 10 Shenzhen Stock Exchange | N/A | 2.5 years (March 2005 – late 2007) | N/A | N/A | N/A | Five entries | Design guide not implemented |
| Case 11 East Pacific Centre | Previous SOE land | 3 years (2004 – 2007) | 300 metres: legally increased 110 metres | 360,000 m ² | 72,600 m ² (legally increased 25.3%) | A few competitors | Urban design study and negotiation |

Fig. 7.0.1 Case-study statistic. This figure presents the basic statistics of all the 11 commercial office developments used in this research.



7.1. Urban Design in the Planning Permitting Process

To reveal the impacts of the planning permitting process on design quality, this research adopts an event-sequence model to analyse the key design development events that affect project design. For every case study in this research, efforts have been made to explore the evolution of design through the planning process. This was achieved mainly by documentary review, interview and observation in the planning process. The general process of planning permitting in China was discussed in Chapter 5 (Fig. 5.2.3). Here, the objective is to find out in detail how the planning permitting process in Shenzhen impacts on design quality? What assessment processes are carried out? And how effective is this process in delivering good design?

At the project level, the ideal process for commercial development has three steps (Fig. 7.1.1). Firstly, when a developer applies for the land use planning permission, the requirements in the relevant detailed plan are translated into design conditions and are attached to the Land Use Planning Permit. Secondly, the developer goes away to retain an architect to draw up his vision, having regard to the design conditions and the relevant regulations. With these drawings, the developer applies for the approval of the architectural design. Thirdly, when the construction documents are submitted, the local authority implements building control. Additionally, after these three steps, and when construction is completed, the planning authority carries out a post-construction examination and issues a Post-Construction Certificate, without which the project cannot be sold or let. But the process is far more complicated in the real world, due to either the lack of an up-to-date urban plan, the lack of necessary level of details in the urban plan, the inevitable political interventions, or the involvement of planning enforcement or appeals.

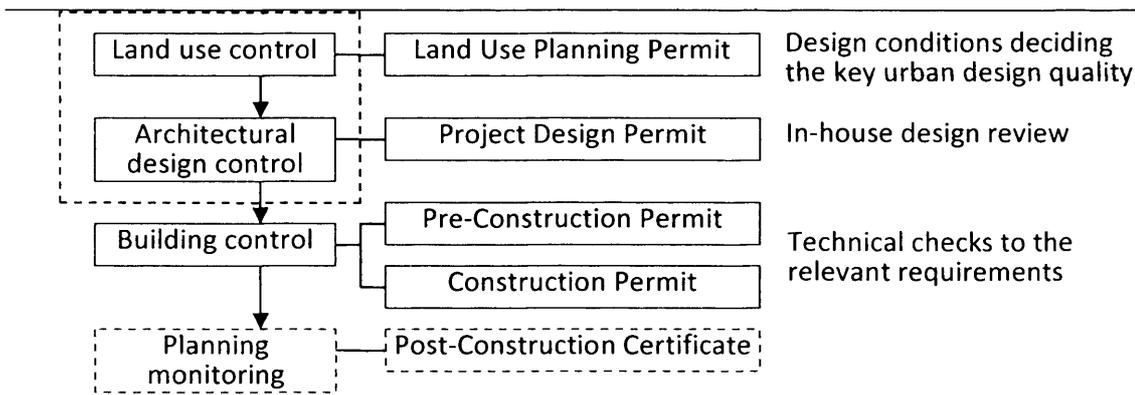


Fig. 7.1.1 Planning permitting process in Shenzhen for commercial office development

7.1.1. Land use control – deciding the key parameters

Issuing a Land Use Planning Permit is the first and the most important step towards securing the quality of urban design in Shenzhen's development control. Shenzhen's innovation at this stage is to use an urban design study as an accompaniment to the Statutory Map and as a means to formulate design conditions in land use control. Shenzhen tends to secure the urban design quality one step earlier than other Chinese cities – at the land use control stage rather than in the architectural design control stage. It enables the planning authority to negotiate better urban design before the architectural design is carried out. If the urban design study conflicts with the original Statutory Map, the planning authority will initiate the Statutory Map amendment procedure to legitimate the changes (e.g., changing the block boundary, floor space allowance and land use). Here, two different approaches are revealed. One is the local government-led urban design study for a relatively large urban block, involving a few different developers and land subdivision. The second one is the developer-led urban design study, as a means to negotiate their development ambitions.

7.1.1.1. Local government-led urban design studies

For large urban blocks in crucial locations (normally in the CBDs), the planning authority tends to be the leader in the urban design study and takes an active role in negotiating with the developers over the design parameters. There are two common

approaches to the local government-led urban design study. One is to use an urban design plan as a marketing tool to promote land development in a strategic area. The other is to use their urban design study to compensate for the weakness of the original urban plan in urban design terms. These two approaches both result in the creation of individual design conditions to regulate the development of urban plots.

The first approach is to develop a firm and clear design vision by commissioning an urban design plan for marketing the specific urban district. For this promotional purpose, a design competition is normally held to select the best urban design plan, and this approach is getting strong local political support. At the same time it allows the local authority to implement it through a series of implementation documents. In Nanshan Central District (Masterplan 3), the ambition of the local government was to develop it as a 'world-class city' centre, by the means of improving the quality of life, creating an ordered and legible urban form with a strong sense of place, and reflecting the waterfront environment (Shenzhen Urban Planning and Land Resources Bureau 1998a). It was hoped that an international design competition could raise the locality's profile to attract potential developers. The urban design plan by (Australia) Brisbane City Comprehensive Design Institute (ABCCDI) claimed that they used the 'urban village' approach to achieve the set objectives (Fig. 7.1.2), and it was welcomed by the jury. The scheme was praised for its ordered built form and the idea of using water features to reflect the seafront environment. In particular, the jury was pleased to see the elevated shopping street (Fig. 7.1.3, will be discussed later) with its potential to better organise vehicle traffic.



Fig. 7.1.2 Masterplan for Nanshan Central District by ABCDDI (Adapted from Urban Planning and Design Institute of Shenzhen 1999).

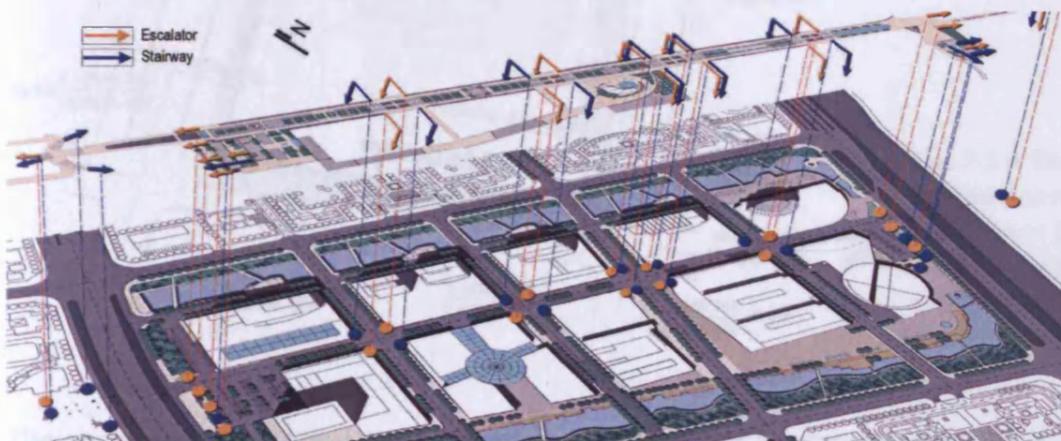


Fig. 7.1.3 Elevated high street for Nanshan Central District (Adapted from China Academy of Urban Planning & Design 2004).

Local politicians considered that this urban design plan reflected the city's ambitions in this area. In 2004, the urban design plan itself was translated into an implementation plan with a site based Development Code, and this was later attached as the design condition for project design. The code's contents include the traditional planning parameters such as floor space, building setback and building height (Fig. 7.1.4), as well as the design guidance on landscape, street furniture, building massing and circulation. This plan also provided construction guidance for the elevated shopping street and the water feature, which was later funded by the government. So far, this district is nearly completed according to this implementation plan. Although there are

some reservations about the quality of the urban design plan (see section 7.3 for details), the planning process of using a design competition to generate a design vision and using an implementation plan to specify the development requirements and provide the planners with a proactive position to control development.

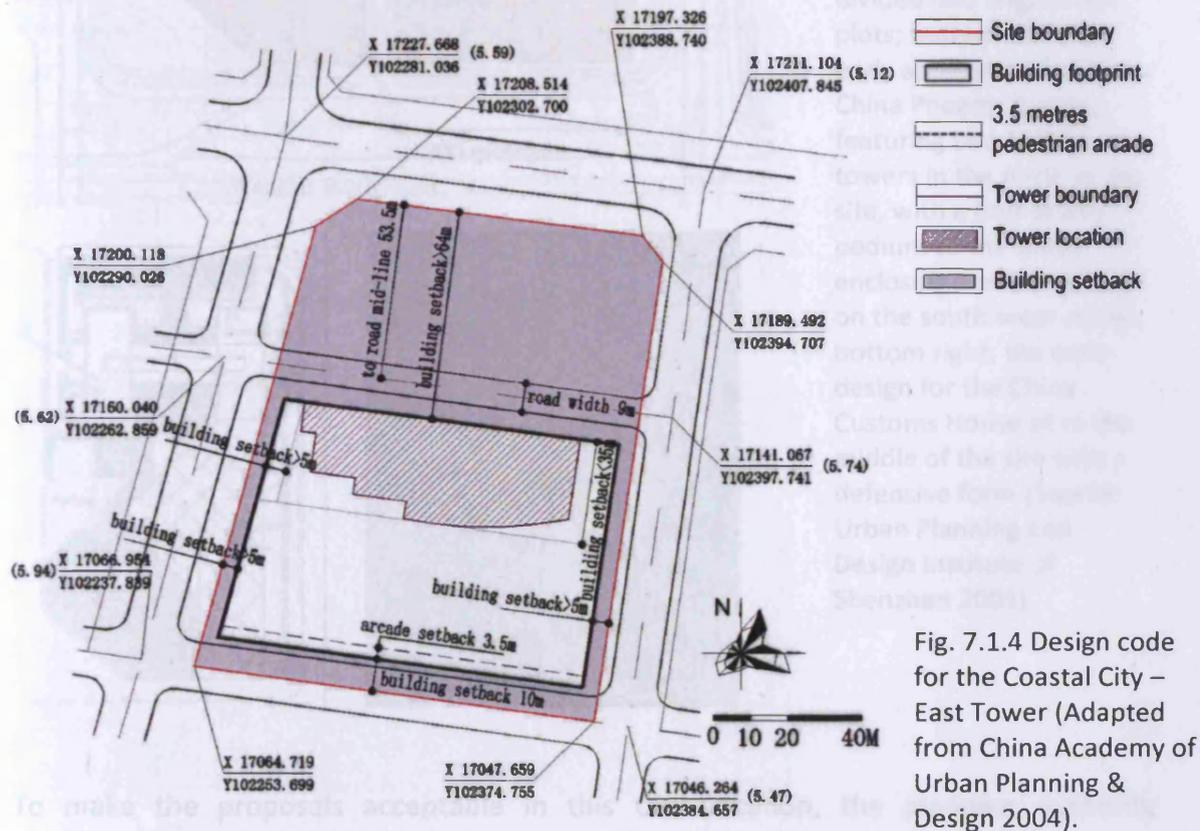


Fig. 7.1.4 Design code for the Coastal City – East Tower (Adapted from China Academy of Urban Planning & Design 2004).

The second approach is to use an urban design study to improve the urban design quality of the statutory plan, because some of the statutory maps were prepared within a very short time, without sophisticated consideration of development demand or the urban environment. The development of Block 26 (Case 5) is a case in point. The original Statutory Map for the block only regulated the land use and density, and failed to provide guidance on the built form. The planning authority was not convinced by the subsequent project designs in this block, as they did not present a 'unified and modern' environment (Fig. 7.1.5).

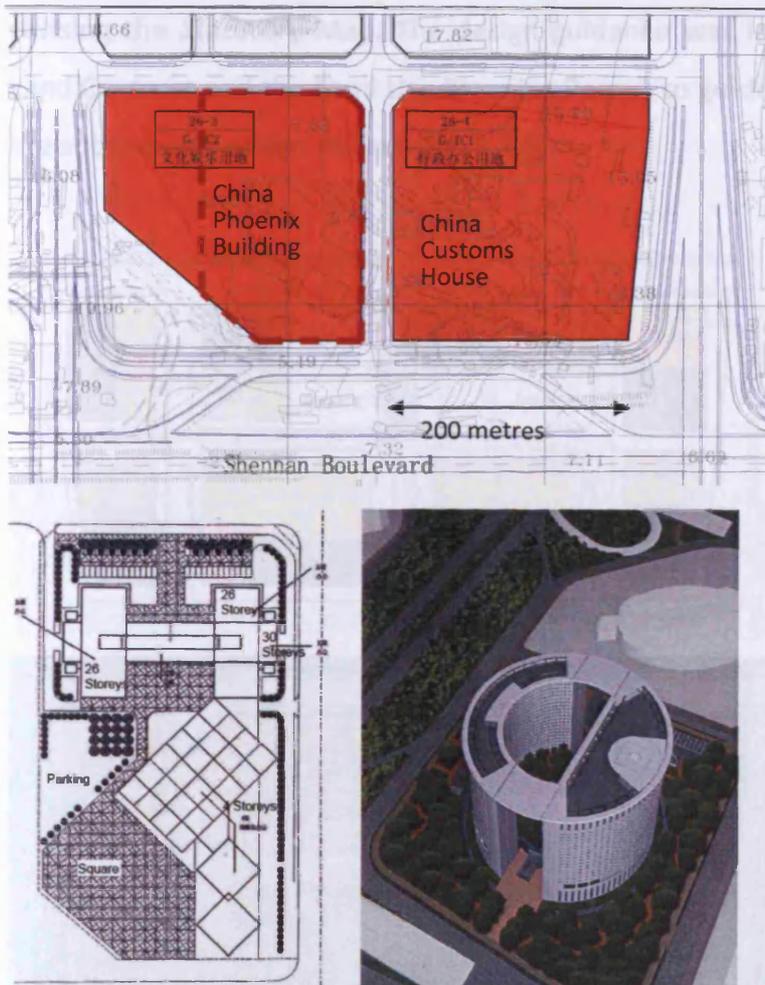


Fig. 7.1.5 The China Phoenix Building. Top: Block 26 in Statutory Map (Adapted from Shenzhen Urban Planning and Land Resources Bureau 1998b) was divided into large urban plots; bottom left: the early application for the China Phoenix Building featuring two 110-metre towers in the north of the site, with a four-storey podium to the south enclosing a public square on the south-west corner; bottom right: the early design for the China Customs House sit in the middle of the site with a defensive form (Source: Urban Planning and Design Institute of Shenzhen 2001).

To make the proposals acceptable in this CBD location, the planning authority considered that an urban design study for this block was necessary to develop the design conditions. Working with the planning authority, Urban Planning and Design Institute of Shenzhen (UPDIS) carried out an urban design study that divided this block into seven gridiron land parcels with narrow urban roads, increased the building density, used buildings to front the streets and to enclose small squares, allocated retail spaces on the ground floor level to activate the street, and regulated towers to form a unified built form (Fig. 7.1.6). Given a significant increase in building density, the planning authority could now negotiate with the developers to change the land parcel. The deal was that if the developer agreed to reduce the site size and build according to the urban design study, the planning authority would allow them to increase the developable floor space. The planning officers were given political support for this amendment, and the outcome of the urban design study was legitimated by

revising the Statutory Map. The design guidance was later attached to the renewed Land Contract and the Land Use Planning Permit to guide the design development and the subsequent design review (Fig. 7.1.6).

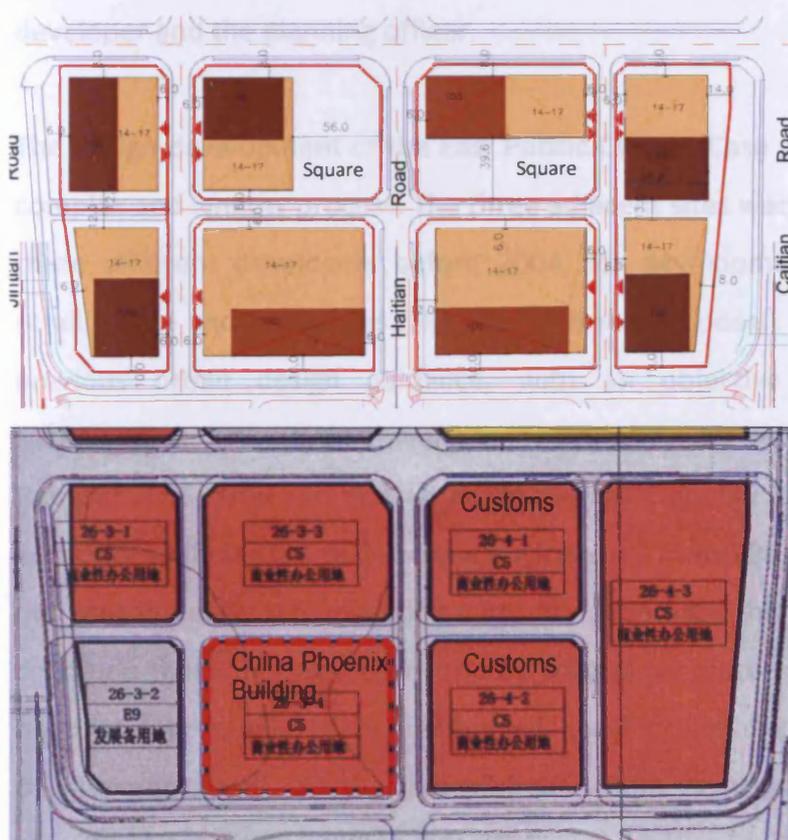


Fig. 7.1.6 Block 26 urban design study and the change of the Statutory Map. Top: Masterplan prepared by Shenzhen's planners (Adapted from Urban Planning and Design Institute of Shenzhen 2001). Bottom: the block in the revised Statutory Map (Adapted from Shenzhen Urban Planning and Land Resources Bureau 2002f). This block is subdivided into seven plots. The site size for the China Phoenix Building is now shrunk in half. But their floor space allowances are increased.

Through the use of both of these approaches – urban design plans and urban design studies – to generate design conditions, Shenzhen's planning officers were enabled to consider the urban design quality before the architectural schematic design.

7.1.1.2. Developer-led urban design studies

Apart from the local government-led urban design study, the developer can also take an active role in producing an urban design study for a Land Use Planning Permit. This normally happens when the developer wants to break the original permitted parameters and to try to increase the floor space allowance. Recently, the planning authority has been trying to limit its own discretionary power and introduced a more

rule-based administration. It therefore holds the position that the original permitted parameters cannot be changed, unless the developer demonstrates a strong reason for it (e.g., increasing public benefit). This process is less straightforward than the local government-led urban design study, and involves endless negotiation between the developer and the planning officer.

The design development of the East Pacific Centre (Case 11) is a good example of this complex and lengthy process. The three adjacent sites were given planning consents to three different developers before 2004, for developments mixed with apartment, retail, office and hotel uses (Fig. 7.1.7). These proposals were much in line with the previous urban design guidance, with an objective of protecting the China Merchandize Bank (CMB) Tower's landmark status by introducing skyline guidance. In October 2005, after assembling the three sites, Donghai Group applied to the planning authority to increase the floor space allowance from 286,800 M² to 360,000 M² (a 25 per cent increase). The planning authority supported this increase in principle, with a condition that this amendment should contribute more to 'public goods'. In the later negotiations, 'public goods' embraced good urban design which relates the new development well to the established landmark tower, and makes a positive contribution to active public space.

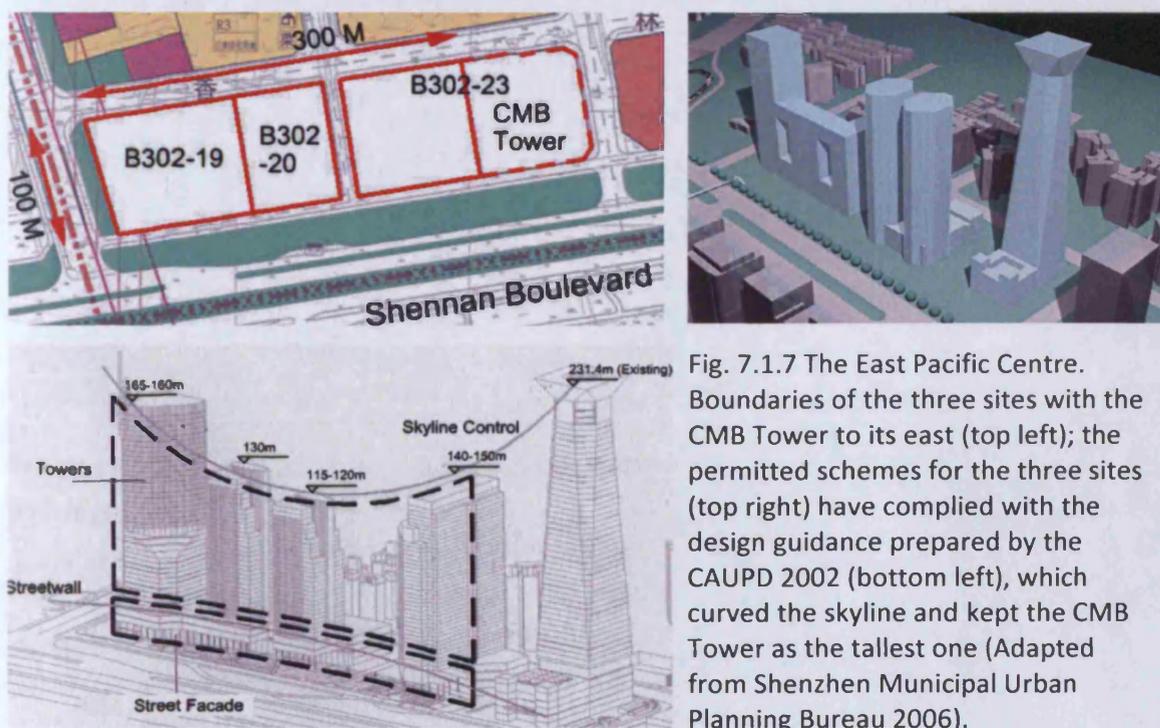


Fig. 7.1.7 The East Pacific Centre. Boundaries of the three sites with the CMB Tower to its east (top left); the permitted schemes for the three sites (top right) have complied with the design guidance prepared by the CAUPD 2002 (bottom left), which curved the skyline and kept the CMB Tower as the tallest one (Adapted from Shenzhen Municipal Urban Planning Bureau 2006).

Failing to satisfy the planning authority in two architectural design competitions, the developer now tried to seek clearer planning guidance using an architect. In these negotiations, the planning officers tended to agree that given the proposed high density, if the original height limits were to remain, the proposed development would be too bulky (Fig. 7.1.8 left). They considered that a taller tower on the site would be more suitable (Fig. 7.1.8 middle), but it should be placed far away from the CMB Tower, to avoid a feeling of overcrowding (Fig. 7.1.8 right).



Fig. 7.1.8 Models used to discuss the possible built form.

The planning officers urged the architect to work out the details of the urban design before the scheme was presented to the city Mayor for political support. These included the new design approach to this gateway location, the quality of the public space, the relationship with the underground development, the land use, the issues of connectivity and shadowing. The architect finally worked out an indicative scheme that met the planning officer's requirements (Fig. 7.1.9). As the result, a taller tower was located away from the CMB Tower to strengthen the site's gateway image, and some active public space was enclosed by the towers and podiums. In 2007, the city Mayor agreed with the planning authority's argument on this gateway site, and the Planning Committee approved the amendment of the Statutory Map, and the planning authority permitted this application subject to the urban design conditions.

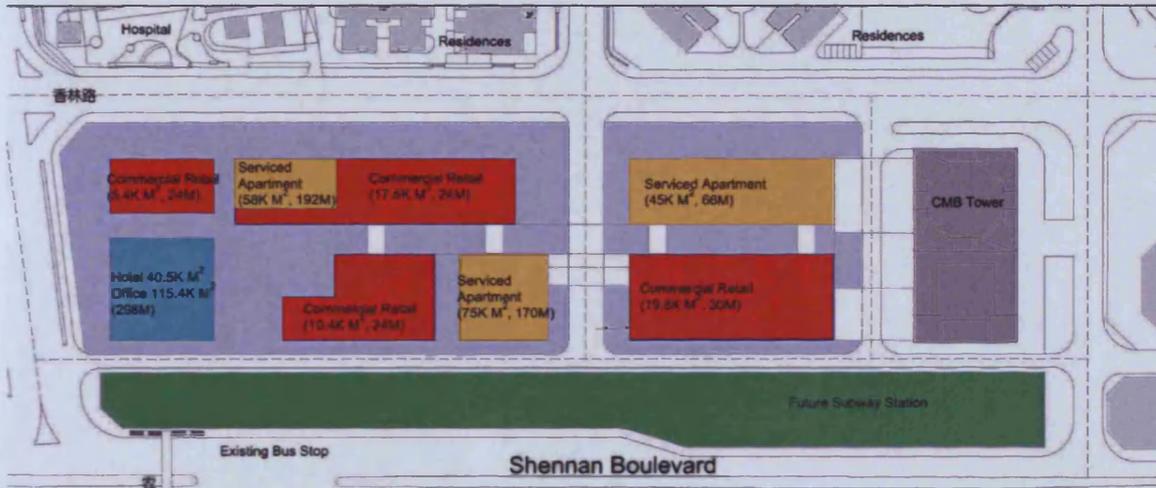


Fig. 7.1.9 Indicative scheme as the result of the urban design study (Source: Shenzhen Municipal Urban Planning Bureau 2006)

In this case, the quality of the public space and the built form was at the centre of design negotiations, and the planning authority was in a strong position to guide the negotiation. But due to the lack of general guidance on preparing design conditions, their preparation approach seems to be ad-hoc, depending on the quality of the urban design plan/study and the skills of the planning officers.

7.1.2. Architectural design control – getting the design right

After issuing the Land Use Planning Permit, the next step is to assess the architectural design. This is to make sure that the project design is carried out according to the given design conditions and other design regulations (such as fire regulation). More recently, for certain investments, the planning authority requires the developer to carry out a design competition monitored by the authority before applying for the Project Design Permit. In this research, all the case studies are the results of design competitions,

followed by the planning authority's in-house design review. It is fair to say that Shenzhen's approach to architectural design control for commercial office development is a rigorous process but it provides certain room for design innovation.

7.1.2.1. Architectural design competition

A design competition to generate the architectural schematic design is required for large residential developments (with the floor space over 60,000 m²) and commercial projects in strategic locations (e.g., landmarks, buildings along the arterial roads, and the city/district centres) (Shenzhen Municipal Urban Planning Bureau 2008). In the last decade, most of the design competitions were carried out using a simple majority voting system. The number of the jurors was not strictly regulated, but certainly contained three kinds of people, i.e., the developer, the planning officer and the experts (see below). More recently, progress has been made to improve the way the jury committee is formed and the design evaluation process. The jury committee now should contain no less than five jurors with an odd number, two thirds of whom should be architectural, structural or engineering experts. Majority voting is now replaced by either nominative voting, rating or integrative evaluation¹⁶ (Shenzhen Municipal Urban Planning Bureau 2008). It is believed that this amendment can ensure a more justifiable process with enough skilled support.

Generally, Shenzhen's approach to regulate design competition is fairly successful. It ensures a good balance of interests, for the developer to express and diversify his design ideas, as well as for the planning authority to monitor the design development process. More importantly, both parties can gain crucial skilled support from the

¹⁶ In the nominative voting process, each juror votes one to three preferred entries, and the first three entries gaining the most votes are recommended to the developer; in rating, each juror rates three preferred schemes, with the most preferred one gaining three points, the second one two points and the third one gained one point, and the first three schemes gaining the highest scores are recommended; in integrative evaluation, scores are given to each evaluation elements for each scheme, with the technical elements weight more than 85 per cent and the economic feasibility less than 15 per cent, and the first three schemes that gain the highest scores are recommended. The jury committee can decides on the process right before the design review is carried out.

experts. To developers, the design competition is a chance to 'buy in' different designs to fulfil their investment strategy. In the cases studied, the developers could choose any scheme to implement, but most of the time they adopted the jurors' recommendations. The planning authority has many roles to play in the competition. By registering the competitions, the planning authority ensures the design conditions issued are enclosed in the developer's bidding book. When the developer confirms the bidders, the planning authority reviews their architectural design qualifications to design the project. To make sure the competition is judged by the proper experts, the planning authority suggests a list of experts who are formally registered with them. To express the planning authority's concern, the case officer normally joins the jury committee. After the competition, the planning authority has the discretion on how to take the jurors' comments forward in the subsequent planning application.

Although an early example, the design competition for the International Chamber of Commerce Tower (ICC Tower, Case 2) and the subsequent planning application reveal the general process. In this case, five design teams were approved by the planning authority and were given urban design guidance as the design conditions. In October 2001, a ten-person jury committee was formed by six architectural and engineering experts recommended by the planning authority, three planning officers and the developer. They used virtual environment computer models to assess the five schemes. Eventually, eight jurors voted for Merchandize Architects' proposal as the preferred design because of its better response to the design guidance and to the developer's bidding book (Huang 2002). The jury praised the scheme for its innovative built form, easy-to-use floor plan for tenants, and economical construction. But the jury added that this scheme needed minor revisions to add a podium to the north to enclose the northeast square, to change the building top design to reduce the wind load, and to reduce the excessive solar gain on the west and south elevations (Fig. 7.1.10). As the developer intended to implement this preferred scheme, the planning authority took the jury's recommendations on board and required the relevant changes. In November 2001, the developer applied a permit with the required revisions, and subsequently gained approval.

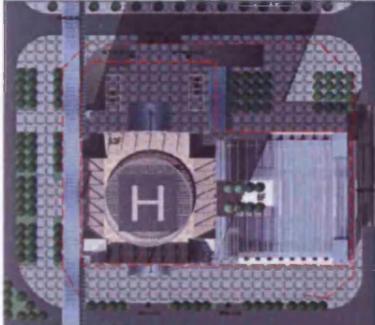
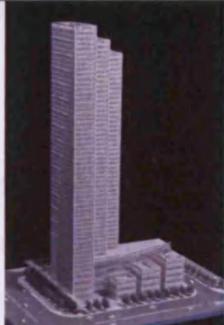
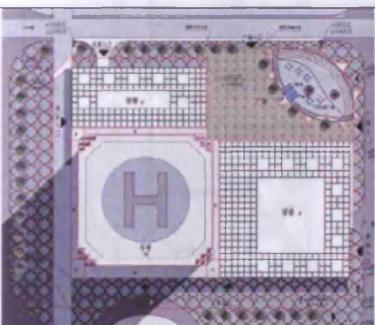
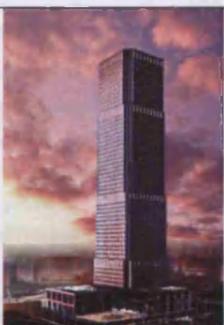
| Site plans | Elevations | Jury committee's comments |
|---|---|---|
|  |  | <p>By Merchandize Architects (Shenzhen) Well articulated built form; good floor plans; economical construction. Needed to refine the core, to reduce the split on the building top, to add north podium, and to consider energy saving strategy to avoid overheating from the west and the south.</p> |
|  |  | <p>By AUBE (France) Well articulated built form; good views on the typical floors; good energy saving strategy; good podium design. Needed to improve the building structure, especially for the core, to avoid visual disturbing on the typical floors, to increase the proportion of commercial use.</p> |
|  |  | <p>By Creative Vision Global Ltd. (Hong Kong) Normal design approach to the built form. The structural columns outside the core may not be economical.</p> |
|  |  | <p>By China Construction Design International (Shenzhen) Normal design approach to the built form. The core is handled well.</p> |
|  |  | <p>By Nanyou Engineering Design (Shenzhen) Normal and plain design approach to the built form. The structural columns outside the core may not be economical.</p> |

Fig. 7.1.10 Entries for the design competition for the ICC Tower (Adapted from Huang 2002)

7.1.2.2. In-house design review

If the design competition is a way to inject higher design quality and innovation into the project, then the architectural design application following the competition is a process to resolve the conflicts between the winning scheme, the developer's demands and the planning authority's requirements. This is the planning authority's in-house design review, and usually involves negotiations on some detailed design elements.

In the case of Guizhou Mansion (Case 3), the design competition was carried out in December 2001 and the scheme by SBA won. According to the design guideline, the jury and the planning authority urged certain changes if it was to be implemented (Fig. 7.1.11). In the revised scheme, colonnades were now laid on the southern and western facades with retail and restaurant uses at the front. The northern side was mainly used to service the building with underground car park and service entrances (Li 2002). In addition to the required amendments, the developer asked for an increase in the floor space to 48,300 M². The planning authority later considered that some increase in floor space in this project was acceptable but only allowed the developer to increase it from 40,000 M² to 46,000 M² (Shenzhen Urban Planning and Land Resources Bureau 2003).

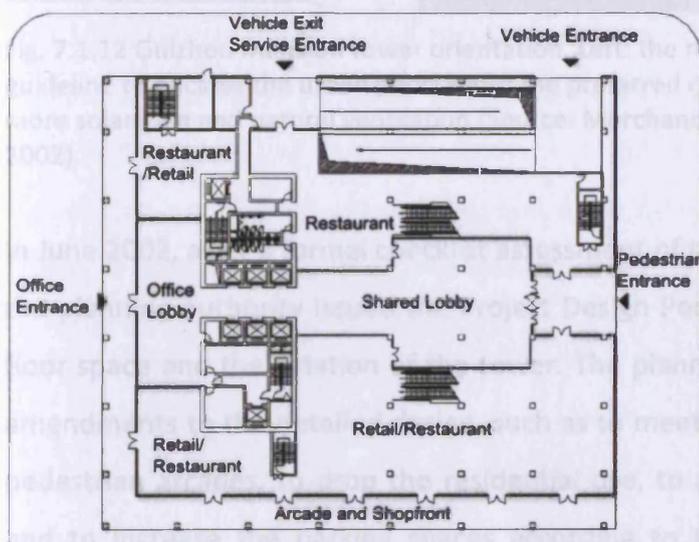


Fig. 7.1.11 The Guizhou Mansion, the winning scheme by SBA (left) and the revised ground floor plan (right) (Adapted from Li 2002).

Another significant discussion during the planning process was the orientation of the tower, which was required by the design guideline to be east-west oriented so that all the towers around the park could be grouped together to provide a sense of enclosure (Fig. 7.1.12). Both the architect and the developer considered that the building would be more energy-efficient if the tower could be south-north oriented. In an informal consultation, the original experts who judged the competition also supported the developer's opinion. Mr Li, one of the experts who commented on the project during interview: 'SOM worked on the urban design guideline, which of course brings in the techniques and skills we are current lacking. But designing south facing buildings has been an important part of the Chinese design tradition. In the case of Guizhou Mansion, using the rear elevation to front the park does not make a significant change to the urban park.'

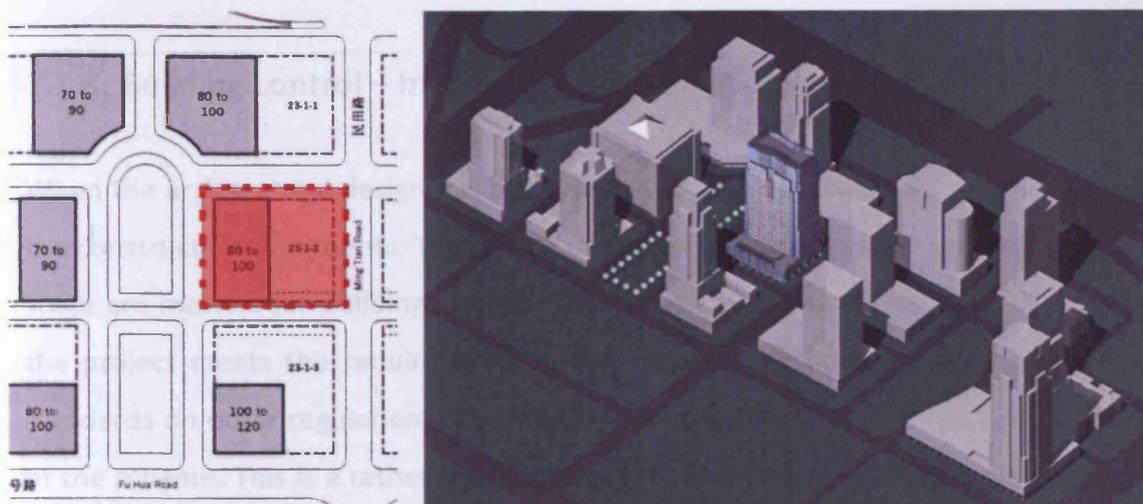


Fig. 7.1.12 Guizhou Mansion tower orientation. Left: the required orientation by the design guideline to enclose the urban park; Right: the preferred orientation by the developer to have more solar gain and natural ventilation (Source: Merchandize Architects and SBA Architects 2002).

In June 2002, after a formal checklist assessment of the submitted scheme (Fig. 7.1.13), the planning authority issued the Project Design Permit and accepted the increase in floor space and the rotation of the tower. The planning authority further urged some amendments to the detailed design, such as to meet the net height of 6 metres in the pedestrian arcades, to drop the residential use, to add a roof garden to the podium and to increase the parking spaces according to the increased floor space. These

requirements then became additional conditions for the developer/architect to complete the design. It is worthy noting that the checklist for project assessment mainly focuses on the technical aspect of planning requirements, without a comprehensive set of criteria to assess the urban design quality of the scheme, which weakens the planning authority's scrutiny on the urban environment.

-
- Is the design in line with the requirements in the Land Use Planning Permit?
 - Is the design in line with the permitted site plan?
 - Is the design in line with the national standards and norms on architectural design?
 - Is the environmental design in line with the *Shenzhen Standard on Environmental Design*?
 - Does the detail of design meet the required depth?
 - Is the roof garden design in line with the relevant requirements?
 - Is the design contract in line with the relevant requirements?
-

Fig. 7.1.13 Checklist for architectural design application (Shenzhen Urban Planning and Land Resources Bureau 2002c)

7.1.3. Building control – monitoring the design development

When the architectural design has been approved, the developer can start to prepare the construction documents. The pre-construction and construction application at this stage are matters for building control. The former examines if the detailed design of the project meets the requirements in the planning documents and the necessary standards on other regulations. The latter examines the structural/engineering design of the scheme. This is a rather rigorous process, with little room for amendment. The planning authority has now contracted with some qualified architectural practices to examine the structural/engineering aspects of the construction documents. When the feedback arrives, the planner will check if the drawings are in line with the design conditions, the previous comments and other technical regulations (Fig. 7.1.14). Once these checks are completed, the Building Construction Permit will be issued and the developer can start the construction.

- Is the design in line with the requirements in the Land Use Planning Permit?
 - Does the design meet the requirements in the Project Design Permit?
 - Is the design in line with the national standards and norms on architectural design?
 - Is the environmental design in line with the *Shenzhen Standard on Environmental Design*?
 - Does the level of design detail meet the required depth?
 - Is the roof garden design in line with the relevant requirements?
 - Is the construction contract in line with the relevant requirements?
-

Fig. 7.1.14 Design checklist, for pre-construction design application and construction design application (Shenzhen Urban Planning and Land Resources Bureau 2002d, e)

7.1.4. Outstanding issues in the process

Land use planning control and architectural design control are the two major steps through which the planning authority manages private development design. The discussions above reveal some common practices within the planning application process. However, there are still a few outstanding issues that affect the practice of design control. They are the use of the land power, scopes for variation in key parameters, planning monitoring and planning appeal.

7.1.4.1. Public land ownership and the scope for variation of the decided parameters

The public land ownership variously impacts on design control depending on the individual development circumstances. In the case studies, the design conditions are attached both to the Land Use Planning Permit and to the Land Contract. They are translated from the relevant urban plans or urban design studies, and are prepared by the officers in the planning authority. Therefore, in most cases, the land power to control the development is exercised through the means of planning control. In some cases, the public land ownership helps the planning officers to negotiate a better design outcome. For example, the planning officer successfully claimed back half of the site from the China Phoenix Building development (Case 5), to create a more compact, condensed and pedestrian-friendly environment. Using the land power, the planning officer also negotiated a reduction in density for the Holiday Plaza (Case 7), with the originally permitted development right transferred to another piece of land.

But public land ownership can weaken planning control, because the city, on behalf of the state, leases land for private use, and collects the usage charge as a part of its income. The leasing price is calculated mainly according to the location and the developable floorspace. Permitting more floor space means the city can generate more income. This financial incentive not only encourages the developer to lobby the government for more floorspace, but also encourages the local politicians to agree these changes. In this research, around half of the cases have the history of increasing floor space allowance, and some increases are as high as 15 per cent (the Guizhou Mansion, Case 3) or even 25.3 per cent (the East Pacific Centre, Case 11) (Appendix 3).

7.1.4.2. Planning monitoring and enforcement

Although Shenzhen's planning authority has been good at developing design parameters, and negotiating and implementing the key elements of urban design, it faces some challenges in its monitoring and enforcement processes.

Although most of the developers would like to cooperate with the planning authority to meet the required design standards, in order to speed up the planning process, some developers use their economic power as a bargaining ploy to challenge the authority. The Great China International Exchange Square project (Case 1) is a case in point. Due to the lack of public finance, the municipal government in 1994 relied on the developer to contribute accommodation for the Shenzhen Stock Exchange¹⁷, as a part of the land bidding deal. To accelerate the planning process, in 1996, the planning authority gave a Land Use Planning Permit and a Project Design Permit to the competition-winning scheme with a Western Classical design (Fig. 7.1.15 top left). The city Mayor was also consulted and agreed the increase in the floor space from 178,400 M² to 220,660 M² (23.7 per cent increase) (Shenzhen Municipal Urban Planning Bureau

¹⁷ Shenzhen Stock Exchange is one of the only two stock exchanges in China, established in 1990 by the Central Government. Since then, this exchange has not only brought a huge amount of revenue to Shenzhen Municipality, but also been helping the city to compete with other cities in the region to attract financial investments. Therefore, Shenzhen's local politicians had been helping this business partner to find a new home and later made land available for its new headquarter in Futian CBD.

1996b). In late 1996, the CBD's urban design plan with a vision of 'modern', simple and functional tower blocks was adopted by the government. To make this project conform to the new CBD image, the planning authority then required the developer to change the classical facade into a modern one when issuing the Pre-Construction Permit.



Fig. 7.1.15 The Great China International Exchange Square. Top left: the competition-winning scheme (Source: Huang 2002); Top right: scheme faced strong opposition from the planning authority but was finally built; Bottom: Informally consented scheme by Yuanjing Architects (Source: Shenzhen Municipal Urban Planning Bureau 2005b)

In 1997, the developer obtained a Construction Permit for the lower 8 floors from the planning authority and started the construction. But because the developer refused to change the facade design, the planning authority refused the developer's application for the Construction Permit for the rest of the building three times in late 1997, 1999 and 2001 respectively. The Permit was not granted until July 2003, when the submitted construction documents managed to simplify the facade design according to the planning authority's suggestions (Fig. 7.1.15 bottom). But again, the developer did not implement the scheme, replacing it with another design (Fig. 7.1.15 top right). In the following three years, the planning authority kept seeking help from the local politicians to negotiate with the developer, and issued warnings and notices to force

the developer to implement the simplified facade design. But it did not take any action. So far, the total floor space built on site is 272,357 M², which exceeds the original permitted space of 178,400 M² by 52.7 per cent, and exceeds the later parameter in the Land Contract Supplement of 220,961 M² by 23.3 per cent.

One may argue that the architectural design was permitted before the urban design plan was adopted, and the requirements to change the design were made after the start of the project construction, which might make the planning authority's requirements seem unreasonable. The conflict of interests for the municipal government in this project may have been a major restriction on the planning authority's further actions on enforcement. Nevertheless, this is a rare case showing the planning authority's failure to control some crucial developments, and a general weakness in planning monitoring and enforcement.

As regards the latter, firstly, there was a lack of efficient enforcement to stop the illegal construction and to force the design change. The general reaction of the planning authority was to issue notices, without mentioning any further actions the authority would take. Perhaps the power of a lawsuit is another tool that the planning authority can use to strengthen its planning function in the future. Secondly, the low fine for overdevelopment encourages the developer to breach the floor space limits. According to the local ordinance, if the excess part of the building is not to be demolished, 60 per cent of the construction cost would be the fine. In the current market condition, office space is valued 25,000 RMB per M² in this location (Feng et al. 2007), which is far more than the 60 per cent of its construction cost of 1,476 RMB per M² (Shenzhen Futian City Management Enforcement Bureau 2006). This gives an incentive to the developer to break the permitted parameters. Therefore, the penalty mechanism needs to be revised to discourage the illegal ratcheting up of densities.

7.1.4.3. Planning participation and appeal

The lack of public participation and the lack of appeal mechanism in planning are starting to put pressure on the planning process. In China, it is not statutorily required to consult the public on a planning application. In the case of Holiday Plaza (Case 7), it was not until the start of the construction that the local residents to the north became aware that this project would affect their sunlight rights (Fig. 7.1.16). They appealed to the planning authority to stop the construction. To make a stronger case, they used the local media to express their objections.

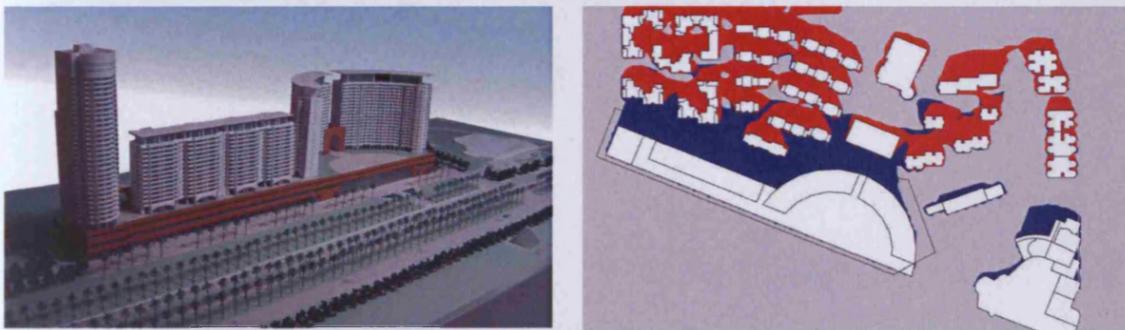


Fig. 7.1.16 The permitted design that affects the sunlight rights of the residents (Source: Shenzhen Municipal Urban Planning Bureau 2004c).

Under public pressure, the planning authority actively negotiated with the developer to resolve the shadowing issue. With the help from the local urban designers, the planning authority suggested a reduction in floor space, a change of land use, and a transfer of part of the development right to another piece of land owned by the developer to compensate for his loss (Shenzhen Municipal Urban Planning Bureau 2004c). In early 2004, the final planning parameters were decided in the light of this study. The developer was happy to accept this deal. In the subsequent public consultation, the authority received 477 returned questionnaires from the local residents, around 90 per cent of whom agreed with the changes (Fig. 7.1.17).

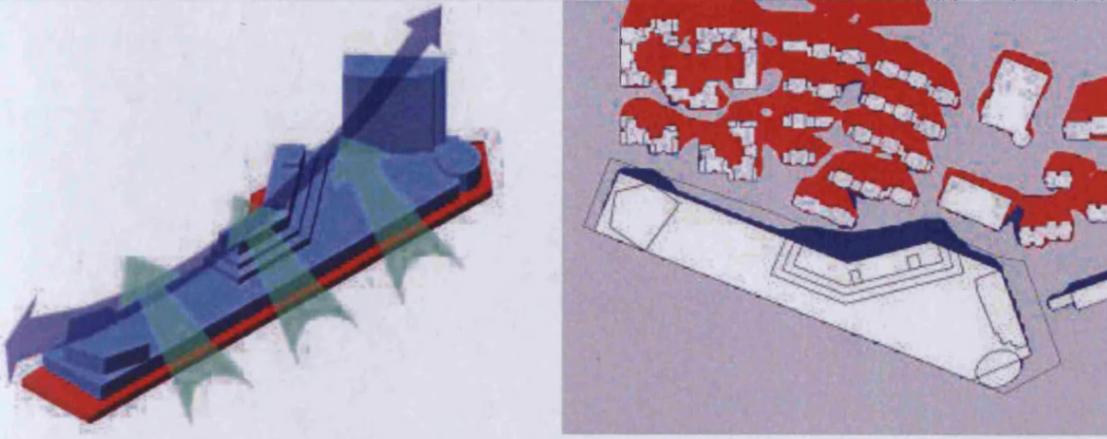


Fig. 7.1.17 The scheme presented in the neighbourhood consultation (Source: Shenzhen Municipal Urban Planning Bureau 2004c).

Although the residents finally gained a satisfactory result, and the developer accepted the final arrangement, the planning authority recognised the failings caused by the absence of public consultation at the planning application stage. It left the general public (in this case the local residents) in a weak position to defend their property rights, and it put the planning authority in a reactive position when trying to resolve this conflict at such a late stage. It is worth noting here that no instances of developer appeals were found during the field work. One explanation may be that the developers can use negotiation rather than an appeal to achieve their objectives.

7.1.5. Conclusion

The above findings reveal that the established national standard of 'One Permission Note and Two Permits' planning permitting process provides a solid framework for design control. Shenzhen's local planning legislation has further tightened up this process, increased the sophistication of the system, and introduced more design-conscious control process. Compared to the general Chinese planning processes, Shenzhen's planning system enables the planning officers to intervene in design early in the planning process. They can use different forms of urban design studies/guidance as companions to the Statutory Maps to generate design conditions. The general use of design competitions provides an opportunity for design innovation within design conditions, and the in-house rigorous design review with a checklist approach allows

the planning officers to resolve the minor conflicts between the winning scheme and the planning requirements. So far, the planning permitting process remains fairly transparent and the planning officers' discretion is regulated under the amendment procedure of the Statutory Map. These have enabled Shenzhen to have an effective control on urban design.

Public land ownership and the political support strengthen the planning officers' ability to negotiate better design, but at the same time the political and economic objectives can easily overtake the environmental objectives. The lack of monitoring and enforcement functions potentially diminishes the planning authority's efforts in raising the design standard in the formal planning permitting process. The lack of public participation in the planning permitting process, and the weak appeal mechanism, are the focus of pressure for further improvement in the system.

7.2. Key Actors in the Design Development Process

This research also utilizes the structure-agency models to explain the impacts of the key actors on the design of commercial office developments. The actors' interests in design, their power to control or influence in the elements that contribute to urban design quality are explored together with their negotiation tactics and their pursuit of planning objectives.

For every case study, the key actors (e.g., developers, planning officers, urban designers and local politicians) were identified through documentary review, observation of the process, and interview. In general, Shenzhen's developers control most of the design elements, having strong interests in the external appearance of their projects, but largely ignoring the quality of the public realm. Planning officers control the use and the form of the development, and have a strong interest in the issues of street and land subdivision. Highway engineers have the dominant power in controlling the street patterns. Although they are not dominant, Shenzhen's urban designers have some power to impact on the quality of urban design. While architects show less interests in the quality of the public realm (Fig. 7.2.1). The degrees of interactions between different actors are also diverse (Fig. 7.2.2).

| | Developers | Local Government | | Architects | Urban designers |
|---|------------|-------------------|-------------------|------------|-----------------|
| | | Planning officers | Highway engineers | | |
| Street pattern | - | ○ | ● | - | ◎ |
| Blocks | - | ◎ | ◎ | - | ○ |
| Plots & subdivision | ○ | ◎ | ○ | ◎ | ◎ |
| Land/ building use | ● | ● | - | - | ○ |
| Building form | | | | | |
| Height/ mass | ● | ● | - | ○ | ◎ |
| Orientation to public space | ◎ | ◎ | - | ○ | ◎ |
| Elevations | ● | ● | - | ◎ | - |
| Elements of construction (details/ materials) | ● | - | - | ◎ | - |

Fig. 7.2.1 ‘Powergram’ of urban design in Shenzhen, inspired by McGlynn’s ‘Powergram’ (1993).

- power-either to initiate or control. ○ interest/influence-by argument or participation only.
- ◎ responsibility-legislative or contractual. - no obvious interest, or unknown.

| | Developer | Politician | Architect | Planner | Urban designer | Highway engineer | General public |
|------------------|-----------|------------|-----------|---------|----------------|------------------|----------------|
| Developer | | - or ● | ● | ● | ○ | - | - or ○ |
| Politician | - or ● | | - | ◎ | - | - | - |
| Architect | ● | - | | ◎ | - | - | - |
| Planner | ● | ◎ | ◎ | | ● | ○ | ○ |
| Urban designer | ○ | - | - | ● | | ○ | - |
| Highway engineer | - | - | - | ○ | ○ | | - |
| General public | - or ○ | - | - | ○ | - | - | |

Fig. 7.2.2 Interactions of key actors in urban design in China

- strong relationship (control/ contract/ direct support).
- ◎ medium relationship (argue/ negotiate/ influence)
- weak relationship (consult).
- no obvious interaction.

7.2.1. Developers

As would be expected, developers are found to be the most important actors in the development process in terms of delivering design quality. They have interests in, and have absolute control over many crucial elements of development quality, such as the land/building use, the general built form and the elements of construction (Fig. 7.2.1). Their interests are normally financially driven, strongly focused on the developable floor space and building height. But more recently, an increasing emphasis is placed on

the factors that would bring longer term success to the development, such as more amenity provision and some energy-saving considerations. These concerns in turn determine developers' negotiation tactics in the planning process.

7.2.1.1. Market and developer's interest in design

Most of the developers involved in this research are speculative developers, taking short-term interests in the development, and utilizing 'build-to-sell' strategies for a quick turnover and a capital gain. This short-termism is facilitated by the government's sudden opening-up of the land supply for commercial offices, creating an uncertainty in the established market. For example, the government started to lease the land for office development in Futian CBD in 1994, and it was not until 2001 that developers showed any interest in it. Previously, most of developers constructed offices for their own use, with a small amount of the floor space for sale, but now the dominant trend is 'build-to-sell' instead of 'build-to-occupy'. Some brave developers saw it as a chance to enter this new market. In fact, most of the private office developers are found to have a track-record in the residential sector, and most of the case studies in this research are these developers' first commercial office developments.

Overall, developers have diverse interests in different design elements. Firstly, this research finds that the developers are concerned most about the size of the floor space and the building height (Fig. 7.2.1). Both these parameters indicate the total saleable/rentable floor space the developer can have within a project, which directly relates to the developer's profit margin. Although most of the speculative developers are willing to design the project exactly according to the planning requirements, in order to avoid any delay in the planning process, they also try at every opportunity to increase their floor space allowance. For example, the developer for Guizhou Mansion (Case 3) successfully and easily obtained a surprising increase of the floor space by 15 per cent, albeit he needed to pay for the difference in the land price. In this project, the charge for the additional floor space allowance was 2,375 RMB per M² (Shenzhen Urban Planning and Land Resources Bureau 2003); according to the architectural

bidding book, the construction cost was projected 3,000 RMB per M²; and the commercial office market price of this kind of space in that period was around 10,000 RMB per M² (DTZ 2004). This high profit margin (around 40 per cent) was the motivation for the developer to test the planning authority's limit.

Secondly, developers have a particular interest in the building's external appearance, including both height and elevation (Fig. 7.2.1), for the purpose of project marketing and corporate branding. In this research, most of the architects and property agents interviewed explained that, the taller the building is, the stronger the positive impression is likely to be provided to the potential investors. 'Aesthetically pleasing' and 'expressing the company's identity' are normally the requirements in the developers' bidding books. This research finds that the developers have no certain standard for architectural aesthetics. Instead, any design that can provide a unique identity is welcomed. These are the implicit demands for iconic designs, which make the project stand out from their context and their competitor projects (Fig. 7.2.3).

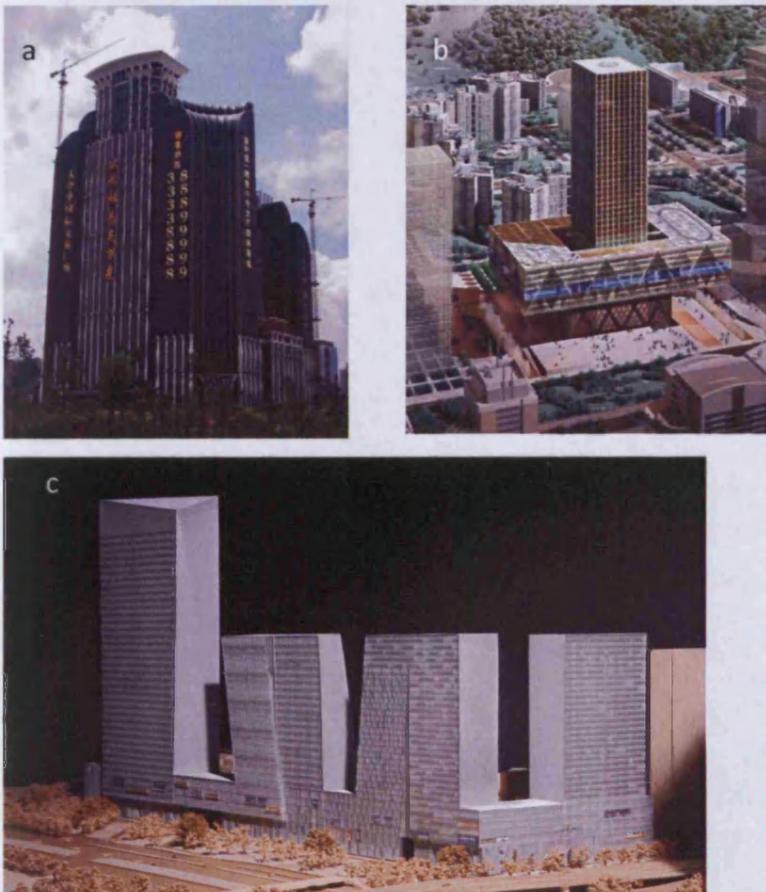


Fig. 7.2.3
Unconventional designs to achieve 'iconicity' in architectural design. a. the Great China Exchange Square (Case 1) with a crown form, b. the Shenzhen Stock Exchange (Case 10) with a raised podium (Source: Office for Metropolitan Architecture 2006), c. the exceptionally long Oriental Plaza (Case 8) (Source: Urbanus Architects 2006).

Thirdly, it was found that the developers have absolute control over the elements of construction such as the detailing and the materials (Fig. 7.2.1). The planning authority regards the choice of detailing and the construction materials as the developer's prerogative. Developers want their projects to be high quality at the concept stage, but during construction, cost-cutting has been observed in some of the projects. For example, the originally designed low-emissivity glass curtain wall was replaced by some standard glass on the ICC Tower (Case 2), to save 20 per cent of the material costs (Interview with Merchandize Architects). The Coastal City's developer (Case 4) intended to use some 'medium standard materials and engineering facilities' to achieve what was originally intended to be a 'high quality' scheme at a lower cost.

However, there are some developers who have longer term interests in the development or are concerned about the design quality for different reasons. Firstly, mixed land use is sought by developers for two main reasons (apart from the planning authority's requirement). On the one hand, mixed land use can reduce the developer's investment risk when facing an uncertain market. In some emerging office districts like Nanshan Central District, where the office market was not established, there was a strong demand for retail. The developer for the Coastal City (Case 4) interviewed explained that 'if the retail space in the podium can be sold, we can pay back the whole investment, and the office tower can be retained as profit'. This investment strategy has been successfully implemented. On the other hand, in some popular locations, a good mix of land use can secure the developer's longer term interest in the development, whereby he retains ownership of some part of the property. In the case of the ICC Tower (Case 2) the developer sold all the office space on the market to pay back the investment and kept the retail space under his ownership to provide a rental income (Interview with the developer).

Secondly, some developers are found to be interested in certain aspects of amenities and environmental performance, although this is motivated by the demands of project marketing and is not achieved systematically in any of the projects researched. In most of the case studies, small sky gardens in the office tower and roof gardens on the podium are the common features. The ICC Tower (Case 2), the Coastal City – East

Tower (Case 4), the Galaxy Central Plaza (Case 6) and the Kingkey Finance Tower (Case 9) have all provided them. The developer for the Coastal City explained the reason for their popularity that 'we consider small sky gardens and roof gardens could provide a nice environment for office workers, and could be our selling point to attract more small or medium enterprises.' Furthermore, to market the development as a 'low energy consumption building', low-emissivity glass curtain walls were used in a few projects, such as the Coastal City – East Tower (Case 4) and the China Phoenix Building (Case 5). Individual air-conditioning control has been the standard in Shenzhen's office development. It enables the tenants to manage their energy costs more efficiently, and at the same time reduces the overall energy consumption of the building. But since the planning authority does not specify any environmental performance standard, the environmental treatments were only treated as 'add-on' elements.

However, the immature market and largely indiscriminating tenants do not encourage developers to provide fully environment-friendly and strongly 'design value-added' developments. At its best, the developer would commit to a less energy consuming building such as Anlian Tower. The project was developed with sky gardens, low-emissivity glass curtain wall, as well as double-skin elevation to prevent excess solar gain and to introduce passive ventilation. The developer's firm commitment to a 'Green Office' as a 'unique selling point' was a major step towards a more sustainable building (Fig. 7.2.4). Sadly, the market response to this 'green' idea was poor. Its rent and selling price was around 10 per cent less than its neighbour (World Union Properties 2006), and it sold only 40 per cent of its floor space in the first year, in contrast to the figure of 70 per cent that its neighbour achieved (Interview to a property agent director in World Union Properties). This was mainly because the project failed to provide flexible floor layouts, which are essential to meet the needs of different size companies or investors. However, it was also partly due to the market's unawareness of the potential benefits of a green building and especially the lower running costs of an energy efficient construction.



Fig. 7.2.4 The Anlian Tower. The project is marketed as a 'living building' with natural ventilation and multi-level sky gardens (left, by Wong Tung Group) (Source: Huang 2002); sunshade curtains are located on the west elevation to reduce the excessive sunlight, and multi-level sky gardens provide some greenery and joy to the office environment (photo by the author, 2005).

7.2.1.2. Developer's negotiation tactics over design

To achieve their development objectives, developers deploy different tactics to negotiate with the key actors (e.g., the architects, the planners and even the politicians). Developers select particular architects to draw up their visions based on two considerations. One is to use architects to materialize their particular investment strategies in design. Because developers are concerned most about the project's marketability, architects who can generate 'unique selling points' are most likely to get the commission for building design. For the cases studied, most of the architects invited to design competitions were those with good reputations in designing high quality and iconic buildings. Depending on the developer's budget, the size of the project and the potential profit, the architects invited to competitions ranged from the local architects (for some medium size projects with tight budgets) to the world-famous 'star architects' (e.g., SOM, Norman Foster & Partners, Terry Farrell & Partners, OMA for large investments like the Kingkey Financial Centre and the Shenzhen Stock Exchange). During the design competitions, architects tried hard to make their submissions stand out from other entries, by developing some unconventional designs (Fig. 7.2.3) and/or by providing some user-friendly environments. But these only make a limited contribution to the urban design agenda,

and they explain why Shenzhen's built environment is dominated by iconic architecture.

A second factor in the choice of architects is their ability to ease the planning process. Architects with these skills get the commissions due to their special relationship with the planning authority. But they are not necessarily the drivers of improved quality of urban design. For example, the developer for the Great China Exchange Square (Case 1) had developed a poor relationship with the planning authority through his lack of cooperation. So when he initiated the new project of the Oriental Plaza (Case 8), he selected the architect regarded by the planning authority as an 'expert' to deal with the planning application and negotiations to overcome his 'reputation'. Smooth planning negotiations were ensured between this architectural 'expert' and the case officer because the architect fully understood the officer's concerns and the developer's objectives. The project was soon granted a planning consent. In the East Pacific Centre (Case 11), when the developer realized that the design competition could no longer convince the planning authority to provide a greater floor space allowance, he invited another 'architectural expert' to negotiate an acceptable building form. Although in this case the negotiation was lengthy due to the major increase of floor space, the communication nevertheless continued and eventually an agreement was reached.

Developers have very varied relationships with the planning authority, and different developers approach the planning authority in different ways. In most cases, the developers want to ensure quick negotiations during the planning application process. This is due to the current high supply of commercial office spaces and the uncertain demand. It is also because the developers have already paid a high price for land leasing and have borrowed money to develop at high interest rates. Thus they are willing to cooperate with the planning authority and tend to agree with what is required, in order to speed up the decision making process and enter the market as early as possible. In this research, the developers for the ICC Tower (Case 2), the Coastal City (Case 4) and the Galaxy Central Plaza (Case 6) all acted in this manner (Appendix 3). They complied strictly with the given urban design guidance on the built

form, massing and street wall. At its best, the time that elapsed from the first time the developer contacted the planning authority to the issue of the final Construction Permit was less than a year (e.g., the ICC Tower, Case 2) in these cases (Appendix 3), including the time spent in design competition.

On the other hand, some developers tried very hard to pursue a greater allowance of development, with more floor space and a taller building. Normally, they needed to carry out an urban design study to test the feasibility of the proposed density/massing against the existing context. The design solution needed to be agreed in principle by the planning authority, and in some cases, by the politicians. Then, the developer needed to wait for the planning authority to apply for an amendment to the existing Statutory Map in the Planning Committee. It is a lengthy process, which only the high profile developers can afford given the increased delay and risk. For example, in the Kingkey Financial Centre (Case 9) the developer's design ambition was limited by the imposed building height limit to protect its neighbour – Shun Hing Square's landmark status. When reviewing the urban design study, the planning authority accepted the developer's argument that a 'group landmark' would further strengthen the city's image, but the amendment of the parameter could not be legitimated without the local politicians' support in the Planning Committee. After two years' negotiation, the building height limit was increased from 300 metres to over 400 metres. The East Pacific Centre (Case 11) was similar. The developer spent two years lobbying the government for this high density development in a gateway location, and persuaded the politicians using the same argument. The result was an increase of building height limit from 190 metres to 300 metres, with a 25.5 per cent increase in floor space (Appendix 3).

However, more powerful developers can use their significant economic contribution to the city as a bargaining ploy to pursue their personal/corporate objectives. The illegal construction of the Great China International Exchange Square (Case 1) discussed previously is a case in point. The Shenzhen Stock Exchange (Case 10) is another significant case. The developer ignored the urban design guidance prepared by the planning authority, which subdivided the block into a few plots and introduced a

street-oriented built form (Fig. 7.2.5). Instead he invited five prestigious international architects to participate in a design competition without any regard to this guidance. This resulted in proposals for a single free-standing building, and the planning authority failed to implement its guidance when facing the developer's strong economic and political lobbying power.



Fig. 7.2.5 The Shenzhen Stock Exchange. Urban design guidance for SSE (left) (Source: Shenzhen Municipal Urban Planning Bureau 2005c) and the competition result (right) (Source: Office for Metropolitan Architecture 2006). The developer ignored the guidance prepared by the planning authority and went on for an international architectural competition for an avant-garde design.

7.2.1.3. Summary

Overall, this research finds that the developers are concerned most about the quantitative (floor space) aspects of their projects, and the quality comes the second. This is still an immature office market, with only about a decade of experience, highly risky but highly profitable. The speed of development and the 'iconic' nature of the building seem to be the crucial conditions for the developer's financial success. There are some signs of developing sophistication to meet the market demands, and the requirements of more user-friendly working environment with low running costs, although these are not achieved systematically. It is hoped that the recent economic downturn will result in a more competitive market, which will further convince the developers of the economic value of good urban design, and will drive them to be more occupier-oriented, although it could also lead to desperation and less design concern due to less demand.

Developers rely on the architects to create innovative designs (normally iconic), for the purpose of project marketing. They sometimes use architects to lubricate the planning process. But generally, these architects make a limited contribution to promoting the urban design agenda. In the current highly competitive and highly profitable market (post 2000), most of the developers are willing to comply with the planning control to speed up the planning process. But their profit-driven nature and economic power encourage some powerful developers to have lengthy negotiations with the planning authority and to use political lobbying in order to achieve the targeted floor space, building height, and other design objectives that are at odds with the planning authority's guidance and design principles.

7.2.2. Planning officers

Planning officers are the gate-keepers of the quality of the urban environment. They demonstrate increasing concern about the quality of the development, and they are the drivers of public urban design quality in Shenzhen. Planning officers in Shenzhen are found to have a strong interest in land subdivision, pedestrian connections, public transportation, parking, mixed-use, building height and massing, and building elevations. But they have not yet developed a concern for promoting sustainability and energy efficiency buildings. In the planning process, planners' ability to control all these elements depends on the nature of the development project, including the site location and size, developer's investment strategy, and even the relevant political support.

7.2.2.1. Land subdivision

Shenzhen's planners are recognizing the potential value of subdividing land into small parcels, in contrast to conventional Chinese urban design which favours large urban blocks and high capacity roads. The urban design exercise for Block 22 & 23-1 (Urban Design Plan 2 & Case 3) was the turning point in this cultural change in design in

Shenzhen. This urban design guideline divided the large block into a gridiron layout with small plots, adding two urban parks enclosed by office buildings. The guidelines' mandatory street wall, ground floor commercial retail use around the urban park and the main streets helped to create a sense of place (Fig. 7.2.6). It also defined the tower locations for each plot as a means to achieve an ordered environment. This approach is now highly valued by the planning authority as 'a piece of urban design which is the closest to the real urban design' (Li 2002).



Fig. 7.2.6 Urban design guideline for Block 22 & 23-1 by SOM in 1998 (Adapted from Li 2002). The way it deals with land subdivision, public space and street wall has had a fundamental impact on Shenzhen's urban design discourse.

The way that this guideline created streets, an ordered building form and a well-enclosed public realm provided lessons for Shenzhen's planners to improve urban design quality elsewhere. They contracted out some block-wide urban design studies, provided practical advice for each study, and joined the discussion for potential design approaches. For Block 26 (Case 5) and Block 6, 7 and 17 (Case 2), the urban design plans drawn up by the local urban designers subdivided the block into small gridiron plots, with the buildings clustered in certain locations and height limits regulated. Roads in these blocks were narrowed with vehicle entrances to the buildings regulated. Low-rise podiums were used to front the street and to enclose public squares. Retail uses were required on the street behind some street arcades. A more harmonious and pedestrian-scale street environment was finally created by these efforts (Fig. 7.2.7).

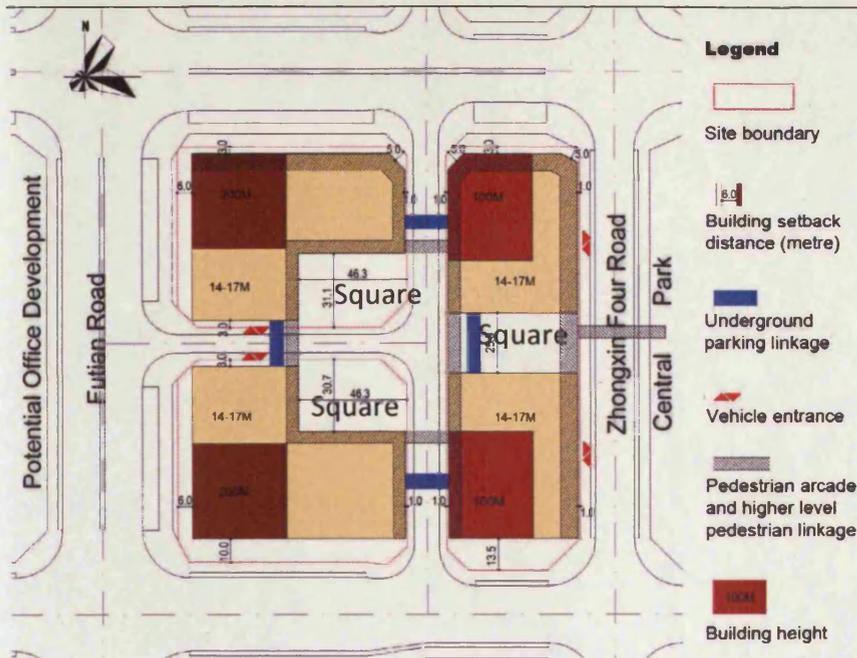


Fig. 7.2.7
Masterplan for
Block 6, 7 and 17,
prepared by
Shenzhen's planners
in 2002 (Adapted
from Urban
Planning and Design
Institute of
Shenzhen 2002b).

But Shenzhen's planners seemed to lose control of the land subdivision process on some single developer sites. They found it was more difficult to negotiate public benefits when the adjacent sites were amalgamated by the same developer. Some of the designated public paths or roads might disappear, and would be turned into a part of the development site. Tough negotiations were required if new public amenities/paths were to be created within the site. For example, the case officer for the East Pacific Centre spent two years in negotiating some public paths/streets through the site (Case 11). But in other cases, developers with more political influence would dominate the negotiation and refuse to cooperate. For example, the developer for the Shenzhen Stock Exchange (Case 10) merged all the four adjacent sites and successfully proposed only one building in the site without any considerations on the quality of the public realm (Fig. 7.2.4).

7.2.2.2. Pedestrian connections

Shenzhen's planners have been trying to improve the pedestrian connections in commercial areas, without challenging private vehicle transport. This is because the modernist legacy of supporting fast private vehicle movement is still dominant in

Shenzhen's planning discourse, while the planners are only slowly recognizing its segregating consequences and negative environmental impacts on the pedestrian environment. Therefore, apart from the efforts of reducing the plot size to create a more pedestrian permeable environment, Shenzhen's planners are adopting some extreme design solutions to separate pedestrians from vehicles.

Using a multilevel system to separate pedestrians from vehicles is becoming popular. A few experiments have been undertaken in certain areas of the city, with a trend towards treating the ground level as a vehicle dominant environment and creating underground or elevated levels to deal with pedestrian connections. To achieve these elevated or underground connections, the planners require the developers to cooperate with each other to open up multilevel entrances and to contribute to the connecting bridges (Fig. 7.2.8 left). This requirement is normally imposed as a part of the design conditions, but in some built schemes, the pedestrian bridge is added by the government, requiring the developer to open up the entrance way (Fig. 7.2.8 right). The actual performance of this multilevel system is too early to conclude, and this requires post occupation surveys when these buildings are fully occupied.



Fig. 7.2.8 Separating pedestrian from vehicles. Left: a pedestrian bridge in the ICC Tower links the second level retail space (photo by the author, 2007); right: a pedestrian bridge in the Great China Stock Exchange was added by the government after the construction was completed (photo by the author, 2007).

7.2.2.3. Public transport

Infrastructure for public transport is partly considered in the planning process, depending on the site location. It usually is broached on those sites which are close to a metro station, and the developer is asked to improve the underground connections. Normally, underground retail uses are encouraged by the planning authority. In the case of the Holiday Plaza (Case 7), the design condition in the Land Use Planning Permit specifies '... (this development) should connect with the metro station and the site to the south using underground retail space ...' (Shenzhen Municipal Urban Planning Bureau 2004a). This arrangement provides the developer with some financial incentive to improve the pedestrian connection underground while costing the municipality nothing (Fig. 7.2.9).

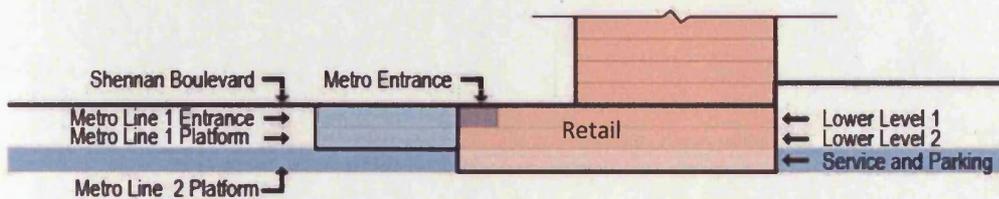


Fig. 7.2.9 Linking the development with metro station. The planning authority requires the developer to cooperate with the metro company to connect the metro with its retail development (area in pink) (Adapted from Shenzhen Municipal Urban Planning Bureau 2004c).

Apart from this, no other means is found to encourage the developer to accommodate other modes of public transport. The infrastructure for buses in Shenzhen is currently provided solely by the government, by building bus lay-bys alongside the major streets, which is normally outside the development site boundaries.

7.2.2.4. Parking

Shenzhen seems to have made progress in handling the parking issue by encouraging shared underground parking. Recently, the planning authority has discouraged ground floor parking and has encouraged some of the adjacent developers to cooperate in a shared underground parking arrangement. The idea of shared parking is to make the

space more flexible to accommodate the changing parking demands of different sites. For example, in the case of the ICC Tower (Case 2), the planning authority adopted the urban design plan's recommendation and in the design conditions required that 'underground car park should link with the neighbouring underground car parks to the north and east sides at the -2 floor level, by a connecting tunnel with 9 metres net width (6 metres for vehicle route and 3 for pedestrian path) and 2.5 metres net height....' (Fig. 7.2.10) (Shenzhen Urban Planning and Land Resources Bureau 2002a, b). But not all these recommendations were successfully implemented, given the developers' different degrees of willingness to cooperate with each other. For example, the attempt to create a connected underground car park in Nanshan Central District (Masterplan 3 and Case 4) has not been successful.

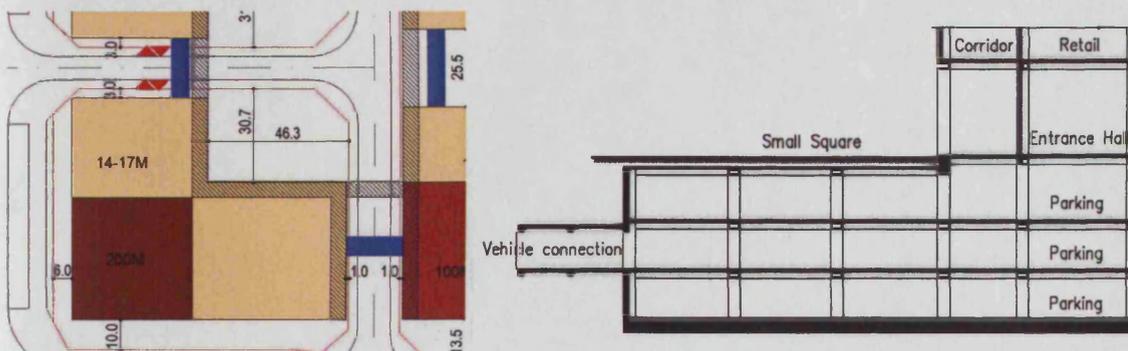


Fig. 7.2.10 Underground parking connection in the ICC Tower. Left: the blue lines indicating the vehicle connections. Right: a section of the vehicle connection (Adapted from Merchandize Architects 2002).

7.2.2.5. Mixed use

In recent years, retail and restaurant uses have been promoted by planners within major office developments. This provides activity support for the public space surrounding the development. In most of the new office developments, the towers accommodate the office space, while the podiums house retail or restaurant uses. In the case of the ICC Tower (Case 2), as a result of the planning control, retail units have almost filled up all the space on the ground floor, leaving only the necessary spaces for entrances, atriums, vertical circulations and servicing rooms. The back square seems successful, half enclosed by colonnaded low-rise podiums and faced by two retail units

and a podium entrance. It enables the square to be populated by the office workers, shoppers and other potential customers. It can be envisaged that this amenity will create a strong sense of place for the office workers, when the building is fully occupied as well as providing highly profitable retail/catering units (Fig. 7.2.11).

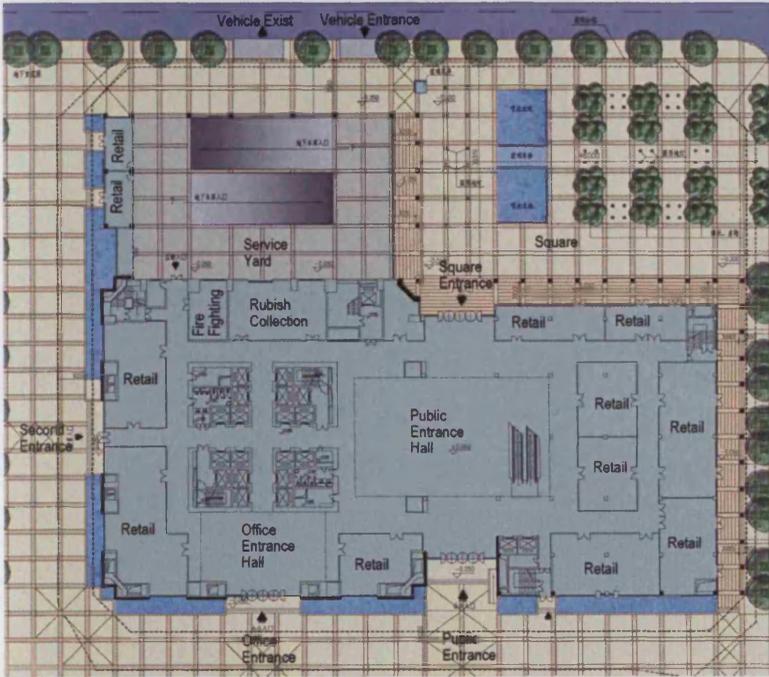


Fig. 7.2.11 The International Chamber of Commerce Tower, ground floor plan (left) (Adapted from Merchandize Architects 2002), and the square built (right, photo by the author, 2007).

7.2.2.6. Building height and mass

The planning authority has strong interests in the building form and seeks a unified and ordered environment mainly by controlling the building height and mass, especially when a detailed urban design plan has been produced. Normally, the urban design plan provides an indicative three-dimensional form for the whole study area, and it regulates the building height and massing according to some wider design rationale. This agreed three-dimensional form provides the planning officers with an overall vision to make judgements on an individual scheme (Fig. 7.2.12).

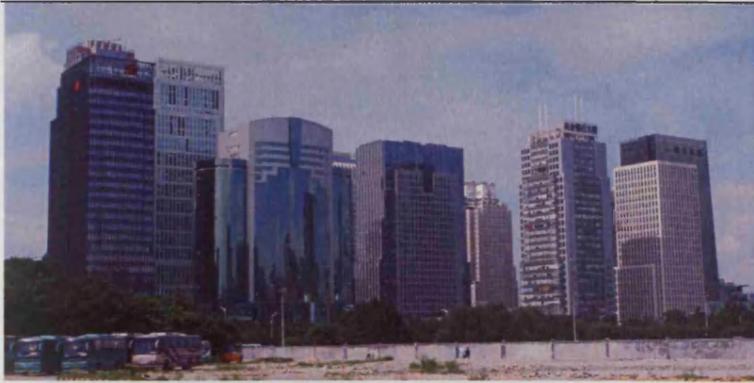


Fig. 7.2.12 Building height, massing and scales. The buildings in Block 22 and 23-1 presenting similar massings (top, see Masterplan 2 and Case 3, photo by the author, 2006), and the Block 6, 7 and 17 feature similar high-rise towers on the back and shorter towers in the front (bottom, see also Case 2, photo by the author, 2007).

The planning authority seems to support the argument that a 'super high-rise' and a distinctive 'gateway' building in the right location can make the place and even the city more legible, provide a sense of arrival, and further enhance the city's modern image and distinctiveness. The East Pacific Centre project (Case 11) and the Kingkey Financial Centre (Case 9) mentioned previously are good examples in this regard. But the planners' with support for such arguments for gateway and iconic buildings potentially opens the door to developers who want to break the original parameters and to seek more floor space. Worse still, due to the lack of strategic guidance on landmarks or tall buildings, and the developers' eagerness to distinguish his project from its neighbours, the urban environment seems to degenerate into a chaotic stage full of 'look-at-me' buildings.

7.2.2.7. Elevations

Together with the building form, elevational design has been a significant factor in planning officers' judgments about the design quality. Shenzhen's planners have a clear vision for building elevations adopted from the Western (particularly American)

modern financial downtowns or CBDs. Generally, a 'modern', elegant, simple and functional building appearance is the planners' basic requirement in controlling private development. It is worth noting that 'modern' in the contemporary Chinese context does not refer to the 'modernist movement' in the West, but it reflects the aspiration for 'modernization' to catch up with the developed countries in economic, technological and aesthetic terms. This elevational taste is different from the one used in the government projects, which prefers grandeur and represents the authority's power. In most of the cases, the planning officers prefer a contemporary approach, with light colour curtain wall or claddings, quality materials and a more minimalist aesthetic. Design innovation is welcome, providing that the building presents a pure and clean image with a strong design idea. Over detailing is opposed, and a design that expresses its function is preferred. This design preference can be observed clearly in the planning process for the Great China Stock Exchange (Case 1) as discussed previously (Fig. 7.1.15).

7.2.2.8. Sustainability and energy efficiency

The planning authority does not rigidly regulate the environmental performance of buildings. Sustainability is not yet at the centre of planning control agenda in Shenzhen. Throughout the cases studied, no policy or guidelines have been found to require the developer to reduce the energy consumption in the planning process. Recently, a national standard of *Code for Acceptance of Energy Efficient Building Construction* (Ministry of Construction 2007) has been adopted to regulate and promote energy saving in buildings. In practice, this regulation only operates in building control and construction. It comes so late in the planning process that a lot of opportunities are missed to encourage a proactive energy saving strategy.

7.2.2.9. Summary

Overall, planners in Shenzhen have had progressive concerns about the quality of the environment. Borrowing skills from urban designers and architects, Shenzhen's planners are moving away from purely elevational control, to regulate the building form and the quality of the public realm. They have managed to subdivide the large urban blocks to form permeable and human pedestrian environment, to provide more amenities, to introduce better pedestrian and public transport connections, to regulate better parking strategies, to promote mixed-use, and to regulate a 'modern and contemporary' built form and functional elevations. But in broad terms, they operate in a pro-development climate, with an emphasis on the visual aspects of urban design quality, and with a lack of consideration of environmental sustainability.

7.2.3. Local politicians

Promoting local economic development and improving the quality of the urban environment have been on Shenzhen's political agenda since the early 1980s. In China's current political system, local politicians are appointed or promoted by the upper tier of government, according to their political achievements, mainly measured by local economic performance (Ng and Tang 2004; Wu et al. 2007). Politicians believe that a better urban environment will attract more inward investment, especially when service industries are highly promoted. Therefore, 'Improving the urban environment' has long been one of Shenzhen's political objectives.

In terms of the environmental target, the politicians have two key concerns. One is to establish a 'world-class' city image using urban design. The Futian CBD (Masterplan 1) and Nanshan Central District (Masterplan 3) are good examples. Since 1989, generations of urban design studies and consultations have been carried out for the Futian CBD and its subdivided blocks (Chen 2006). The masterplanners from all over the world have been invited and have taken part in drawing up the future form for this new centre. Apart from adapting these consultation results into the local plans, the

local politicians have been fully convinced by the presented 'modern', elegant, unified, simple and functional aesthetic, and have adopted it as the official 'taste'.

Another concern of the politicians is to avoid the 'urban illness' of the Western cities, such as overcrowding and traffic congestion. The planners in the 1980s set up a vision for Shenzhen with large urban parks and broad urban arterial roads. This vision was successfully achieved because the majority of land in Shenzhen at that time was undeveloped. Shenzhen's reputation of 'garden city' was praised by the central government and attracted a large number of study visits from other Chinese cities. Therefore, this design approach has indeed been a political achievement. Ironically, now it proves to be one of the causes of traffic congestion, due to the encouragement to drive and the high capacity but widely spaced major road network (Urban Planning and Design Institute of Shenzhen 2006b). The fear of traffic congestion also leads to the extreme design approach of separating pedestrians from vehicle transport.

Shenzhen's politicians treat the planning authority as an implementation body and an advisory body for their vision of the city. The head of the planning authority is politically appointed, and the local politicians expect the planning authority to perform three functions. First of all, the planning authority is to implement the politicians' environmental vision. The business of plan-making and development control in Shenzhen has focused on promoting local economic development and improving urban environmental quality. In terms of urban design, the 'modern' and functional official aesthetics have been heavily emphasized. In some important planning projects, the local politicians provide their full support to the planning authority's suggestions and administrative actions. For example, the politicians supported the planning authority's experiment with a strict urban design control in Block 22 & 23-1 (Masterplan 2, Case 3) to create a harmonized environment. Similarly, the planning authority obtained political support to negotiate with the China Phoenix Building developer (Case 5) to reduce the plot size and to introduce a more street-oriented environment.

Secondly, as a public authority, the planning authority is expected to provide a transparent and fair decision making process. To establish this reputation, the planning

authority produced an administration handbook (Shenzhen Municipal Urban Planning Bureau 2005a) with written rules to guide its day-to-day business. This handbook is accessible to the general public as a tool to comprehend and monitor the decision making processes in planning. This expectation also forces the planning authority to react quickly to public appeals. The planning authority's quick reaction to the residents' appeal to the Holiday Plaza (Case 7) on sunlight rights was partly the result of this expectation.

Thirdly, the planning authority is expected to be the professional advisor for the key planning and development projects. In Shenzhen's planning system, the Planning Committee holds the final decision power of urban planning, and the city Mayor is the head of the committee acting as the final decision maker. Normally, local politicians do not intervene in matters of private development, but they will be the final decision makers for some significant projects, such as those along Shennan Boulevard or some established landmarks. For example, in the case of the Great China International Exchange Square (Case 1), it was the politicians' decision on how to resolve the illegal construction issue, and the planning authority only acted as the technical advisor. In the East Pacific Centre (Case 11) and the Kingkey Financial Tower (Case 9), where the main issue under discussion was whether to increase the original floor space and height limit, the politicians took the planning authority's advice into account and made the final decisions.

So, in summary, the local politicians' interest in urban design and environmental quality is due to its potential to attract more investment. But their vision of good design is narrow and confined to its visual aspects. The intention to avoid traffic congestion by building high capacity roads and large urban blocks has resulted in worse traffic conditions, and this in turn helps to create the extreme approach of separating pedestrian from vehicle transport. Due to the strong political interest in planning, political support is always available to help the planning authority research and negotiate high quality urban environment. Due to the relative openness of Shenzhen's political climate, the planning authority is expected by the local politicians to be more transparent and fairer in the decision making process. But due to

politicians' narrow and simplistic vision of environmental quality, and their strong interest in some projects, political intervention in some crucial projects is unavoidable, with both positive and negative results for the quality of urban design.

7.2.4. Conclusion

This section used a structure-agency model to help reveal the key actors' interests and relationships in making urban design decisions. In the design development process, the developer is the most important actor determining the quality of urban design. Although they have strong interests in maximising the floor space and building height, and building distinctive icons, they are slowly recognising some of the value in urban design, and are willing to invest in some amenities and sometimes energy-efficient designs in response to the market. They tend to comply with the relevant planning requirements to speed up the planning process, though they do sometimes use political lobbying and lengthy negotiation if they want more floor space and building height. Architects have a limited impact on the final design quality. They are found to be serving the developers' investment strategy and drawing up the developers' design ambitions to create iconic buildings, but sometimes they act as the mediators to lubricate the planning process.

Planning officers work closely with urban designers and act as the design rule-makers and gate-keepers to secure design quality. They are becoming more and more sophisticated, with the focus on design slowly moving from architectural form to incorporate some crucial urban design qualities, but without a well developed position on sustainability yet. They search for political support in preparing urban design studies and in negotiating the quality of urban design with developers. Local politicians act as the vision-providers for the whole city, and provide political backing to planning officers for their negotiations. However, their narrow understanding of visual aspects of urban design, and their tax-base/urban competitiveness considerations, have tended to undermine the delivery of design quality.

Highway engineers' involvement in the design process is indirect, but is exerted through over-generous highway standards that are imposed on the city. They set major limits on what can be achieved in urban design terms.

The impact of the general public on individual office development is minimized, due to the lack of public participation in the planning permitting process. But the rising public concerns about land development, particularly when it impacts on the residential areas, are injecting more public consciousness into the planning process. The resident appeal case (Case 7) signals that a more balanced design control system is needed in Shenzhen, to involve the general public in the planning permitting process. Such tensions will become more common as land becomes scarce, development more compact, and the adjacency of different uses more common.

7.3. Commercial office development's design quality

This section seeks to evaluate the urban design quality of Shenzhen's commercial office development, as a means to explore the effectiveness of its approach to design control. To help to evaluate design quality, this research borrows the key 'post-modern' urban design principles/objectives developed from the Western design control practices (see Chapter 2), and tries to find out how these developments respond to them. It is argued that although these principles are developed from European and American traditional urban form, most of them are universally applicable as points to good design and place-making (Bentley et al. 1985; Jacobs 1961; Lynch 1981).

As the result of the fieldwork research and some 11 case studies, it is found that there are four key issues that can be used to assess the design quality of Shenzhen's recent office developments. These include the design approaches to respond to the context and building form; the means to achieve pedestrian walkability, accessibility and comfort; the efforts to produce a sense of place and identity; and the approaches to environmental sustainability and energy-efficiency.

7.3.1. Context, building form and elevation

'Designing with the context' is one of the most important principles in 'post-modern' urban design. But it has been proved problematic in many Western countries as the office tower has become a symbol of global investment, and iconic architecture has become a means of place and property marketing. In Shenzhen, given its fast-growing speed and the subsequent radical change of scale over the years, this seems to be a challenging task and it is essentially absent in Shenzhen's planners' agenda.

To many Shenzhen (Chinese) architects and planners, the practical 'context' for them has been the future developments visualized in urban design plans, the CBD of towers which normally present a 'modern', simple and functional vision, with large scale, high density, tall tower form, and require a unified and ordered built form as discussed above. But this 'modernist' masterplan introduces a significant change of scale, making the context redundant. For example, in the Futian CBD, most of the apartments in the late 1990s (Fig. 7.3.1 left) are now deemed to be unsuitable for modern living, due to their super-high density, the lack of solar gain, the lack of fire protection, and being 'out of character' with the CBD 'modern' image. With the higher land values, these villages¹⁸ are facing demolition and re-development. Given these facts, the urban designer who carried out the urban design study for this district said '... there is almost nothing in it (the village) worthy referring to ...'. Due to its close location to the CBD, the urban designer considered this linear site should reflect the CBD's modern and unified environment. As the result, four identical high-rise slab boxes were proposed on the site making a great contrast to the building scale and massing of the village (Fig. 7.3.1 right).



Fig. 7.3.1 The Oriental Plaza. Original village (left, photo by Nan Yang, 2006) behind the proposed development (right, source: Urban Planning and Design Institute of Shenzhen 2006c), shows the contrasting building density and massing (Case 8).

¹⁸ China urban studies academics call these villages 'urban villages' or 'villages in urban area'. They are collectively owned by farmers and not subject to city urban planning management. When the city expands, these villages are surrounded and sometimes swallowed by urban development, normally by the means of transferring the collective landownership to the state public landownership. The villagers get certain compensation from this transaction.

Generally, there is a lack of respect to the context in masterplans, in terms of massing, scale and even land use. The urban design studies on which the masterplans (see Masterplan 2, 3 for example) are based often seem to be concerned only with the area within the study boundaries, without any relationship to surrounding built forms. If contextual analysis in the built form is carried out, it seems that this is done very selectively and is limited to some commercial imperatives. This normally happens when the site is adjacent to some established residential area, in which the lack of public participation makes the resident/public interest 'disposable'.

Taking the East Pacific Centre (Case 11) as an example, urban design studies had been carried out for two years in this project to negotiate a possible built form and developable floor space for this mixed-use (hotel, retail, apartment and office) development. A lot of attention was paid to relating the proposed development to the established landmark CMB Tower, and the result was to propose the tallest tower far way from the CMB Tower, to make the built form less oppressive. But no building form study was carried out to relate the proposed development to the residential buildings, although the potential shadowing effects from the towers was considered. In this process, the planning authority seems to have had no problem with the highly contrasting scale between the proposed development and the residential buildings. The residents were well aware of the development, but the shading issue was resolved by financial compensations, and they seemed to accept this (Fig. 7.3.2).

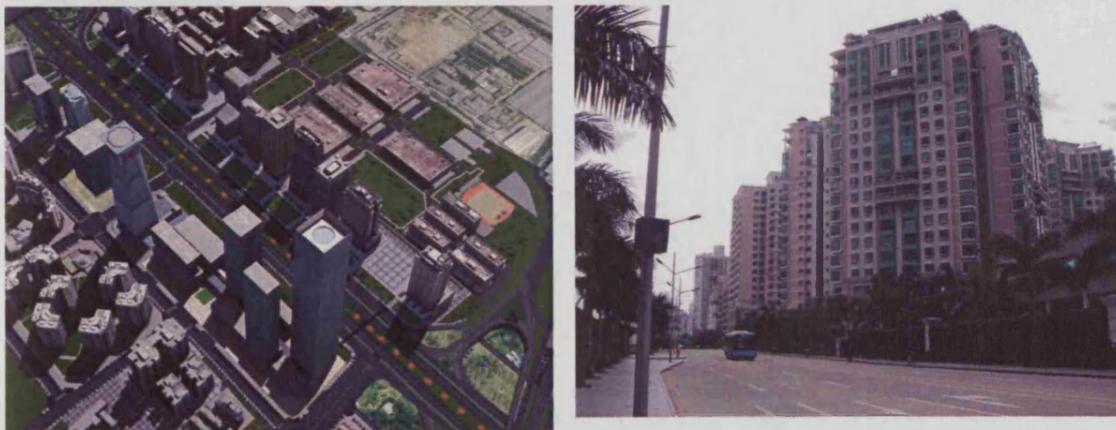


Fig. 7.3.2 The East Pacific Centre. The urban design study (left, by AUBE Architect, 2007) (Source: Shenzhen Municipal Urban Planning Bureau 2006) shows a great contrast in building massing with the residential development behind (right, photo by the author, 2005).

Shenzhen has been developed from a fishing village in the countryside to a city of 8 million people in less than 30 years. The speed of this growth, the intensity and the large scale of the urban development have been a part of Shenzhen's urban development culture, the so-called 'Shenzhen speed'. To fit the new into the old has not been Shenzhen's design tradition. Instead, building urban icons and establishing novelty in the urban environment with strong contrast to their context and adjacent new buildings is the dominant aesthetic.

7.3.2. Walkability and accessibility

Generally, Shenzhen is a city with a poor pedestrian environment. The city's blue print was drawn up in the early 1980s based on the 'modernist' planning principles to facilitate the fast movement of private vehicles and the segregation of different land uses. The general form of the city is dominated by extremely high capacity urban roads that create large super-blocks. The density of the road network is low, and roads are generally lacking within the superblocks (Urban Planning and Design Institute of Shenzhen 2006b). These produce a city with a pedestrian-unfriendly environment, making it difficult for the pedestrian to walk across the street/road (Fig. 7.3.3).

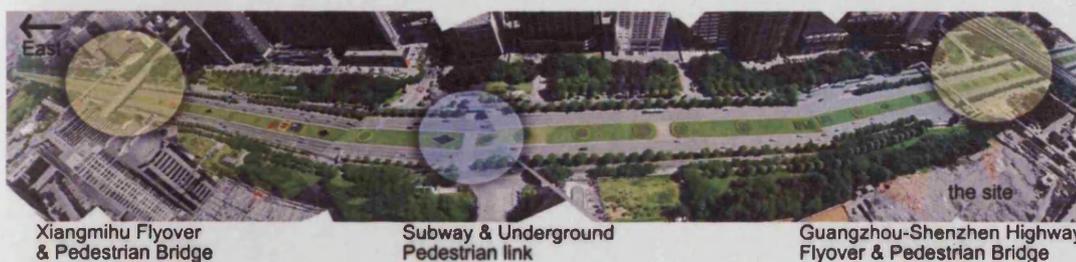


Fig. 7.3.3 Pedestrian connections to the East Pacific Centre (Adapted from Shenzhen Municipal Urban Planning Bureau 2006). For a 300 metres wide site, there is only one pedestrian bridge (right circle) and an underground pedestrian path (middle circle) to link it to the other side of the road.

Recently, walkability has been improved in certain locations with careful urban design studies and planning control. But even in these locations, the projects are suffering from a lack of connection to their neighbours outside the study area. A prime example of this is the China Phoenix Building in Block 26 (Case 5) and the Galaxy Central Plaza

(Case 6). They are located on the opposite sides of Shennan Boulevard, and are bounded by two large flyovers to their east and west (Fig. 7.3.4). Through a careful subdivision of the block into smaller plots, an easily surveilled pedestrian environment is created for Block 26. But the two flyovers connecting the three major fast speed urban roads only allow the pedestrian to walk to the site under the flyovers, where they are vulnerable to street crimes such as robbery and most likely to be assailed by traffic noise and air pollution. The generous 200 metres wide Shennan Boulevard makes it even harder for the pedestrian to cross the road. The flyover originally intended to increase the vehicle traffic efficiency now confuses even the drivers trying to find their way around. The same situation arises with the Galaxy Central Plaza. Although it provides a welcoming entrance plaza and tries to increase the connections throughout the site by introducing some cross-site pedestrian footpaths, the flyover makes it difficult for pedestrians (or motorists) to connect to the east and to the north.



Fig. 7.3.4 Accessing the China Phoenix Building and the Galaxy Central Plaza (FuF means footpath under flyover) (Adapted from Urban Planning and Design Institute of Shenzhen 2006a). The two flyovers and the three broad urban roads make the site barely walkable or accessible (left). The only option for pedestrians to go across the road is through the unpleasant footpath under the flyovers, where there is the potential for street crimes (right, photos by the author, 2007).

To increase the pedestrian accessibility, while keeping the private vehicles moving quickly, multilevel systems to separate pedestrians from vehicles are commonly seen in Shenzhen. This approach is partly facilitated by the city's attempt to explore the underground and elevated levels of commercial use, as a way to sustain the economic growth when the land availability for new developments is shrinking (Urban Planning and Design Institute of Shenzhen 2006b, 2007). The planners in Shenzhen see the multilevel pedestrian system in Hong Kong Central as the exemplar to deal with pedestrian connections. But they seem to neglect the factor that its success is based on the super-high density urban environment, and that Hong Kong's success also relies on the retail spaces lining the paths, adding the necessary activity supports and surveillance. It is too early to say if Shenzhen's radical approach to introduce the multilevel pedestrian system will be successful. But it is easy to predict that if this system is located outside high density areas and without enough activity supports, it will fail. It has been proved not to be the answer in many western countries, albeit ones where pedestrian flow is much lower and climatic conditions are problematic for part of the year.

Apart from subdividing large urban blocks into smaller plots and bridging pedestrian connections using multilevel systems, more efforts have been made to increase the accessibility of the built environment, such as creating incentives to connect to metro stations with the new development, and introducing a better organized parking strategy. But it seems these are only marginal efforts, and the majority of the built-up area remains poorly accessible on foot. The high capacity of urban roads, broad building setbacks, and the prevailing unwillingness to reduce the convenience of private vehicle transport, all have been the negative pre-conditions for individual project design.

7.3.3. Sense of place, enclosure of public realm and activity support

Producing a sense of place is another crucial principle for post-modern urban design, which is usually accompanied by the appropriate enclosure of public realm, activity

support and desire for a human scale. But the concept of sense of place is hard to define in contemporary Chinese urban development. According to one planning officer interviewed, ‘... there has been a lack of street concept (sense of street) in (China’s) planning education, governmental planning guidance and the local planning control ...’ In practice, the city builds roads for vehicles, rather than streets for pedestrians, and the high capacity of urban roads diminishes the sense of place and the quality and identity of the urban environment.

For example, the distance between the Oriental Plaza (Case 8) and the building across the road is some 200 metres, with 40 per cent of the section occupied by vehicle lanes, and 60 per cent by pedestrian walkways and road greenery (Fig. 7.3.5 top). The buildings and the spaces between them hardly have any dialogue, and the space seems to be redundant and unusable. One of the favourite options is to turn the greenery in front of the site into an urban park. But pedestrian access to these spaces is forbidden, and the current design and management approach to these urban parks does not make them accessible to or used by the pedestrian (Fig. 7.3.5 bottom). Functionally, these green spaces act only as visually pleasant elements in the city, but they create blind spots that encourage street crime.

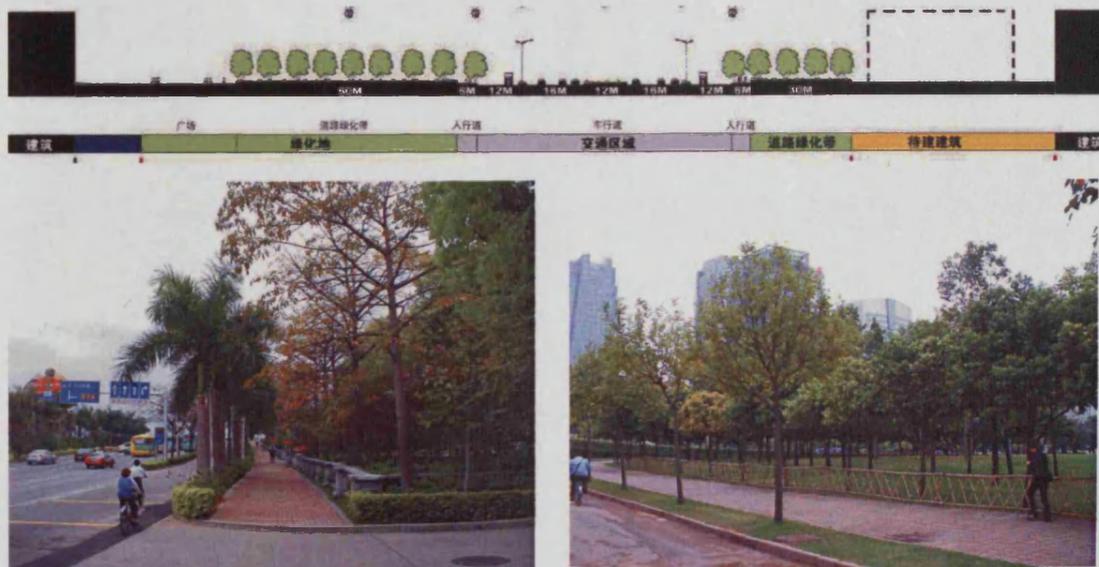


Fig. 7.3.5 A lack of sense of place in Shenzhen’s urban environment in general. The distance between the Oriental Plaza and the building on the other side of Shennan Boulevard (top) (Source: Urban Planning and Design Institute of Shenzhen 2006c). Greenery along the urban roads does not have any engagement with pedestrians (bottom, photos by the author, 2005).

Recently, efforts have been made to produce a sense of place through the planning process in some locations. The concept of 'street' has been more popular recently in Shenzhen's planning since the experiment of an urban design guidance for Block 22 and 23-1 (Fig. 7.2.6, Masterplan 2) in 1998. Through the land subdivision of the large urban blocks, Shenzhen's planners manage to inject some small squares adjacent to the office blocks. Attention has been paid to reducing the width of the internal streets, to use low-rise podiums to enclose the streets and provide a human scale environment, and to regulate some retail uses on the ground floor to animate the space. Some of these spaces now seem very successful with clearly defined edges using trees or ground floor retail units. The activities supported by the retail uses provide a return to the developers (Fig. 7.3.6 left). The streets now are robust and well used with the small restaurants and retail units that attract passing trade (Fig. 7.3.6 right).



Fig. 7.3.6 Active streets in Shenzhen. Retail entrance for the Galaxy Central Plaza, with a high level overhanging, well-arranged advertisements, transparent shopfronts and high quality stone pavement, all indicate a high quality public realm (left, photo by the author, 2007). The street in front of the Guizhou Mansion, is fronted by a restaurant and a few retail units (right, photo by the author, 2007).

But some small squares/parks regulated by the planners seem less successful. They are still suffering from the lack of clearly defined edges, because they are bounded by too many roads that accommodate too much vehicle traffic. The two small squares in Block 26 (Fig. 7.1.5 and Case 5) only have one building edge. Although the ground floor spaces will provide retail units that support the activities within the squares, these amenities are suffering from a lack of enclosure. This may also partly result from the developers' lack of recognition of the value of these places, which potentially can help

the development to develop a prestige status, and can provide the office workers and tenants with comfortable places for walking and relaxing.

7.3.4. Sustainability and energy efficiency

Shenzhen's office designs are only slowly embracing sustainability issues, despite the official propaganda to achieve sustainable development. The planning authority does not impose any regulation in this regard, although the state recently published a regulation on building energy saving performance which, again, comes too late in the design development process. This research found that most of the energy saving strategies were initiated by the developers, responding to the cost-efficiency concerns of some tenants. But these initiatives are lacking a comprehensive energy saving strategy, although some developers use low-emissive glass and individual-controlled air-conditioning. In a sub-tropical city like Shenzhen, a comprehensive sustainable strategy for a commercial building should reduce the energy consumption for cooling by introducing passive/natural ventilation, and/or using facade treatments to prevent over heating (e.g., low-emissive glass and double skin facade). For a broader environmental agenda, the city should discourage car use, promote sustainable construction, and encourage the use of renewable energy, grey water and rain water. But Shenzhen's current office developments only achieve very few of these. The sustainable strategy needs to inspire the design. Therefore, more regulation and guidance is needed in this regard.

7.3.5. Conclusion

To conclude, Shenzhen's current design approach to commercial office development has been constantly improving and is much more design literate than those in the 1980s and the 1990s. The quality of the development in Shenzhen has been improved significantly by the imposition of 'modern and functional' official taste in elevations, and by using an urban design plan to provide a framework for development control.

But these urban design plans fail to respond to their context. Walkability and accessibility within urban blocks is being achieved, by some careful land subdivisions, shared underground parking strategy, and incentives to connect some developments to metro stations and to bridge the segregated pedestrian environment. But at larger scale, pedestrians are still suffering from high capacity urban roads, and the multilevel pedestrian system is facing the challenges of activity support and long-term maintenance. A sense of place has been created in some locations, by introducing small squares in the office block, enclosing streets by low-rise podiums and providing retail units to animate the space. But the broad urban roads and the over-generous building setbacks undermine the planners' efforts, and some small squares are suffering from a lack of enclosure and activity support. The development of sustainability and energy efficiency is lagging behind, due to the lack of a proactive planning regulation and the weak response from the market.

In the future, to achieve better quality of urban design, Shenzhen needs to improve its approaches in environmental design. At large scale, the city should change the superblock-wide road masterplanning approach, in order to form a more permeable and walkable environment. The project designs need to embed more contextual analysis that goes beyond the site boundaries linking adjacent projects together, in order to create continuous high quality public realm. More attentions should be paid to the place-making of the public realm, in terms of public space design, landscaping and seating. More importantly, urban greenery should be accessible to the general public with appropriate activity support within them. Broader sustainability issues should also be considered and regulated, especially for energy and water uses.

7.4. Overall conclusion

This chapter has discussed Shenzhen's recent approach to the delivery of urban design quality, by assessing the impacts of the planning process on urban design, exploring the key actors' interests and strategies in urban design, and evaluating the design outcomes. It finds that Shenzhen's planning and permitting process has a positive impact on raising design quality, due to the combination of land and planning controls, the early intervention of urban design in the planning process, the introduction of design competitions for project schematic design, and the well established planning process that regulates procedural requirements. These put Shenzhen in a leading position in China's urban design control. But the weakness of planning monitoring, enforcement, public participation and appeal mechanism remain a challenge to further development of a sophisticated design regime.

Developers, planning officers and local politicians are found to be the most important actors to influence the design outcomes in the development process. Developers are acknowledging some value of urban design, and providing some qualities in response to the market demand. But they are most concerned about the developable floor space and the iconic status of their projects, as well as the speed of the planning decision. Their provisions of urban design quality and energy-efficient design are constrained by their understanding of the immature market and their short-term interest in the development. Planners are becoming more and more sophisticated in controlling urban design quality, by working closely with the design professionals and politicians to negotiate better design. Their emphasis on design has moved on from being purely concerned with the building's external appearance to seeking to improve the quality of the public realm. But these concerns are still very 'modern' in standard, pro-development, economic-oriented, without enough concern on the environmental sustainability. Politicians provide a broad vision to the city's future urban form with the ambition to attract investments. They provide strong political support to the planners' design negotiations, but sometimes their interventions in individual projects have

some disappointing design results, due to their prime concern on economic development and their narrow understanding of urban design limited in the visual dimension.

The urban design quality of Shenzhen's commercial office urban design quality has been improved significantly in the recent decade, with more humane, walkable and enjoyable public space created. But the city is still facing the challenge from the superblock and wide urban road design legacy, the extreme design approach to separate pedestrians from vehicles, the unprecedented development speed, the significant change of development scale and sustainable development. How Shenzhen's experiences are comparing with the international aspirations on best practices in design control, and how it represents the general practice in other Chinese cities are to be discussed in the next chapter.

CHAPTER 8. URBAN DESIGN AS PUBLIC POLICY IN CHINA AND THE WAYS FORWARD

8.1. Urban design as public policy in China?

This research set out with the objective to assess **how China has been developing urban design as public policy**. It is broken down into eight questions:

1. How is urban design as public policy integrated into the Chinese planning system?
2. Whose vision underpins urban design practice? And by what means?
3. What instruments have been used by planners to promote good design?
4. What design principles have been used to underpin design decision making?
5. How effective is the regulatory process in promoting good design?
6. How do the political and economic conditions influence urban design practice, and whose design interests have been served in the development process?
7. What is the quality of design outcome of Chinese urban developments?
8. What measures are possible to help achieve better practice and design outcomes?

These questions are answered in a slightly different order. Question 2 to question 5 follow the four key parameters of the international aspirations for good practice in urban design control discussed in Chapter 2 (Fig. 2.3.2 and reproduced below). Under each parameter China's achievements and weaknesses are revealed. The analysis then assesses the political and economic influences on urban design decision making (question 6) and the design outcomes of China's urban development (question 7) are followed. The answers to these questions provide a deeper understanding and reflection on how urban design as public policy has been injected into China's planning

system (question 1). During the discussion, Shenzhen's relevant experiences are concluded, and how far these represent practices in other major Chinese cities is also discussed. The future challenges to better develop urban design as public policy in Chinese cities are then discussed, and practical suggestions are made for improvement (question 8). Finally the limitations of this research and suggestions for further work are also identified.

Principles for Progressive Urban Design Review

Community Vision

1. Committing to a comprehensive and coordinated vision of environmental beauty and design (Brennan's Law) (Lai, 1988, p. 426).
2. Developing and monitoring an urban design plan with community and development industry support and periodic review (Lai, 1988, p. 429).

Design, Planning and Zoning

3. Harnessing the broadest range of actors and instruments (tax, subsidy, land acquisition) to promote better design (Lai, 1988, p. 430–431).
4. Mitigating the exclusionary effects of control strategies and urban design regulation (Lai, 1988, p. 430)
5. Integrating zoning into planning and addressing the limitations of zoning (Lai, 1988, pp. 431–432).

Broad, Substantive Design Principles

6. Maintaining a commitment to urban design that goes well beyond elevations and aesthetics to embrace amenity, accessibility, community, vitality and sustainability (Scheer, 1994, p. 9).
7. Basing guidelines on generic design principles and contextual analysis and articulating desired and mandatory outcomes (Blaesser, 1994, p. 50).
8. Not attempting to control all aspects of community design but accommodating organic spontaneity, vitality, innovation, pluralism: not over-prescriptive (Lai, 1988, p. 428; Blaesser, 1994, p. 50)

Due Process

9. Identifying clear a priori rules for urban design intervention (Lai, 1988, p. 425; Scheer, 1994, pp. 6–7).
 10. Establishing proper administrative procedures with written opinions to manage administrative discretion, and with appropriate appeal mechanisms (Lai, 1988, 427; Scheer, 1994, pp. 3–4).
 11. Implementing an efficient, constructive and effective permitting process (Scheer, 1994, pp. 5–6, 7).
 12. Providing appropriate design skills and expertise to support the review process (Scheer, 1994, pp. 4–5; Lai, 1988, p. 431).
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Fig. 2.3.2 International aspirations for good practice in design control (Source: Punter 2007).

8.1.1. The vision for the city

The idea of a 'Community Vision' suggests that the design vision of a locality needs to be developed with the local community with coordinated efforts. The participative processes need to give politicians, communities and the development industry a voice in setting the direction, form and quality of developments. This coordinated vision also needs to underpin the making of statutory plans for an effective implementation.

In China, the general public is largely ignored in the urban development process, and only consulted on the draft statutory plans. A city's vision of land development is essentially shaped by the business-oriented elite group. In large cities, local governments commit themselves to an urban competitiveness ethos to attract investments, and local politicians tend to have a strong vision of urban design, albeit one limited to visual aspects. If the local politicians are aware of the positive contribution that urban design can make in promoting local economic development, urban design considerations are then embedded in urban plans. Shenzhen represent the best practice in this regard, to use urban design studies to underpin its making of the Statutory Maps in some strategically important localities to guarantee the design outcomes. However, because the making and the implementation of the urban visions are dominated by the local politicians and the developers, these visions are only for the purpose of place-marketing, without enough input in place-making to improve the quality of life.

8.1.2. The planning instruments to promote good design

International good practice indicates the need to incorporate as many instruments as possible to promote better design and to mitigate exclusionary effects in the development process. As this research only focuses on commercial office development, the issue of providing low-cost housing is not relevant here. The efforts to mitigate social exclusion in commercial developments mainly rely on the application of the generic urban design principles, which are to be discussed in the next section. Chinese

planners are equipped with two strong instruments to promote good design in the planning process – combining land and planning controls, and integrating zoning and planning devices. Shenzhen’s practice shows how these can be achieved.

8.1.2.1. The combination of land and planning control

The combination of land use control and land administration is the most powerful mechanism that Chinese planners have to promote good design. Although the powers of development control and land administration are now under the jurisdictions of different authorities, the design conditions prepared by the planning authority are attached both in the Land Use Planning Permit to regulate design, and in the Land Contract to define the development right. If the design conditions are well articulated, this is a very effective mechanism to guide the design of development. Most of the cases studied in this research demonstrate this advantage. Furthermore, this ‘dual control’ enables the planners to use an incentive mechanism to encourage the developers to contribute to a high quality of urban design, through the exchange of land parcels with their relevant development rights.

However, the public land ownership is a double-edged sword for development control. The local government’s conflict of interest in land development comes from its dual roles as the land owner and the development regulator. Many Chinese local governments are actually relying on the land income to support their public expenditure. Design quality can therefore be easily sacrificed for short-term economic targets, such as permitting more floor space for a larger revenue income without scrutinizing its quality. Shenzhen seems to have made some progress in this matter by exchanging additional floor space allowance for better urban design thereby incentivising design quality. But the scope for the floor space variation is less regulated, largely depended on the developer’s lobbying power and leads to excess height and bulk. More guidance is therefore needed to develop a more sophisticated process.

8.1.2.2. Integration of planning and zoning

Zoning and planning could be integrated together to balance the planning certainty and flexibility. Urban design in China uses the advantage of the urban planning system, which combines land use control and detailed zoning control. The land use control is actually a discretionary permitting process, allowing the planners to assess the development proposals under changing political and economic circumstances. Meanwhile, Controlled Detailed Plan (CDP) in Chinese cities (or Statutory Map in Shenzhen) provides crucial parameters to define the development rights of every individual urban plot, which injects great certainty into the system and sets the planning discretion within certain boundaries.

More importantly, the zoning-like Statutory Map (or CDP) can be complemented by urban design studies. Shenzhen's five-tier urban plan system has stressed urban design as one of its key components. For each tier of the urban plan, urban design either acts as the strategy to guide the making of urban plan or provides the detailed design requirements of urban plots. In recent practice, urban design has been the major consideration for the preparation of the legally binding Statutory Maps. Furthermore, a reasonable urban design study can break this rigidity. A formal plan amendment mechanism is provided to legitimate these study results. This provides more urban form-led and quality-oriented guidance for future developments.

But in this development climate which emphasizes the necessary speed of control decisions, the speed of plan making is lagging behind, and the quality of the urban plan is low. The legitimacy of the Statutory Map (or CDP) is facing enormous challenges, because the limited time available for its preparation reduces the quality of the research and design thinking that underpins its preparation, leading to some lack of respect for the existing development rights. Due to the local politicians' dominant position in making the final planning decision, the opportunity for plan amendment could be in danger of becoming the developer's tool to increase their floor space allowance by political lobbying.

8.1.3. The shifting conception of urban design

Since the introduction of marketisation in 1979, the ideology of planning and design has been progressively changed in China to respond to the shift from state-led to private-led land development. In the early years of the market reform, the ‘socialist’ and ‘modernist’ planning and design ideologies were dominant. These ideologies did not embrace the concept of public realm, but promoted monumental public space and grand structures, enclosed self-contained work unit compounds¹⁹, and laid out the city blueprint with superblocks and wide urban roads. In this production-first era, the quality of the pedestrian environment and the sustainability issues were not considered (Fig. 8.1.1). Development control was not introduced in China until the late 1980s, when the market reform was deepened. In this new era, these ‘socialist’ and ‘modernist’ legacies still exist, but coexist with some ‘post-modern’ urban design principles imported from the West to shape the Chinese urban form.

8.1.3.1. China’s current responses to the generic urban design principles

China’s current approach to urban design is ‘modernist’ in its character. Broadly, urban development in Chinese cities is large in scale, very dense, heavily zoned, car-oriented, iconic and context-free! Elevational control is dominant in the planning process, with a vision of a ‘modern’, elegant, simple, ordered and functional buildings. In some crucial locations, the development is expected to be a landmark for the locality to market the locality and the building. But in reality, all buildings are designed to compete for attention on an increasingly crowded stage! The idea of providing convenience for private vehicle transport still prevails, even in heavily populated areas. The prevailing design approach of separating pedestrians from vehicles pushes the pedestrians to make way for vehicles, an approach which has been widely rejected in many cities overseas. But perhaps it is justifiable in China due to the density of population. The advocacy of developing underground and elevated commercial space has strengthened

¹⁹ In the market reform era, especially in the early period of the reform, state work units were still the dominant entities in the Chinese urban form.

the local authority's argument for supporting the segregation of pedestrians and vehicles.

China's planners recognised that those design ideologies developed from the centrally-planned era could not deal with the new circumstances in the reform era. They started to seek help from Western urban design practice. They learned from the Western designers who participated in design consultations, they studied the approaches by which the urban design guidelines were formulated (with special reference to the American cities), and they slowly embraced the urban design principles widely advocated by the Western thinkers and design practitioners such as Lynch (1960; 1981), Jacobs (1961), Bentley and his colleagues (1985), Barnett (1974), Carmona and his colleagues (2003) as well as many others. Therefore, together with the 'modernist' legacy, some 'post-modern' urban design principles began to influence the Chinese urban form, as the response to the challenges of commercial development. A basic level of 'post-modern' urban design principles are considered or promoted in some locations where urban design is valued, although even here they are not systematically applied (Fig. 8.1.1).

| Generic urban design principles | Shenzhen in the pre-1990s | Shenzhen's response in the post-1990s |
|--|--|---|
| Quality of the public realm (attractiveness, activity richness, continuity, and enclosure) | No concept of public realm | Some streets and squares have activity support, and are properly enclosed. No concept of a continuous connected public realm. |
| Character, legibility, sense of place and visual appropriateness (local identity) | Monumental public space | Achieved in some locations, with some sense of commercialism, but some locations suffer from the sudden change of scale of buildings and spaces. |
| Diversity, Mixed-use, mixed age, mixed rent, concentration | Work unit legacy of single use and tenants | Achieved in most of the new developments with mixed-use, providing some diversity on the ground level. |
| Human scale and vitality of the street | Socialist 'grandeur' in buildings, roads and squares | Achieved in most of the new developments, with low-rise and continuous podiums to enclose streets and with retail uses to activate the streets. But huge contrasts of scale with wide streets and tall buildings. |
| Permeability (ease of movement, short blocks) | Superblocks, wide roads, pedestrian separation | Achieved in some carefully masterplanned areas, but the city is still dominated by superblocks and divided by wide urban roads. |
| Social inclusion | Axiomatic in work unit | Not relevant in 'all commercial' development, but have design for pedestrian accessibility (see above). |
| Automobile attrition, surveillance (safety) | Car dominated | Failed in most of the locations, due to the prevailing design ideology to separate pedestrians from vehicle transport |
| Environmental sustainability (Energy and resource efficiency, bio-diversity) | Not a concern | Beginning to address energy efficiency but not yet concerned about bio-diversity and water efficiency. |
| Community consultation and control | Not a concern | Not a concern in planning |
| Economically sustainable | Not a concern | Growth oriented |

Fig. 8.1.1 Shenzhen's response to the key urban design principles in the development control process (Principles derived from: Bentley et al. 1985; DETR and CABE 2000; Jacobs 1961; Lynch 1981)

This research finds that the quality of the public realm is getting increasing attention in China's planning process. Taking Shenzhen as an example, pedestrian walkability and permeability now have been addressed, by dividing large urban block into small gridiron urban plots with narrow streets, to create a well surveilled public realm. Public transport is considered, although it is limited to connecting developments to the metro stations. The attempts to introduce shared underground parking help to create more quality space for pedestrians and to make efficient use of the parking spaces. Public

amenity is now promoted within some urban blocks, by providing small public squares or parks. Human scale streets are provided, by regulating street width and narrowing building setbacks, and by the enclosure of continuous low-rise podiums. Mixing of land and building uses is encouraged in many locations, to provide the project with a certain economic vitality, to animate the public space, and to increase the use of underground car parking through the day. These design and development approaches also ensure that the public spaces created can be used and accessed by the general public, contributing to social inclusion.

The shift in the concept of urban design in China has some similarities to the Anglo-American experience discussed in Chapter 2, which emerged from a simplistic approach to aesthetic/elevational control to embrace the quality of the urban form and especially the public realm. But China's 'post-modern' urban design considerations are still applied at a very basic level and are not truly focused on achieving a high quality public realm. The 'modernist' approach to urban form is still in place, and the development of sustainability and energy efficiency in design is currently not on the planners' agenda. Based on the above analysis, China needs to introduce more urban design and broad sustainability considerations in the planning process, needs to change the extreme approach of separating pedestrians from vehicle transport, and should consolidate the practice of providing a high quality public realm with continuity, a sense of place, diversity (mix) in development, human scale, and a general ease of pedestrian movement. The focus of control should shift from buildings to spaces, and from elevations to general environmental quality. Overall, a deeper understanding of the generic urban design principles is needed to promote better quality of environment, but these must be tailored to local conditions and public preferences.

8.1.3.2. The radical change of scale and the development context

Contextual analysis is a crucial way to inspire design thinking and to achieve a better fit of the proposed development into its surroundings, to contribute to a more meaningful, comfortable and vital public realm. It is one of the key principles in

'post-modern' urban design and linked to a desire to preserve and enhance heritage and the retention of a sense of place in the built environment.

This research finds that China does not value this principle as crucial in place-making for two reasons. Firstly, the new cities like Shenzhen were developed largely from greenfield sites with 'modernist' planning approaches of large scale, segregated land use and large scale investments. With the fast pace of urban development, context seems to be an irrelevant issue, since most of the existing low density buildings are largely outworn and disposable, and the 'real' contexts for designing buildings are the masterplans displaying a vision of a new 'city of towers'. But the masterplans are very weak as regards to the quality of the space at street level, and often fail to address the buildings' relationship with their immediate surroundings in terms of the pedestrian environment and the quality of public space.

Secondly, in most of the Chinese cities, for marketing purposes, developers and local politicians are all keen to develop iconic buildings to stand out in the townscape, which can be easily marketed and express the 'economic competitiveness' of the building and location. Both support the architect's approach to create urban novelty, with iconic touches and sharp contrasts with their neighbours. If proposals respect their adjacent context, it seems this is done highly selectively, with reference to the elements that could enhance the city image of prosperity and economic success, such as their relationship to established landmarks. In the cities where conservation district or historic buildings are found, more effort is made to preserve historic character and at the same time to meet the rapid urbanization demand. But in fact, the redevelopments of old urban quarters without any respect to the original urban fabrics are taking places in many cities (as has been discussed in Chapter 5).

All the above implicates that more sensitive conservation/contextual thinking needs to be established in China's land development process. This is not only applicable in historical districts in towns and cities, to preserve and enhance the local distinctiveness, but also applicable in the new development areas. In new cities like Shenzhen, a lot of the built environment seen today will last for decades, and will provide a more

established context for development in the future. Therefore, new cities need to develop the practice to embrace more contextual analysis in the planning process, to enable the development to be better fitted into its surroundings, and to start to preserve and enhance its heritage, and in particular to provide a higher quality of the public realm.

8.1.3.3. Mandatory design outcomes and design innovations

China has been trying to regulate some mandatory design outcomes while accommodating design innovations. The mandatory outcomes are mainly delivered through issuing design conditions generated from the urban design studies/plans. From the administrative point of view, this has been achieved successfully. But due to the coexistence of the 'modernist' and some basic level of 'post-modern' design principles, these mandatory outcomes are regulated in an ad-hoc manner, mainly through volumetric and functional controls. Therefore, the actual design qualities are suffering from the lack of more sophisticated detailed control.

As regards design innovation, Shenzhen provides an excellent example on how far design competitions can be successfully applied in the Chinese planning framework. For private developments, the design competition is paid for by the developer and works as part of his investment strategy. The competition is only used to generate 'ideas', rather than as a guarantee for a planning permit. The planning authority can also gain skilled support through this process. Although public regulation of private design competitions is difficult and sensitive, Shenzhen has successfully managed it. The competition process is now monitored by the planning authority to make sure the entry schemes are in line with the given design conditions, and the entries are by fully qualified, often internationally acclaimed architectural designers. The competition schemes are judged by design literate individuals chosen by the local authority. But the system currently provides too much design freedom to the developers and architects. Because the competition mainly serves the developer's investment strategy and his need for project marketing, the designs generated from this process are mostly iconic

and eye-catching designs. Their contribution to the quality of the public realm rarely goes beyond the planning authority's requirements. This suggests that the Chinese planning authorities need to develop more sophisticated mandatory urban design guidelines to improve the quality of the public realm.

8.1.4. The impacts of the planning permitting process on urban design

The planning permitting process in China fully embraces the design control process. Its performance indicates the strengths and failures of China's design control process. This can be revealed in examining a priori rules to underpin design intervention, the formal process of planning permitting, and the level of skilled support for the control system.

8.1.4.1. A lack of priori rules for urban design intervention

The international good practice in urban design control demands clear rules for urban design intervention, for the reason that the public regulation should be governed by the rule of law (due process). But generally, Chinese local authorities have a lack of priori rules for urban design intervention, and lack general design guidance to support consistent design decision making, even in a 'design exemplar' city like Shenzhen. Although urban design studies/plans have been the major reference documents when preparing design conditions for development projects, they have not generated a comprehensive set of urban design principles, with which to assess individual development projects (Fig. 8.1.1).

Some design principles have been mentioned in the local planning norm or official plans to develop a pedestrian-friendly environment with vital mixed-use in place making. For example, the *Shenzhen Urban Planning Norm* (Fig. 6.2.2) requires mixed-use to activate the public realm, the *Urban Comprehensive Plan* (Fig. 6.2.5) promotes a sense of community and a respect to the natural environment, the *District Plans* (Fig. 6.2.6) advocate legibility, continuous street wall and human scale, and the

Statutory Maps (Fig. 6.2.8) require a respect to the context and an enhancement for the local character. But these terms are not defined, nor are they consistently applied.

The focus of design still limited to the visual/elevational aspects and lacks the necessary sophistication to promote good urban design. For example, walkability in most of the urban design plans has driven the development of smaller urban blocks, but it is also the driver for the approach of pedestrian-vehicle separation in some plans. Even worse, guidance on place-making for crucial public space such as squares and parks is missing. Although clear design checklists are provided at every stage of the permitting process, these checklists focus on the technical aspects of the planning requirements (see Fig. 7.1.12), placing only broad and vague requirements on the quality of the urban environment, without supportive guidance on which to base the urban design intervention. Therefore, the current design interventions are only on a basic level. More efforts need to be made to convert the post-modern principles into various level of guidance with a clearer interpretation of concepts and terminology.

8.1.4.2. The permitting process

China's well-established planning permitting process (see Fig. 7.1.1) could be developed towards a more 'orderly exercise of discretion'. Shenzhen's experience shows the potential of this. Firstly, the Statutory Map, accompanied by the urban design study/plan, provides crucial information for land use planning control. Design conditions for project development are issued at this stage with mandatory requirements derived from the Statutory Map (such as land use, density, building height and site boundary) as well as specific urban design requirements if the relevant urban design plans are available (such as the requirements on street wall, ground floor arrangement, and locations for towers, podiums and even public squares). Shenzhen's innovation in this regard has been to use the Planning Committee to govern the preparation and amendment of the key parameters, as a way to regulate the local authority's discretion. Secondly, architecture and urban design control can make use of a design competition to generate design idea and goes through a rigorous in-house

design review to ensure that the project design complies with the relevant regulations and design conditions. The in-house design review is carried out according to the given design conditions and the relevant planning requirement, as a way to guarantee the public interest in the private development. Thirdly, building control at this last permitting stage ensures the transformation of the project design into construction documents reflects the relevant requirements.

In this process, Shenzhen has established good practice by developing the *Permitting Process Manual* to guide the planning officers' comments, judgements and recommendations, and these are formally recorded to inform the design development in the next stage. This research suggests that this kind of consistent decision making process is fairly constructive (focusing on the improvement of the design quality), effective (the quality of the public realm is normally improved) and efficient. The minimum time the developer spends to go through this three-stage process has been less than one year including the time spent in a design competition (Fig. 7.0.1). Each stage of the application to the planning authority was normally one to two months only, if the development design complied with the key planning parameters.

But in this process even in an 'advanced' city like Shenzhen, the political intervention in some development projects, or the decisions made by the Planning Committee, are hardly scrutinized by the general public, as has been discussed in section 8.1.1.3. The lack of public consultation in the permitting process disadvantages the aggrieved neighbours whose property rights or living qualities are negatively impacted by the proposed development, and does not provide the means for them to express their concerns. The Planning Committee also lacks enough public input. This makes the local discretion on project design unregulated. Therefore, quality of life considerations can be easily overtaken by the city's political and economic agenda. As regards developer's design appeal, these are not found in this research. Developers tend to use negotiation rather than appeals to achieve their design objectives. But the planning authority now needs to develop this mechanism and the practice of public participation to prepare for the future challenges.

In those cities with less transparent or less regulatory framework, planning decisions are made behind the closed doors, and sometimes mainly according to the key local politicians' personal preferences (note Guangzhou's experience in Section 5.2.3.2). More thorough-going reform is needed in these cities to make their planning services more public-oriented.

8.1.4.3. Skilled supports

Proper skilled support is needed for the public sector to negotiate design improvements. Well-resourced local authorities tend to do better in this regard. Their strong economic position enable them to use some land leasing income to invite the world's leading architects and designers to carry out urban design studies and to prepare urban design plans. For the same reason, the planning authorities can contract out some site-based urban design studies to urban designers to facilitate the decision making, and to invite a design expert/jury/team to comment on schemes from time to time. The results of the site-based urban design studies and the comments from the design experts have been used by the planning officers to negotiate with developers on design matters.

Furthermore, the developed cities along the Chinese coastline tend to be more attractive than the developing cities in inland China in terms of attracting skilled planning officers. Most of the planning officers in the large coastline cities were trained in architecture graduated from the top universities, and are able to communicate with design professionals. Shenzhen has shown its advantage in this matter. Other less advantaged cities would suffer from the lack of skilled support in this regard.

But this research finds no evidence that these architect-trained planners are receiving any further training for urban design or sustainability strategy in any form. Although there is evidence that experts are helping to develop increasingly sophisticated systems, continuing education for planners in matters of design is needed to supply

the necessary skills to the planning process, to meet the future challenge in the built-environment.

8.1.5. The political and economic impacts on urban design

8.1.5.1. Local politicians

Local politicians have strong interests in urban development. This is because the rapid urbanization demands a quick provision of infrastructures (such as highways, utilities, public transport and others), and the private land development can provide the local government extra resources in this regard. Therefore, local politicians try to develop 'good' urban environments to attract investors and to provide the city with a prestigious image. Local politicians also want the public authority to be transparent and to make decisions according to the established rules, in order to provide an investor-friendly regulatory environment. But from time to time, this rule-based governance is breached by the developer's economic power. These all have enormous impacts on China's urban design.

Firstly, local politicians are eager to create a good urban environment for investment. This political strategy includes using urban design to promote the locality as an 'international city' to attract high-tech industry and financial services. For instant, the terms frequently used in Shenzhen's governmental documents like 'Singapore's environmental quality', 'liveable city', 'garden city', 'international standards' and others express its ambition. This political appeal is intensified in strategic locations, and also slowly applied to the whole city. The high level of political support has ensured the planners' suggestions on urban design and the subsequent urban plan amendment are easily implemented (e.g., passed through the Planning Committee in Shenzhen). But what has been discovered in this research is that the political visions of urban design are visually obsessed (not in an experiential way, but in an abstract way). They are 'modernist' in standard, preferring wide urban roads and high rise and iconic

towers, which could be the demonstration of the city's economic success, and could be the political achievement easily recognized by the upper tiers of governments. These visions do not pay enough concern to how the public space is formulated and how the pedestrian routes are connected, failing to address the environmental quality for office workers, shoppers and the general public.

Secondly, some local politicians recognize that a transparent and fair regulatory environment is also crucial for attracting investment as it can provide the investors the security and predictability when they need to develop projects. This enables Shenzhen's design control to develop towards an 'orderly discretionary' process with established rules to guide decision making. Shenzhen's attempt to separate the plan approval power from the planning authority is a good start to regulate local discretion. Although it is still a politician and planning authority dominated organization, the Planning Committee, with the majority of the members from non-civil servants, provides an opportunity for the public to join the decision making process. The plan amendment mechanism scrutinized by the Planning Committee has effectively reduced the behind-door negotiations that formerly prevailed and has now been replaced by an incentive mechanism that trades more floor space for a higher quality public realm, becoming a sort of bonus/planning gain system. If the local politicians fail to recognize the importance of administrative transparency in attracting investments, the democratization in planning and design will take a long time to establish.

Last but not least, due to the Chinese local politicians' strong interest in land development, they are keen to be involved in some crucial developments, and actually making the final decisions. Based on the consideration of economic competition with other cities, local politicians' decisions in many cases are in favour of the short-term local financial gain. They normally support the developer's increase of floor space to maximize the local revenue income, and support the developer's ambition to build 'landmark' or 'gateway' buildings as a way to market the city and the locality. But the quality of the daily environment to sustain the long-term local prosperity is less of a concern. These have also been the developer's bargaining ploys to negotiate more developable floor space.

8.1.5.2. Developers

Developers are profit-driven. This unchanging objective affects their visions to land development and their negotiation tactics. Most of the developers in this research are speculative in their nature, apart from some very well-resourced developers such as the ones for the Phoenix Building (Case 5), Shenzhen Stock Exchange (Case 10) and Kingkey Finance Tower (Case 9). Those speculative developers intend to sell off the whole floor spaces or a large part of them for immediate profits. They only provide the kind of quality of development that the market can afford. They are conscious about the speed of the planning decision and the floor space they can get from a project. They also want to generate some unique selling points for their developments through various means.

Firstly, the nature of China's office market decides the quality of the development. The office market in most of the Chinese cities (apart from some parts in Beijing and Shanghai) is different from those in the world financial capitals such as New York or London, where the developers construct office spaces to attract or to house the international corporations who demand prestige locations and extremely high environmental quality. For example, the office tenants in Shenzhen are most likely to be some local or regional small and medium enterprises, instead of the giant international corporations. Therefore, naturally, the demand for the quality of the space and the price the tenants can afford are much lower than that prevailing in New York and London. This therefore decides the developers' investment strategy to use 'medium quality materials and engineering tools' to supply the office space. But generally, the market competitiveness in the large cities increasingly drives the developers to provide some occupier-oriented products.

Secondly, the speed of the planning decision and the floor space allowance are equally crucial to developers. On the one hand, the speedy urbanization process and the competitive market require the developers to go through the planning process as quickly as possible. This attitude makes the developers agree to any reasonable requirements imposed by the planning authority to avoid the risk of delays. It also

enables the planning authority to regulate the development more effectively. On the other hand, developer's profit is largely dependent on the quantity of the floor space. For some influential developers, opportunities have been sought to negotiate with the planning authority and to lobby the local politicians for greater floor space allowances. Better quality of urban design (at a basic level, like public space provision) has been treated by the developers as the argument to exceed the key planning parameters, such as the building density and the building height. These pressures are actually pushing China's planning system to its limit.

Lastly, the market competitiveness has driven the developers to generate some particular selling points to attract potential tenants and investors. One conventional way is for the development to generate an iconic image, by either making the building taller through tough planning negotiation, and/or buying in unconventional design through the use of competitions. More recently, owing to the developer's increasing understanding of the 'commercial value of urban design', more attention is paid to the quality of the development, such as adding sky gardens to provide a user-friendly working environment, introducing individual-controlled air-conditioning for users to better control their running costs, and providing the necessary human scale amenities in the public realm. But due to the lack of tenant/owner awareness of the long-term benefits of the energy-efficient design in the market, and due to the developer's inherent cost-efficient investment strategy, a high quality of built environment, sustainable buildings and a quality public realm are yet to be developed.

8.1.5.3. General public

In China, community or user control of the quality of the local environment is absent. There is very limited public participation in the planning process, and it only materializes in the draft statutory plans. Although in a Chinese context, Shenzhen's Planning Committee mechanism has made a big step forward, public participation in planning is still not achieved. Even worse, the local politicians are administratively appointed by the upper tiers of governments, rather than democratically elected,

without any responsibility to the general public. Therefore, democratization in planning in China is yet to be developed. A deep political and institutional reform would be required if Chinese cities were to develop their visions with the local community to realize urban design's public value, and this will also take a long time to progress. In shorter term, opportunities may lie in involving more of the public in the planning process (e.g., increasing the autonomy of the Planning Committee in Shenzhen), so that a greater degree of public control or public participation can be achieved.

8.1.6. The design outcomes of China's urban developments

Although this research has focused on the commercial office developments, the evaluations of the design outcomes apply to other types of developments in China as well. China's current design approaches to developments (including retail developments, hotels, public buildings and residential developments in inner-city area) and the quality of public realm have been constantly improving within their site boundaries. The 'modern and functional' official taste in elevations is easily observed. But their urban design approaches are still 'modernist' in character with large scale, car-oriented developments and tower block forms, and fail to link to adjacent areas in terms of pedestrian walkability, continuously connected public realm, active land use at street level and the scale of buildings and spaces.

In detail, walkability and accessibility within some urban blocks are achieved, by some careful land subdivisions, shared underground parking strategies, and incentives to connect some developments to metro stations and to bridge the segregated pedestrian environment. A sense of place has been created in some locations, by introducing small squares, enclosing streets and providing retail units to animate the space. Human scale streets are provided in some projects, by regulating street width and narrowing building setbacks, and by the enclosure of continuous low-rise podiums. Mixing of land and building uses is achieved in many locations, to provide the project with a certain economic vitality, to animate the public space, and to increase the use of

underground car parking through the day. Energy saving strategies are employed in some projects to reduce the tenant's long-term energy costs.

But these developments often fail to respond to their context. At large scale, the broad urban roads and the over-generous building setbacks undermine the quality of the public realm. Pedestrians are still suffering from high capacity urban roads, and the actively promoted multilevel pedestrian system is facing the challenges of activity support and long-term maintenance. In many locations, superblocs are developed as homogenous housing estates, with huge building setbacks from the streets, sometimes gated with solid walls. Some designated public paths disappear in these large land enclosure process, and the pedestrian environment are facing the challenges of the wide and high-capacity roads, inaccessible urban parks, and the blank street interfaces. The development of sustainability and energy efficiency is lagging behind, due to the lack of a proactive planning regulation and the weak response from the market.

8.1.7. Urban design as public policy in China's planning system

Shenzhen is in a leading position in China to make progressive improvement in developing urban design as public policy. Its experience represents the leading edge of design control in China. Differences in local market conditions, political culture, planning tradition and development, all determine different cities' approaches. Well-resourced cities along the coastline tend to have stronger markets, better skilled planners, more sophisticated process and larger budgets to negotiate design improvements. For those small or medium size cities, their position would be weaker. Through the lens of Shenzhen, some conclusions can be drawn as regards the achievements of developing urban design as public policy in China.

Generally, urban design's public values are only partially embedded in China's urban planning system, due to the rapid urbanization processes, the significant change of development scale, the top-down political control, the indiscriminating tenants and the partial application of the generic urban design principles in the planning/design

process. Chinese cities are facing many challenges to develop a system that can compare with the best international practice in design review.

Firstly, most of the Chinese cities have strong visions for their future built environment (although it is partly flawed!), but this vision is not developed with the local communities, only reflecting the elite group's vision with a strong business-orientation. The current market conditions and political climate have driven the developers and politicians to provide and promote better quality of public realm. But the developer's short-termism and politician's over emphasis on local economic growth limits the further development of design quality. Although Chinese cities have made progress to involve the public in urban plan making such as Shenzhen, this is only the first step towards public involvement, and more efforts need to be made to involve the public in the planning permitting process and to generally democratize China's planning. In the future, the public could be the driver for better design quality. A fundamental change is required to make the local politicians accountable to local citizens, but this reform will take considerable time to evolve.

Secondly, the political support, the use of land power, and the discretionary zoning control have provided a solid base for Chinese cities to pursue higher quality of urban design. But a more regulated system is needed to limit the politician's intervention and to improve the Statutory Map (or CDP) system, especially to provide more thorough and design-conscious research on which to base the making of the urban plans.

Thirdly, the planners have slowly moved from a 'modernist' design approach to a 'post-modern' approach to address the quality of the public realm. But they need a deeper understanding of the generic design principles, to put pedestrians as the priority in environmental design, to pay more respects to the development context, and to impose energy-efficient/sustainable design as a consistent requirement (see Fig. 8.1.1). Fourthly, the established planning permitting process has been a successful mechanism for urban design intervention, but it needs to address its weakness in dealing with post planning issues such as planning monitoring, enforcement and planning appeal.

8.2. The challenges and practical suggestions

China's approach to design control is facing tremendous challenges, with rising concerns over private property rights, the sophistication of the current planning system, the on-going market downturn, the 'modernist' design culture and particularly the sustainability agenda. If Chinese cities including Shenzhen are going to withstand these challenges, some crucial changes must be made.

The increasing significance of private property rights will challenge the traditional approach to development control. The old framework of permitting development without any public consultation will soon be phased out. As China's amendment of the *Constitution* (National People's Congress 2004) and the adoption of the *Real Right Act* (National People's Congress 2007) to formally protect private property rights²⁰, the situation in Quanzhou (see Chapter 5) where citizens are conscious about their property rights will soon be seen in many Chinese cities. The situation in the Holiday Plaza (Case 7) where the local residents appealed because the development would block their access to sunlight will become much more common in the future. If the planning permitting process still excludes the public, the potential conflicts will appear at the later stages of the planning process, which puts the local government in a reactive position. Therefore, urban plans will have to consider these rights and make allowance for them. Public consultation should also take place not only in the plan making process, but also in the planning permitting process.

The sophistication of the planning system should be increased. Firstly, it is necessary to make the project permitting process more transparent. Shenzhen has achieved this by establishing a Planning Committee. But the political intervention in the planning process is not monitored. Mechanisms should be developed to increase the local politicians' accountability when making key decisions for the city. Opportunities may

²⁰ The previous versions of Constitution inherited the 'socialist' idea, only protected the public properties, and left the legitimacy of the private property rights in an ambiguous status.

lie in the injection of public participation in the permitting process and to increase the autonomy of the Planning Committee to better perform its monitoring function. Secondly, a mechanism to better manage the amendments on the Statutory Maps should be developed, especially to guide the floor space/building height bonus. This guidance potentially can further regulate administrative discretion, especially the political discretion in some significant projects. Thirdly, the post-planning functions of monitoring, enforcement and the ability to deal with planning appeal should be strengthened, to ensure the project is developed as what has been permitted.

For other Chinese cities, the recently adopted *Town and Country Planning Act* (Standing Committee for the National People's Congress 2007) has borrowed a lot of Shenzhen's approaches to improve the sophistication of the Chinese planning system. In terms of design control, one of the key features is to require a public consultation in the making and amendment of urban plans, and the amendments of the lower-tiers of urban plans should be guided by the upper-tiers of plans. But this is only the first step to develop a sophisticated design control system. Learning from Shenzhen's experience, mechanisms should be further developed to improve the quality of the urban plan with the injection of urban design considerations, to monitor the permitting process to make it more accountable and to strengthen the post-planning monitoring functions.

The recent global economic recession has affected the Chinese domestic market. This market downturn affects every aspects of the Chinese economy including real estate development. Zhang (2008) suggests that a less rapid urban development with more emphasis on social developments will provide opportunities for a more balanced and quality-oriented urbanization. The slowdown of the urbanization process is a good opportunity to provide time for planners and designers to have a deeper deliberation on the making of urban plans and urban design studies, as well as controlling development. It is hoped that this market condition will also increase investors' and occupiers' awareness of building's long-term running costs, and drive the developers to provide some more occupier-oriented products to maintain a competitive market position.

A better design outcome cannot be achieved without a change in the design culture. The 'modernist' car oriented, over dense and segregated design approaches should be challenged, by a better understanding of urban design. The generic 'post-modern' principles stated in Fig. 8.1.1 should be applied in the urban design process. In Shenzhen's planning, the design approach of wide urban road and large urban blocks is slowly changing. But the approach of extreme separation of pedestrians from vehicles needs to be revisited, private car traffic needs to be restrained in some populated areas, public transport should be promoted, and the making of successful squares should be readdressed. The concerns on urban design should move away from the purely visual dimensions to address the quality of the public realm, and further to address the issues of sustainability and energy-efficiency.

Saving energy and reducing carbon emissions are now mainstream techniques to contribute to achieving sustainability in the built environment and are common in the global discourse. At local level, the rising costs of energy and the rising concerns on the long-term running costs of the built environment have demanded a more sustainable mode of life. Given these urgent concerns, planning should put sustainability and energy-efficiency in the centre, promote public transport and utilize sustainability strategies to drive the design of cities and buildings. In more detail, these strategies should further guide the selection of renewable and reusable materials to construct projects. Given Shenzhen's experience in putting urban design in the centre of planning, sustainability can be practically achieved by embedding this concept in urban design, by using incentive mechanisms, promoting good practice in the development industry and advocating the demand in the market. This will also have to be centrally imposed by the city along with regulation by the central government.

To achieve this, some on-going advocacy and training programme to promote good urban design and energy-efficient design are needed, to increase the users' demand on long term consideration of urban design, to change the development trend and to provide skill support in the control side. But at the end, the reform of the urban planning system should be deepened. The above suggestions could not be achieved without the reform of the decision structure. As Zhang (2002 p.75) argues that 'as long

as overall reforms are not in place, planning reform and other professional solutions may only achieve little.'

8.3. Research limitation, future research and reflection

This research has revealed the 'cutting edge' of urban design control in China, as a response to major commercial office development, and within the extraordinary fast developing city – Shenzhen in particular. But Shenzhen is a unique metropolitan centre in China with a lot of administrative reforms, and it is new with only 30 years history. Its experience in urban design is similar to other large Chinese cities, but is more advanced. It does not represent the current general Chinese experiences, especially those of small and medium size cities and those cities with significant conservation issues. Future research in Chinese design control can fill in this gap by providing parallel studies in other large cities and medium size cities. It can also pay more attention to the approaches on conservation areas. By doing so, the Chinese approaches to design control can be revealed more comprehensively.

Moreover, future research can also look at other types of developments. Xu's research Chinese gated communities (Xu 2009) and Yang's work on Chinese central pedestrian districts (Yang 2009) have provided good starts in this regard to reveal urban design approaches to other types of Chinese urban developments. Further research opportunities can be sought in residential projects, by differentiating the project locations (inner city and suburb), and the degree of gated enclosure and the project size. Residential development in China is an interesting topic for design control research, but it is very broad given the project variety. Future research can concentrate on how the 'modernist' superblock and wide urban road rationale meets the 'post-modern' design principles of developing a sense of neighbourhood, liveability and the quality of public realm at project level. It can also reveal more on how the Chinese planning system is dealing with the exclusionary effects in urban (re-)development. Comparative study is welcomed to explore why some out-of-centre large scale residential developments are strictly gated, while some inner city residential developments are fully open.

Future research can also look more generally at cities at large and concentrate on the connections between areas and across blocks. By doing so, the research can reveal how different projects are linked together and in turn impacts on the quality of the public realm. In this regard, how commercial developments are linked with residential developments is of particular interest. The event-sequence and structure-agency approaches can also help in the research process.

Finally, the applicability of the Western developed principles on the Chinese context has to be considered. Although post occupation survey is the best way to develop China's own urban design principles based on public preferences. This research suggests that the Western-developed urban design principles can still be a legitimate basis for analysis of China's studies on urban design achievements. Theoretically, the generic urban design principles (see Fig. 8.1.1) are concerned about the human's perceptions in and interactions with the built environment. Although they were developed from the European traditional urban form, they are widely applicable worldwide, and in contemporary Chinese urban development.

Practically, some localities in China have successfully used some of these principles to harmonize their streets and to activate their public space, as revealed in some of the case studies in this research. Although these applications are small in their scale, and normally at site level, they represent a general acceptance of the generic urban design principles in the Chinese context. But under the current political and economic conditions, not all the generic urban design principles can be easily applied in China easily. In terms of the design concept, providing convenience for private vehicle transport takes priority over pedestrian connectivity, visual impact takes priority over experiential quality for the public, economic growth takes priority over the quality of life. It is predictable that for a long period of time in the future, the 'Socialist' and 'modernist' legacy of wide urban road and superblock design approach will still act as the pre-conditions for development projects, and the pursuit of sustainability will continue to be limited to some basic level of energy efficiency. This culture cannot be changed unless a fundamental reform takes place in the planning system, and even in the political system.

As China is currently adopting a gradual reform policy, this should be able to re-shape the decision making culture to some degree. The generic urban design principles will remain relevant in future studies examining China's progress in design terms.

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Appendix 1. Semi-Structured Interview Questions

Part One is a set of general questions to ask the interviewees. They were developed according to the research questions. They were asked to the relevant interviewees who were deemed being able to answer. Part Two is for individual development projects. These questions were asked to all interviewees where they were applicable. They were structured according to the formal planning permitting process, which is also the design development process. The interviewees were the key actors in the design development process, including developers, designers, planners and real-estate agents. At the end of the research, nine planning officers, six architects, seven urban designers, three developers and their representatives and two real estate agents were interviewed.

Part One. General questions to the interviewees

| | |
|---|--|
| Political economic impacts on design | <ul style="list-style-type: none">◆ What were the changing market demands on design?◆ What are the developer's responses to the market demand on design?◆ How do you value urban design? (Marketing? Public space improvement?)◆ What are the local politicians' interests in development? And in design? |
| Tools to promote good design | <ul style="list-style-type: none">◆ What are the impacts of the plan making/approval process on urban design?◆ How does Shenzhen's local planning framework impact on urban design?◆ What are Shenzhen's innovations in regulating urban design? |
| Shifting conception of urban design | <ul style="list-style-type: none">◆ What planners concern about design over time?◆ What are Shenzhen's future challenges in terms of urban design?◆ What kind of skilled supports does the planning authority have?◆ Is there any training available for further education to the planning officers? |
| The permitting process | <ul style="list-style-type: none">◆ What are the weaknesses of Shenzhen's system?◆ What is the role of peer design review in regulating design? |

Note: design concerns could include: iconicity, landmark, building height, other forms of visual impacts, materials, public space, sustainability, internal environment, pedestrian connections, public transport, parking and others.

Part Two. Standard questions for the case database

| | |
|---|---|
| Urban plans/urban design plans | <ul style="list-style-type: none"> ◆ What were the government's objective in this project and its design? (Economic, social or environmental?) ◆ How were the relevant plans/design parameters decided? Why? (Density, FAR, form, conditions) |
| Land leasing | <ul style="list-style-type: none"> ◆ Can you tell me the process of land leasing? (Negotiated? Bidding?) ◆ What was the market condition at the time? (Any key figures?) ◆ What were the developer's background and strategy in this project? |
| Land use control | <ul style="list-style-type: none"> ◆ Can you tell me the process in land use control? (Any key changes?) ◆ What were the developer's design concerns? (height, visual impacts, materials, public space, sustainability, internal environment, circulations, parking and others) ◆ What were the local politicians' design concerns? (Political objectives?) ◆ Were there any changes to the original parameters? Why? (FAR, height, boundary, parking, materials, etc) |
| Architectural design control | <ul style="list-style-type: none"> ◆ Can you tell me the process in architectural design control? (FAR, height, boundary, parking, materials, etc) ◆ What were the developer's design concerns? (height, visual impacts, materials, public space, sustainability, internal environment, circulations, parking and others) ◆ What were the jury's concerns in the design competition? (Design, structure, sustainability, circulation?) ◆ What were the local politicians' design concerns? ◆ What were the architect's design concerns? (height, visual impacts, materials, public space, sustainability, internal environment, circulations, parking and others) ◆ What was the planning authority's response to the project design? |
| Building control and post-planning | <ul style="list-style-type: none"> ◆ Can you tell me the post-planning events? ◆ What were the developer's design concerns? ◆ What was the planning authority's response to the project design? |
| Reflection | <ul style="list-style-type: none"> ◆ If you do this project again, would you do it in the same way? ◆ What have been done to promote sustainability/energy efficiency? ◆ Can you supply the relevant drawings? ◆ Are you satisfied with the current design result? Why? ◆ What else can you say more about this project? |

Note: more detailed questions were proposed prior to the interviews for any particular case study, based on the evidences found in the relevant case archives, reports, news and publications.

Appendix 2. A list of potential cases

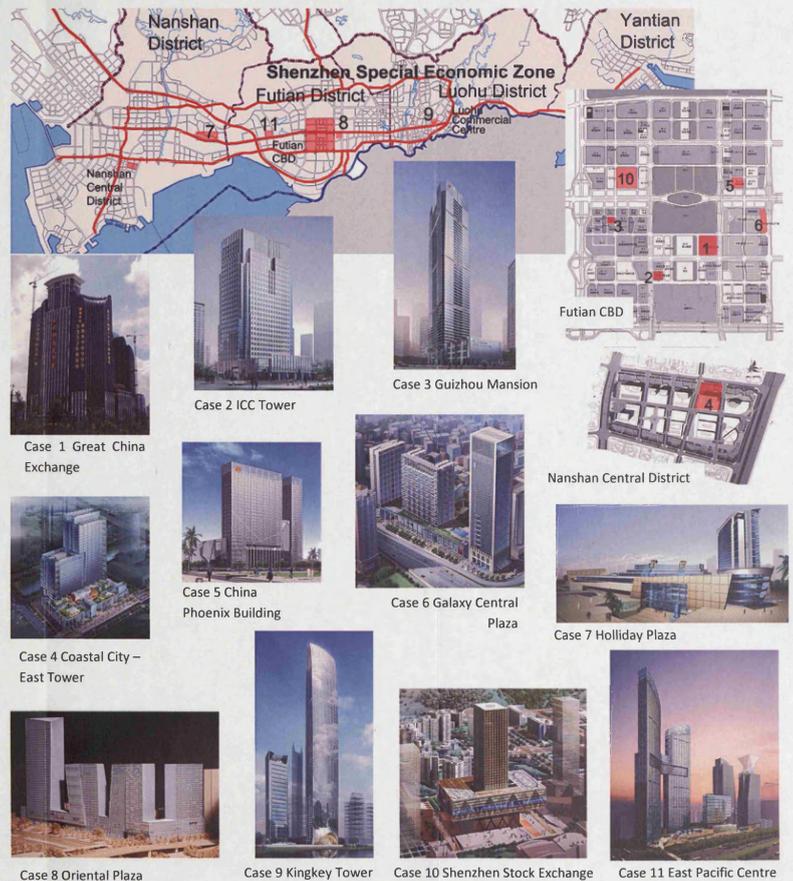
This is list of the potential commercial office development projects identified according to the case selection criteria, at the beginning of the research and during the fieldworks in Shenzhen. These projects were selected first by internet research and news review, and later by reviewing the archives in the planning authority as well as by discussion with the planning officers. The projects highlighted were the ones with comprehensive review of their development histories and were included in the case database (Appendix 3 and 4).

| | Name | Location | Planning status | Completion | Note |
|----|---|---------------|------------------------------------|-------------------|---|
| 01 | Office for China Electronics Shenzhen Company | Luohu Centre | Planning started in 1980 | Completed in 1982 | |
| 02 | Shenzhen International Trade Centre | Luohu Centre | Planning started in 1980 | Completed in 1984 | The first skyscraper in Shenzhen |
| 03 | Shun Hing Square | Luohu Centre | Planning started in the late 1980s | Completed in 1996 | Tallest building in Shenzhen in the 1990s |
| 04 | SEG Plaza | Luohu Centre | Unknown | Completed in 1999 | Mixed with hotel and retail |
| 05 | Kingkey Finance Tower | Luohu Centre | Planning started in 2002 | On site now | Tallest building to be in Shenzhen |
| 06 | Great China International Exchange Square | Futian Centre | Planning started in 1996 | Completed in 2007 | Illegal development, lengthy negotiation |
| 07 | Jiangsu Mansion | Futian Centre | Planning started in 1996 | Completed in 2001 | |
| 08 | Rongchao International Business Mansion A | Futian Centre | Planning started in 1998 | Completed in 2002 | Masterplanned, strict design control |
| 09 | Rongchao International Business Mansion B | Futian Centre | Planning started in 1998 | Completed in 2001 | Masterplanned, strict design control |
| 10 | China Unicom | Futian Centre | Planning started in 2000 | Completed in 2006 | Masterplanned, strict design control |
| 11 | Shenzhen Metro Tower | Futian Centre | Planning started in 2000 | Completed in 2006 | |
| 12 | International Chamber of Commerce Tower (ICC Tower) | Futian Centre | Planning started in 2001 | Completed in 2004 | Masterplanned, previous lessons learned |

| Name | Location | Planning status | Completion | Note |
|-----------------------------------|--------------------|--|-------------------|---|
| 13 Anlian Tower | Futian Centre | Planning started in 2001 | Completed in 2006 | 'Green office' |
| 14 Guizhou Mansion | Futian Centre | Planning Started in 2001 | Completed in 2004 | Masterplanned, strict design control |
| 15 Aerospace Mansion | Futian Centre | Planning started in 2002 | Completed in 2005 | Masterplanned, strict design control |
| 16 China Custom House | Futian Centre | Planning started in 1999 and resubmitted in 2002 | Completed in 2007 | Masterplanned, previous lessons learned |
| 17 Galaxy Central Plaza | Futian Centre | Planning started in 2003 | Completed in 2007 | Mixed with residential use |
| 18 New World Centre | Futian Centre | Planning started in 2003 | Completed in 2007 | High quality finishing |
| 19 China Phoenix Building | Futian Centre | Planning started in 2001 and resubmitted in 2004 | Completed in 2006 | Masterplanned, previous lessons learned |
| 20 Shenzhen Stock Exchange | Futian Centre | Planning started in 2005 | On site now | Powerful developer and architects |
| 21 Oriental Plaza | Futian Centre | Planning started in 2007 | Not started yet | Linear site |
| 22 East Pacific Centre | Futian off-centre | Planning started in 1994 and resubmitted in 2003 | On site now | Site amalgamation, lengthy negotiation |
| 23 Architectural science building | Futian off-centre | Planning started in 2004 | unknown | |
| 24 Coastal City – East Tower | Nanshan Centre | Planning started in 2002 | Completed in 2006 | Masterplanned, strict design control |
| 25 Coastal City – West Tower | Nanshan Centre | Planning started in 2002 | On site now | Masterplanned, strict design control |
| 26 Tianli Central Plaza | Nanshan Centre | Planning started in 2003 | Completed in 2008 | Masterplanned, strict design control |
| 27 Holiday Plaza | Nanshan off-centre | Planning started in 1993 and resubmitted in 2004 | Completed in 2008 | Citizen protest |
| 28 CAPOL International Tower | Yantian off-centre | Planning started in 2005 | Unknown | |

Appendix 3. Case-Study Statistic and Map

| Case studies | Land leasing | Time to approve | Building height | Floor space | Extra floor space | Design competition | Note |
|--|--------------------------------|--|---|------------------------|---|-------------------------------|--|
| Case 1 Great China International Exchange Square | June 1994, bidding | 9 years (June 1994 – July 2003) | 202 metres: 27 metres more than permitted | 272,357 m ² | 51,396 m ² (23.3% more than permitted) | Three entries | Illegal, embedded governmental property |
| Case 2 International Chamber of Commerce Tower | January 2002 | 9 months (January 2002 – August 2002) | 216 metres as original permitted | 134,000 m ² | 0 | Five entries | Masterplanned, then lease land |
| Case 3 Guizhou Mansion | December 2001 | 18 months (December 2001 – May 2003) | 100 metres as originally permitted | 48,000 m ² | 8,000 m ² (legally increased 15%) | Four entries | Masterplanned, then lease land |
| Case 4 Coastal City – East Tower | April 2002 | 3 years (April 2002 – March 2005) | 100 metres as originally permitted | 59,000 m ² | 0 | Three entries | Masterplanned, then lease land |
| Case 5 China Phoenix Building | June 2001, revised in Dec 2002 | 2.5 years (December 2002 – September 2005) | 110 metres: legally increased 20 metres | 80,000 m ² | 31,300 m ² (legally increased 64.3%) | Two competitions held | lease land, then masterplanned, and revise condition |
| Case 6 Galaxy Central Plaza | previously collectively owned | 15 months (September 2003 – January 2005) | 170 metres as permitted | 122,000 m ² | 0 | Five entries | Constrained site, mixed use |
| Case 7 Holiday Plaza | Land leased before 1993 | 1 year (2004 – 2005) | 100 metres | 58,200 m ² | Reduced 56.8% | Number of the entries unknown | Citizen protest, development right transfer |
| Case 8 Oriental Plaza | N/A | N/A (August 2007 – now) | N/A | 148,800 m ² | N/A | Three entries | Urban design guidance, constrained site |
| Case 9 Kingkey Finance Tower | May 2004 bidding | 2 years (2005 – 2007) | Over 439 metres: legally increased 139 metres | 405,000 m ² | 50,000 M ² (legally increased 14.3%) | No information found | Urban design study |
| Case 10 Shenzhen Stock Exchange | N/A | 2.5 years (March 2005 – late 2007) | N/A | N/A | N/A | Five entries | Design guide not implemented |
| Case 11 East Pacific Centre | Previous SOE land | 3 years (2004 – 2007) | 300 metres: legally increased 110 metres | 360,000 m ² | 72,600 m ² (legally increased 25.3%) | A few competitions | Urban design study and negotiation |



Appendix 4. Case study database

Case study database introduction

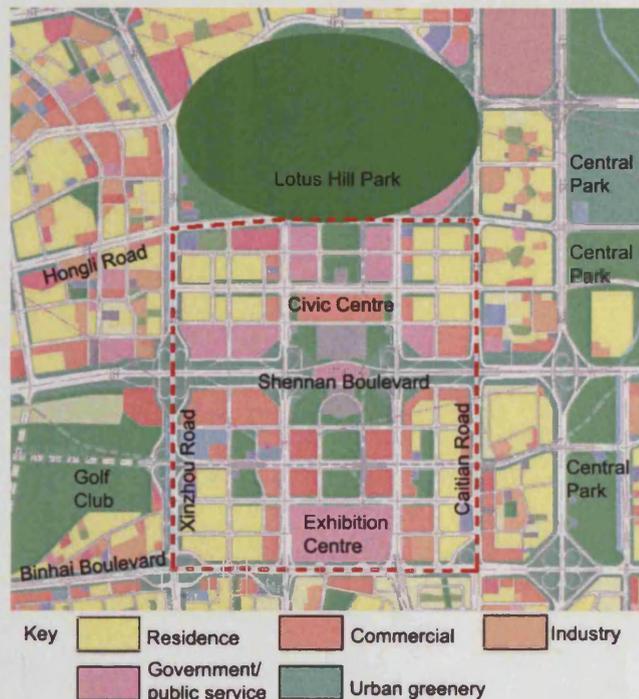
This database includes the design development processes for three masterplans and 11 office projects. They were collected during the fieldworks to Shenzhen in 2006 and 2007. They are attached in this thesis to provide a basis for case-study replicability, so that the research findings and the final analysis in Chapter 7 and 8 can be checked back through careful readings of each individual case history, and the evidence fully evaluated. Each of the office development case studies is structured by the same order. These include how the relevant urban plan was formulated, how the land was released, how the design was formulated and amended by the key actors (e.g., planners, politicians, developers and architects where it is possible), how the built projects impact on the public realm, and finally the evaluation to the design development process.

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| Case 9. Kingkey Finance Tower..... | 328 |
| Case 10. Shenzhen Stock Exchange..... | 334 |
| Case 11. East Pacific Centre..... | 337 |
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Masterplan 1. Futian CBD

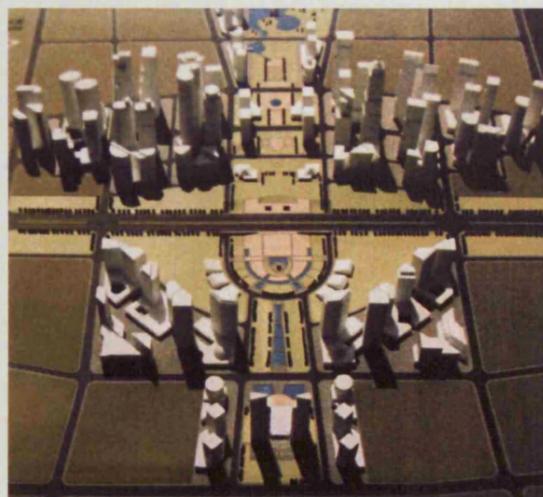
Shenzhen Futian CBD is located in the middle of Futian District, with the size of 4.5 km². It is bounded by Hongli Road to its north, Binhai Boulevard to its south, Xinzhou Road to its west and Caitian Road to its east. Lotus Hill is sitting to its north and is designated as an urban park. Further to its east and adjacent to its west are the large Central Park and the Shenzhen Golf Club, which reflect the early planning ideology of using large greenery to separate the built-up area when the city's blue print was formulated. Shennan Boulevard, the city's most important arterial road is running across the CBD (Masterplanfigure 1.1).



Masterplanfigure 1.1 Futian CBD (Source: Shenzhen Urban Planning and Land Resources Bureau 2002d)

The CBD project was initiated in 1984 when preparing Shenzhen's second Comprehensive Plan. China Academy of Urban Planning and Design (CAUPD) proposed this new city centre in the south of Lotus Mountain, south facing Shenzhen River, which reflects the ancient *Fengshui* philosophy, with a hope to bring prosperity to the city (Song 1997). In 1989, Shenzhen Municipality held an urban design consultation, to search for suitable design ideas to the CBD, to make it an enjoyable environment to live, to work and to play (Chen 2001).

In the second urban design study in 1991, based on the previous consultation, the CBD was divided into 25 pieces of blocks, with a large central square in the middle, surrounded by commercial buildings with residential towers on the outskirts (Masterplanfigure 1.2). An elevated pedestrian system was proposed to



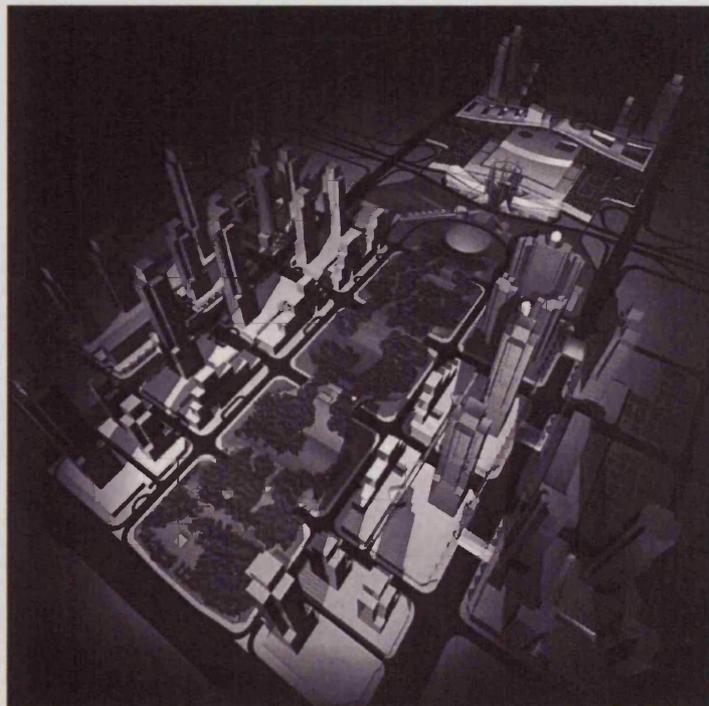
Masterplanfigure 1.2 The second masterplan for the Futian CBD (Source: Chen 2002)

connect the major buildings, to separate pedestrians from vehicle flows. In 1992, CAUPD was invited to prepare a Detailed Plan for the new CBD, with a hope to boost Shenzhen as one of centres for Chinese foreign trade and financial service (Chen 2001). The plan was based on the previous urban design studies. The construction for the road system (100 metres wide) proposed in this plan started in 1993. The original topography was flattened and 85 per cent of the roads were completed in 1996 (Masterplanfigure 1.3). In 1994, this plan was further detailed with some urban design studies.



Masterplanfigure 1.3 Futian CBD in 1996 (most of the low-rise buildings were to be demolished).

During their visit to Shanghai, Shenzhen's politicians were impressed by Shanghai's approach of using international urban design consultants to design the Pudong CBD. In 1996, an international urban design consultation was carried out for the core area of the CBD and the Civic Centre (the Municipal Building), and the jury chose a preferred scheme from the four prestigious international design firms. The chosen scheme by New York based John Lee/Timchula Architects was dominated by a 250 metres wide grand central park as the axis. The Civic Centre featuring the 'national colour' (red and yellow) was covered by a 560 metres long 'flying' roof in the symbolic centre of the CBD. Two retail centres were proposed in the south with a second level pedestrian system. An elevated pedestrian system was introduced to link the major retail spaces (Masterplanfigure 1.4). This design showed the political loyalty of the local politicians, symbolized the city's bright future in economic



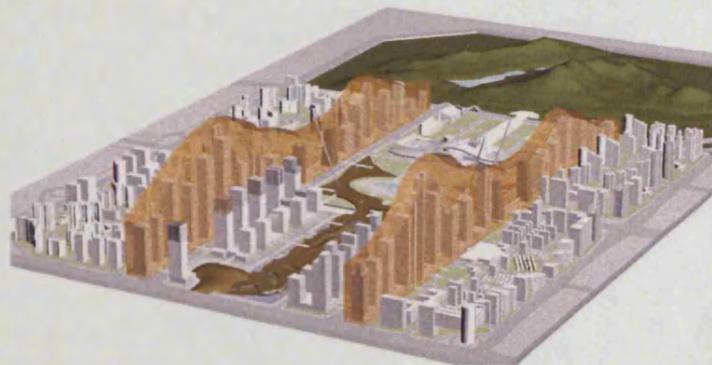
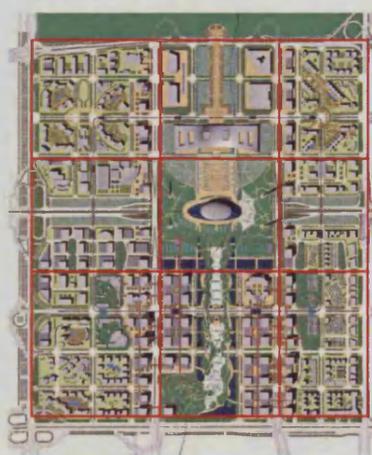
Masterplanfigure 1.4 The preferred scheme in the 1996 design consultation by John Lee/Timchula Architects (Source: Chen 2006).

development, and introduced elevated pedestrian system to allow vehicle traffic to run more smoothly. But some planners were concerned about this 'taller, bigger and broader' approach, for not offering a compact, continuous and humane environment (Huang 2001). In 1998, according to the newly adopted *Planning Ordinance*, the above planning arrangements were transferred into a Statutory Map for development control (Chen 2001).

In 1999, Shenzhen decided to carry out a more detailed design consultation to provide a stronger form for the CBD, including amendments to transport planning and underground spaces. The scheme by SOM with narrower roads, a denser road network, smaller urban plots, and a smaller central park was not favoured by the local politicians (Masterplanfigure 1.5). Instead, the scheme by Obermeyer Planen + Beraten inheriting the 'taller, bigger and broader' spirit was preferred. The scheme provided an 'inspiring image' for the new CBD, with the Chinese tradition of gridiron layout, with fluctuating skylines symbolizing 'dancing dragons', a flying disk for sightseeing, and a sunken water system around the central park (Masterplanfigure 1.6). This scheme was praised for providing a powerful 'modern' image for Shenzhen, and it has been guiding the CBD's built form together with some other small urban design studies.



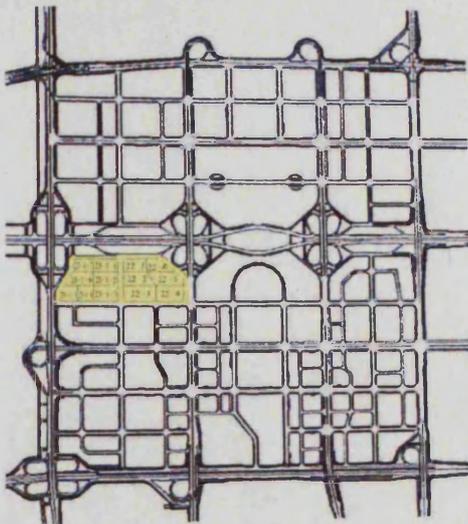
Masterplanfigure 1.5 Masterplan designed by SOM.



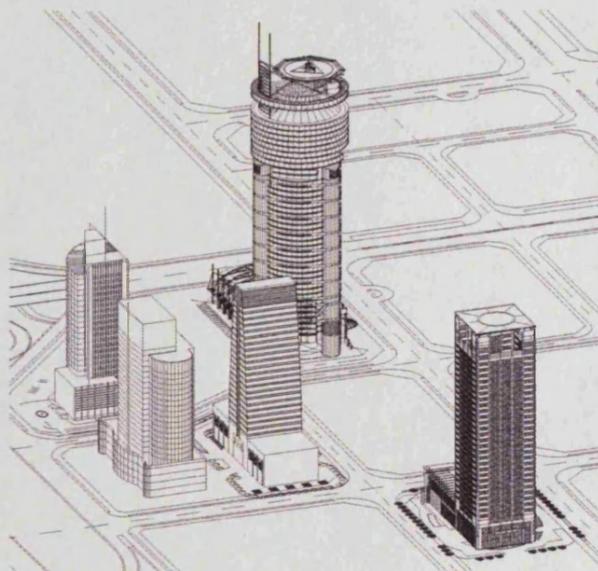
Masterplanfigure 1.6 Masterplan prepared by Obermeyer in 2001 claimed to reflect the traditional Chinese design. It introduced two rows of high-rise buildings along the south-north axis with defined waves ('Dancing Dragons'). It strengthened the design concept of 9-compartment. Residences were sitting in the four corners. Public buildings were located in the north and commercial in the south.

Masterplan 2. Block 22 and 23-1

Block 22-1 and 23-1 was the earliest urban block in Futian CBD to be leased by the government. It is located in the mid-west of the CBD and to the south of Shennan Boulevard (Masterplanfigure 2.1). It was originally divided into 13 plots and attracted 9 developers in the early 1998. One of the plots had been developed by the earliest developer. When the CBD's international urban design consultation was coming to its end in 1998. The planning authority issued design conditions for the proposed developments within the block according to the consultation's rationality. But the lack of detailed design guidance resulted in a chaotic urban environment. Every building was trying to cry out for itself and the quality of the public space was minimised (Masterplanfigure 2.2).



Masterplanfigure 2.1 Location for the block within the Futian CBD.



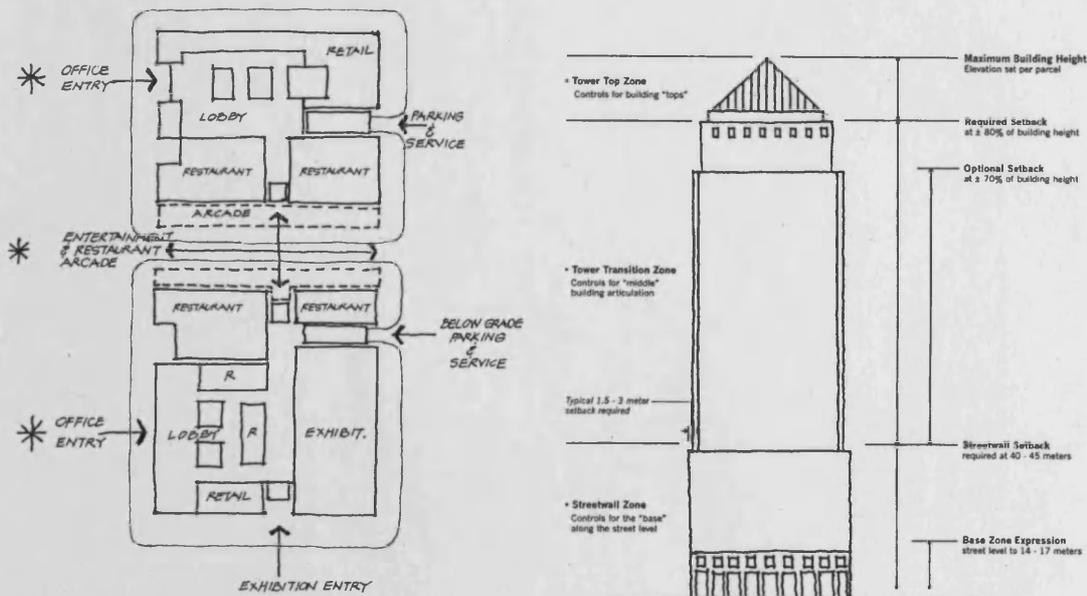
Masterplanfigure 2.2 Computer generated models for the architectural designs before the design guideline (Source: Li 2002).

To achieve a harmonized built form, and to manage every individual development efficiently, in the middle of 1998, the planning authority commissioned the highly reputable American architectural practice Skidmore, Owings & Merrill LLP (SOM) to prepare a detailed urban design guideline for Block 22-1 and 23-1. The consultation result surprised the planning officers and the jury team by its simple approach to deal with the urban design issues. SOM found the original land subdivision confused the public and private spaces, and lacked amenity provisions. Retaining the original development density, SOM divided the large block into a gridiron layout with small plots, adding two urban parks enclosed by office buildings. The guidelines' mandatory street wall, ground floor commercial retail use around the urban park and the main streets helped to create a sense of place (Masterplanfigure 2.3). It also defined the tower locations for each plot as a means to achieve an ordered environment.



Masterplanfigure 2.3 Top: the original land parcelization of the block. Bottom: Urban design guideline for Block 22 & 23-1 by SOM in 1998 (Adapted from Li 2002). The way it deals with land subdivision, public space and street wall has had a fundamental impact on Shenzhen's urban design discourse.

The guideline was highly praised by the planning authority as 'a piece of urban design which is the closest one to the real urban design' (Li 2002). Notably, the adopted design guideline brought in the American downtown control experience, by providing some detailed guidance on site planning (Masterplanfigure 2.4). This guidance carefully dealt with the public and private spaces, enclosed the open space by clustering towers, addressed streets by continuous podiums, differentiated the pedestrian street and service access roads, created green and shaded streets by landscape design and arcades, and increased the street variety and viability by introducing restaurant, entertainment and small retail function along the streets.



Masterplanfigure 2.4 Site planning requirements and tower setbacks of the design guideline.

The guideline also introduced detailed facade control and required that when the tower is taller than 45 metres, the tower should setback from 1.5 metres to 3 metres. In terms of the materials, the guideline encouraged light green non-reflect glass, light colour marble, stone or render. Dark colour was not permitted. Building facade formed only by glass curtain wall was not encouraged. For podiums with 14 metres to 17 metres high, there should be 40 per cent of the wall use marble cladding. The guideline also suggested the office and retail/restaurant to share underground parking spaces.

In the implementation process, the planning authority first applied the masterplan's guidance rigidly, but later relaxed some unnecessary requirements such as the building setback and fenestration proportion control. To the day of the research, all plots in the block have completed. A high quality urban environment and mixed-use 'downtown' space are generated. But some architects and citizens consider that the highly identical towers within the block provide a boring image to the city (Fang 2004).

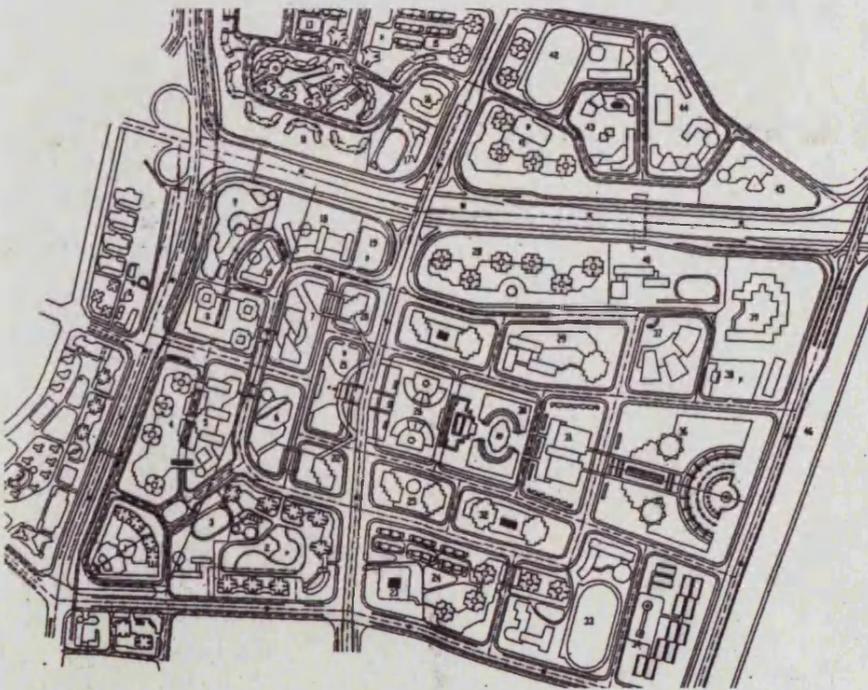
Masterplan 3. Nanshan Central District

Nanshan Central District (NSCD) is located at the bank of Shenzhen Bay. It connects Nanyou Developing Zone to the south and Shenzhen University to the north (Masterplanfigure 3.1). The site for the core area is about 30 hectares with major use of commercial retail, office, hotel, exhibition and cultural facilities. It has been positioned as business and cultural centre in west Shenzhen.



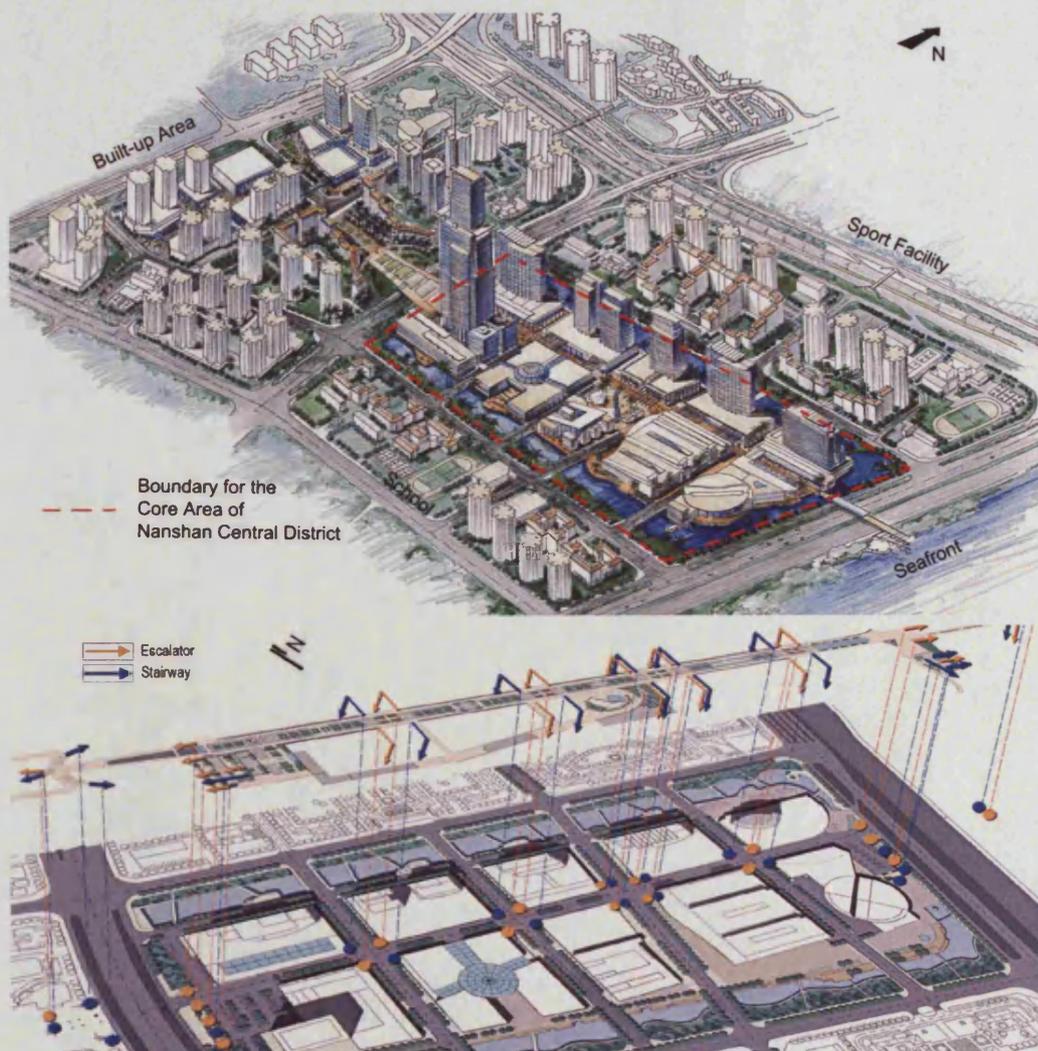
Masterplanfigure 3.1 Location for Nanshan Central District.

The Shenzhen Municipal established an independent District Corporation to deal with the planning, land release, design and development control issues for this area. This was to ensure the locality to have more autonomy and efficiency to develop the central part of the administrative district. The yield from land development would go back to the Corporation for infrastructure construction. A few urban design consultations were carried out for this district. In 1994, the North-East Architectural Design Institute drew up the first plan for NSCD. This first detailed plan with 'modernist' design principles featured wide buildings standing alone in the middle of every urban plot (Masterplanfigure 3.2).



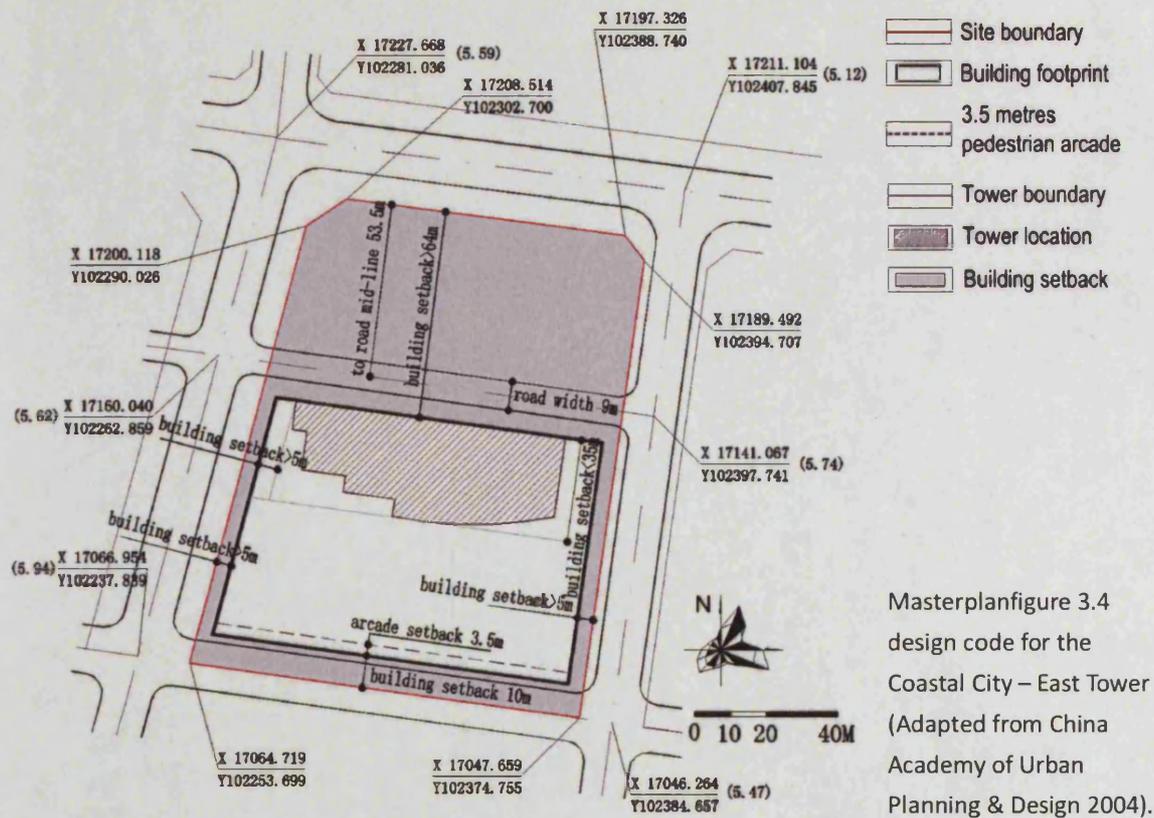
Masterplanfigure 3.2 The first detailed plan for the NSCD featured wide buildings standing alone in the middle of every urban plot. The idea of creating a district centre with a strong east-west commercial axis remains in the latter plans.

In 1998, large scale gated residential compounds were permitted around the core area, and the land lease incomes financed the development of the core area. An international urban design competition for core section of NSCD was carried out. The ambition of the local government was to develop it as a 'world-class' city centre, by the means of improving the quality of life, creating an ordered and legible urban form with a strong sense of place, and reflecting the waterfront environment (Shenzhen Urban Planning and Land Resources Bureau 1998a). It was hoped that an international design competition could raise the locality's profile to attract potential developers. The urban design plan by (Australia) Brisbane City Comprehensive Design Institute (ABCCDI) claimed that they used the 'urban village' approach to achieve the set objectives (Masterplanfigure 3.3 top), and it was welcomed by the jury. The scheme was praised for its ordered built form and the idea of using water features to reflect the seafront environment. In particular, the jury was pleased to see the elevated shopping street (Masterplanfigure 3.3 bottom) with its potential to better organise vehicle traffic.

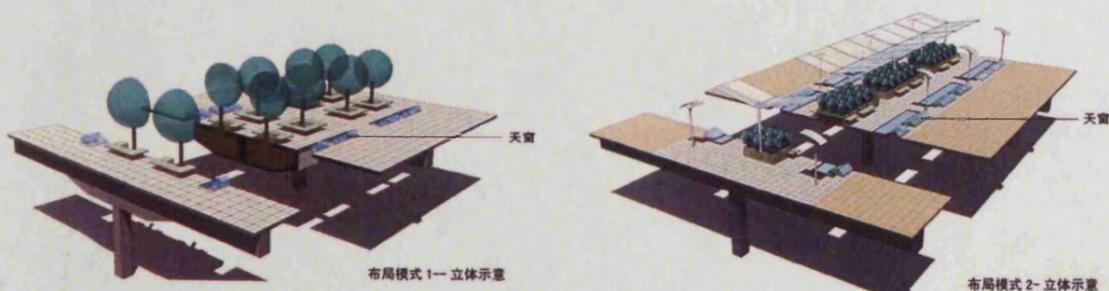


Masterplanfigure 3.3 Top: Masterplan for the Nanshan Central District by ABCCDI (Adapted from Urban Planning and Design Institute of Shenzhen 1999); Bottom: Elevated shopping street for the Nanshan Central District (Adapted from China Academy of Urban Planning & Design 2004).

Local politicians considered that this urban design plan reflected the city's ambitions in this area. In 2004, the urban design plan itself was translated into an implementation plan with a site based Development Code, and this was later attached as the design condition for project design. The code's contents include the traditional planning parameters such as floor space, building setback and building height (Masterplanfigure 3.4), as well as the design guidance on landscape, street furniture, building massing and circulation.



This plan also provided construction guidance for the elevated shopping street and the water feature, which was later funded by the government (Masterplanfigure 3.5). So far, the project is under construction now, and the quality of the actual result is yet to be investigated. But the question is whether this kind of extreme method is the only way to deal with pedestrian and vehicle traffic, and if this 'unconventional high street' will work functionally and financially.

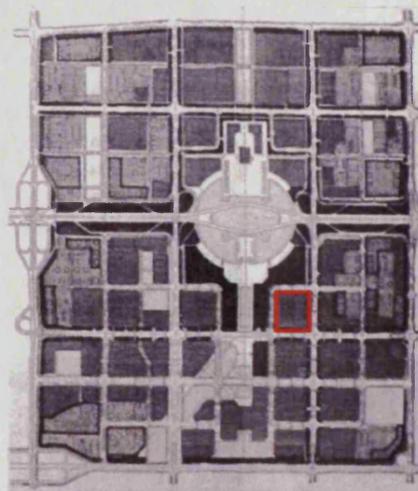


Masterplanfigure 3.5 Implementation plan for the elevated shopping street.

Case 1. Great China International Exchange Square

1.1 Introduction

This case study presents a complicated planning management process, and it shows the city's limited capability to enforce the volumetric and elevational control. The site of 30,396 m² is located in the middle of the Futian CBD, to the south of the central park and to the east of a proposed retail park. The site boundary was broadly defined in the 1992 CBD Detailed Plan (Casefigure 1.1), which controlled only the building setbacks and the land use. The established site context before 1996 was subject to a radical change (Masterplanfigure 1.3) and there was no clear guidance for architectural design.



Casefigure 1.1 The site in the Futian CBD Detailed Plan 1992.

1.2 Land release and development conditions

This was the first site to be leased and developed in the new CBD, and it would house the Shenzhen Stock Exchange (SSE). SSE has had a significant financial contribution to the local and national revenue. To maximise the land value, the site was put to auction in Hong Kong, and the Great China International (Groups) Limited won the bidding in June 1994. The floor space allowance for this site was 178,400 m², within which 54,685 m² to be returned to the government for SSE's operation. The Land Contract was signed in 1994 allowing the use of office, commercial, apartment, hotel and entertainment, with the construction completion deadline of June 1996. The design condition extracted from the 1992 Detailed Plan only required the building to have 10 metres setbacks from all edges of the site boundary.

1.3 Design in the planning process

Due to the developer's personal interest in Western Classical design, Anbao (Singapore) won the design competition in early 1996 out of the three entries (Casefigure 1.2). Soon after the competition, on 15 January 1996, regarding the jury's recommendations, the planning authority accepted the winning scheme in principle, but questioned the economic feasibility of the construction and required the developer to reduce 230,000 m² floor space (28.9 per cent increase of the original parameter) to meet the permitted parameter (Shenzhen Municipal Urban Planning Bureau 1996). In May 1996, the city Mayor was consulted and

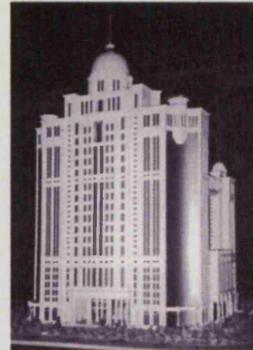
agreed the increased of floor space to 220,660 m² with the condition of paying the additional land price. The Land Contract Supplement was not signed until August 2001 to legitimate the increase of floor space (23.7 per cent increase of the original parameter).



Isozaki & Associates (Japan)



Loebli Schlossman & Hackl (USA)



Anbao (Singapore)

Casefigure 1.2 Three entries for the design competition (Huang 2002)

In late 1996, the new masterplan (Masterplan 1) was adopted, which was trying to provide a 'modern', simple and functional tower block image for the new CBD. The planning authority then required the developer to change the classical facade into a modern one when issuing the *Pre-construction Design Permit* with a Note for further requirements (Shenzhen Urban Planning and Land Resources Bureau 1996). In the following years, the developer kept working with the planning authority to change the design while constructing the building according to the winning scheme. It is worthy noting that due to the lack of qualification check for the design competition, Anbao's background was unknown. It was later found out that Anbao was not qualified for architectural design in China, and it did not take part in any of the subsequent design development. The followings are the key stages in design process.

1997 The developer obtained *Construction Planning Permit* for the lower 8 floors from the previous Implementation Department of the planning authority, and started the construction. Soon after the commencement of construction, the planning authority's CBD Office took over all the planning management function from the Implementation Department. The developer went on to apply for *Construction Planning Permit* for the rest of the building. But the CBD Office refused the application and urged a change of style on the building facade.

1999 The developer applied for *Construction Planning Permit* again, without amendment on facade design. Application was refused.

07/ 2001 When construction reached the 20th floor with permission only for the lower 8 floors, the application was submitted again. The planning authority refused it and insisted in the change to facade design. Yuanjing Architects was invited to carry out two alternative designs. The authority was satisfied with them, but the developer did not implement them.



08/ 2001 *Land Contract Supplement* was signed allowing the site to be developed up to 220,660 m², and reinforced the deadline for completion of August 2003.

2002 Construction continued without legal permission.

07/ 2002 The developer ignored the planning authority and applied for a *Building Work Construction Permit* for the 22-38 floors from the City Construction Bureau. The permit was granted. But the developer still needed the *Construction Planning Permit* from the planning authority before the building could be put on the market.

08/ 2002 The structure of the building was nearly finished. To resolve the permission issue, the developer submitted three new facade designs. But the jury team organised by the planning authority considered that none of the designs sit on the new CBD well, in terms of the massing and the facade designs. More importantly, the facade treatments did not comply with the existing building structure. The jury suggested that the building should be treated as a group of buildings to break down the building massing. The developer promised to take the original dome off from the building and further develop the design according to the experts' advice.

10/ 2002 Two alternative elevational designs by Shenzhen University were brought forward. Further design review for facade change was held. The jury team considered none of these schemes had taken the previous advice on board, and considered that the previous schemes by Yuanjing satisfied the new CBD's environment most and could be implemented.

01/ 2003 Yuanjing Architects was invited again to produce a new facade design. The jury team undertook field work on the site and found that the construction work had been carried out to the 38th floor. It was impossible to implement this design. But the developer promised to alter the facade design according to Yuanjing's design rationale.

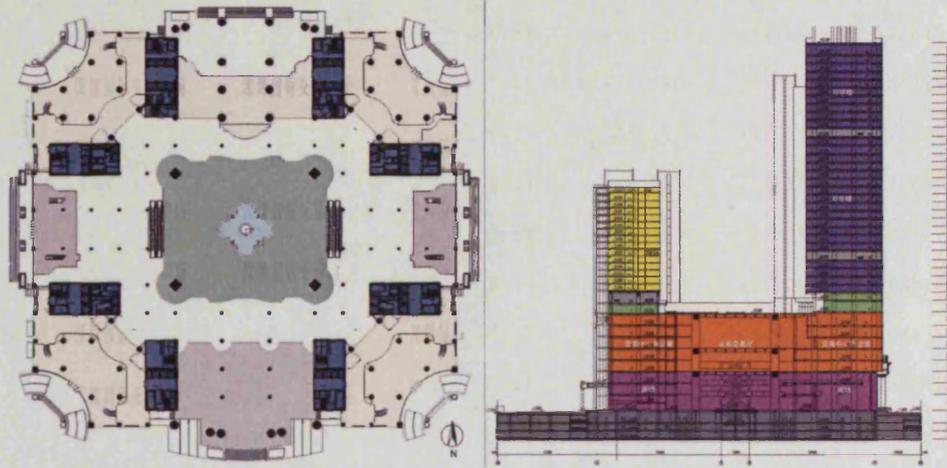


07/ 2003 The *Construction Planning Permit* was granted for the whole building based on the fact that the submitted construction plans managed to simplify the facade design. But the developer did not carry out the amendment based on the permitted construction plans. The planning authority issued a letter of warning to the developer but did not state any subsequent actions.

08/ 2003 Deadline for completion of construction in the *Land Contract Supplement* signed in 2001 was met, but the construction was still not completed.

2004 The developer met a serious financial problem to complete the project, and the Shenzhen Exchange refused to be housed in the building. But part of the building was still the government's property. The local politicians undertook a site visit to the project, and required the developer to change the facade design complying with the planning authority's requirement. They urged the developer to finish the construction at the end of 2004.

10/ 2004 The planning authority issued the *Notice for Stopping the Illegal Construction* on the grounds that the construction was not carried out according to the permitted construction plans but did not state any subsequent actions. The following ground floor plan and section extracted from one of the design submission were like to be the ones constructed.



02/ 2005 Local politicians led a meeting and required the planning authority to decide the facade design in a month. The meeting also discussed the issues of the excessive floor space, the possibility of converting the underground car park into commercial use to create a better connection with the city's subway development, the ways to dispose the government's property in the building.

03/ 2005 The developer did not submit any facade design schemes, or other materials regarding the building construction. The planning authority urged the developer to provide two schemes for facade design, to change the underground car park into commercial use, to provide the details of the involved contractors, and to provide the implemented construction detailed design.

05/ 2005 Local politician held a meeting again to resolve the issue. The meeting concluded that the developer should use the materials which the planning authority required, the planning authority should regard the fact that the building construction was nearly finished when dealing with this case, and the building should not go into the market if it fails to change the facade. But the developer did not provide the construction drawings which were used on site. Therefore, the planning authority could not judge if the facade change is feasible.

05/ 2005 The developer presented a facade design by Archurban Architects, but did not provide the construction plans using on site. The jury team could not judge if the building structure can support the excessive floor space. Based on the presented elevation design, the experts suggested the top overhanging to be taken off, and the complicated white columns to be simplified.



06/ 2005 Archurban Architects took off the top overhanging according to the above requirement, but the rest of the facade design remained. The planning authority was satisfied with the design and urged the developer to implement it. The developer did not carry out any changes according to the new design, and replied that the overhanging on the top (for helicopter stop) was made of concrete and the white columns had been finished, and this made the task too difficult to carry out.



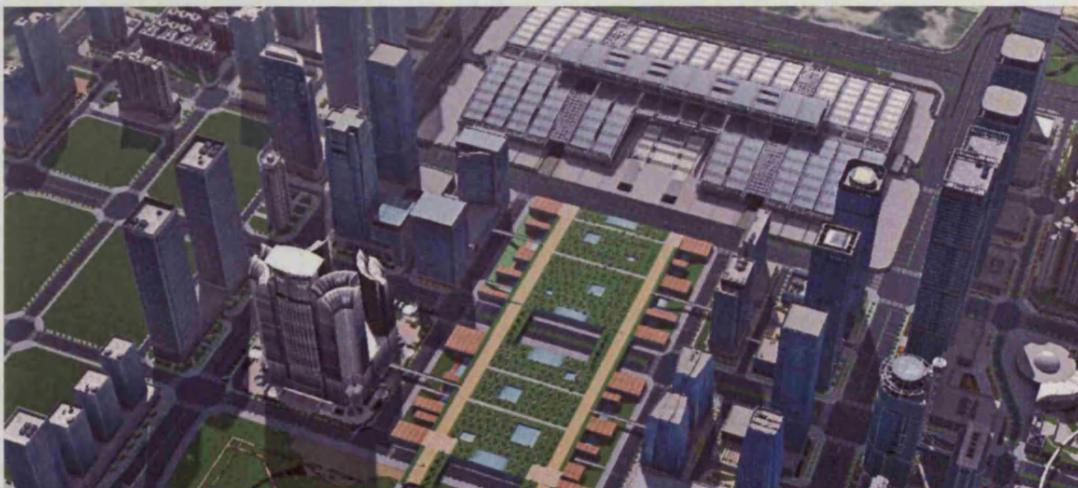
04/ 2007 The government's property within the building was as allocated to the Office for the National University Games.

08/ 2007 The building on site was nearly completed. Finally, the total floor space built on site is 272,357 m², which exceeds the original permitted space of 178,400 m² by 52.7 per cent, and the later parameter in *Land Contract Supplement* 220,961 m² by 23.3 per cent.



1.4 Design outcomes

Until late 2006, the construction for the Great China International Exchange Square was completed, much later than most of its neighbouring buildings. The original exchange hall has been converted into retail space. Sheraton Hotel was invited to occupy the hotel space. The planning authority concluded that this project failed in a few factors such as the unsympathetic facade treatment, the excessive floor space and the delay of completion (Shenzhen Municipal Urban Planning Bureau 2005a). In terms of design, the criticisms from the planning authority were the over sized massing, the over complicated facade detailing, the over emphasis on the imperial image and the darkness of its facade which was totally opposite to its surrounding light blue/green building elevations (Casefigure 1.4). Some architects and planners considered the building as a giant black devil with white bones stretching out and laughing at the city. All of these were said to have ruined the modern CBD's image (personal conversation with some architects).



Casefigure 1.4 The Great China Exchange Building within the new CBD environment (Shenzhen Municipal Urban Planning Bureau 2005a).

Albeit the developer provided four entrances for the metro station (Casefigure 1.5 d) and a pedestrian bridge (Casefigure 1.5 f) as requested by the government, the new development poorly constructs the public realm. The strangeness and coldness brought by this inhumane and giant structure have a negative impact on the street (Casefigure 1.5 e). All the above issues were not the major concerns of the jury teams during different stages of design reviews for this project, and they were obsessed with facade treatments rather than the quality of the public realm.



Casefigure 1.5 The development outcomes

a. b. The highly contrast black and white facade attached to the bulky building, provides a comfortless streetscape. The corner entrance shows a radical scale change from human height to the canopy. The building sets back far away from the urban road, leaving a large and empty space. The wide landscape belt signals the site boundary, within which car park occupies the excessive space.

c. d. The southern entrance for Sheraton Hotel also keeps distance from the street, leaving excessive space along the building footprint for car park. The lonely entrance for the metro

station has no connection with the building, despite the ongoing negotiation on changing the building's underground car park into commercial space linking the metro station.

e. f. A few superscale black granite spotlights with high quality of finishing stand along the site boundary, signalling the property boundary but providing an unwelcome environment for the street. There was no consideration made to connect the building/site with the urban park on the other side of the road, despite the pedestrian bridge on the background.

Finally, the developer only received a minor financial charge for the overdeveloped floor space, without actual enforcement from the government for the delay of completion or for not amending the facade design. The total floor space is finally counted 272,357 m², exceeding 33,911 m² than the permitted one (23.3 percentage). According to the rule for overdevelopment punishment, half of the construction cost applies to the over-provided floor space, which is 25 million RMB in total in this project (Shenzhen Futian City Management Enforcement Bureau 2006). Shenzhen Municipal Government retained the right to sue the developer for the delay of construction with a fine of 498.3 million RMB (calculated as two years delay, and 0.05 per cent of the total construction cost per day) (Wang 2007). But to encourage the developer to prepare the government-owned 54,685 m² floor space and to urge him to construct the four metro entrances as soon as possible, the government did not take action to sue the developer. The fine only applied to the quantity of construction such as the over constructed floor space according to the construction cost, and the number of days delay for completion, but did not apply to the quality of construction such as the facade change or the quality of space.

1.5 Evaluation

The developer managed to build his fantasy building while guilefully dealing with the planning authority, and finally he was subject to a minor financial punishment mainly due to the overdevelopment. One may argue that the architectural design was permitted before the urban design plan was adopted, and the requirements to change the design were made after the start of the project construction, which might make the planning authority's requirements unreasonable. In this particular case, the planning authority was unable to regulate the building form according to its objectives, because of the late intervention of the masterplan and the lack of enforcement from the government. The existence of the local government's interest in the project was part of the barrier preventing the planning authority taking a strong action. The quality of public realm was poorly created because of the lack of concern in the planning management process. In particular:

- ◆ The pressure to quickly dispose the land to get an immediate financial return and to have the Shenzhen Exchange Hall and the relevant public facilities built were the barriers for the government to have a proactive control on this development. If the government waited until the masterplan was carried out, then dealt with the planning application, or issued the design conditions, the situation would be different. The question here is that how frequent the plan should be updated to catch up with the

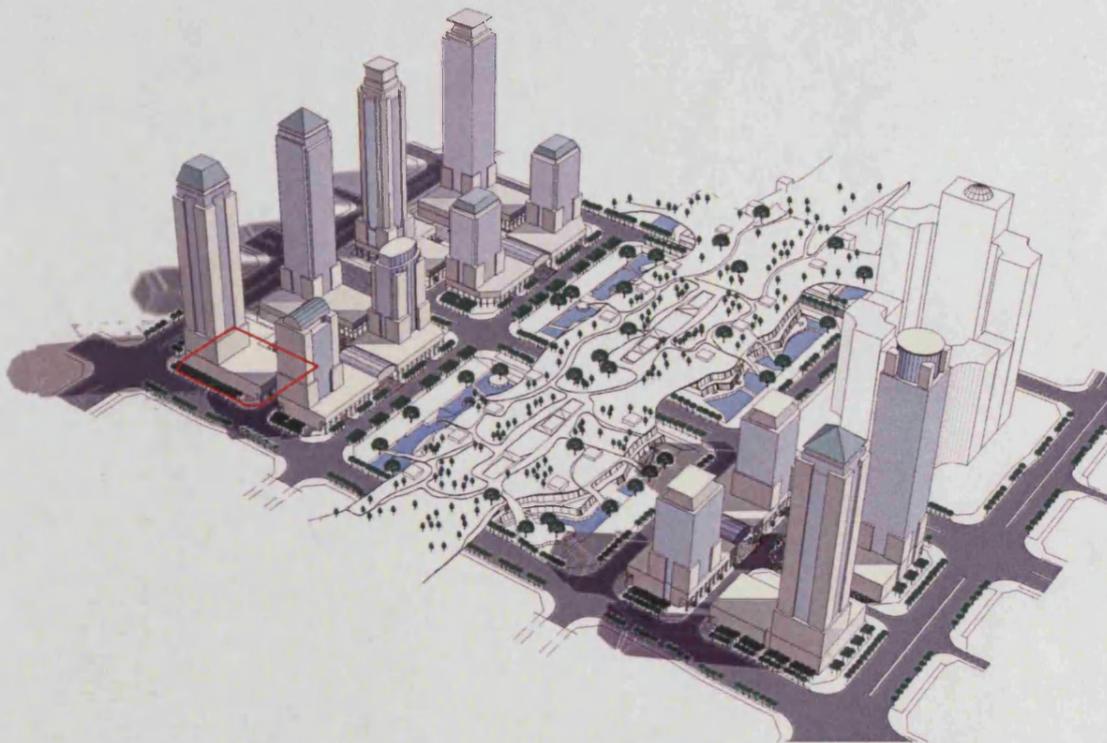
changing development requirement? The fact is that the government has never stopped updating the plan for this CBD, but this case signals that the plan is still lagging behind the development speed. Perhaps in the area requiring speedy decision making, apart from the availability of urban plan, the necessary skills and mechanism to strengthen the control to developments are the other crucial solutions.

- ◆ The financial return from land development is taking a higher priority than the quality of the development. The Chinese local governments are always in need of financial income to re-invest back to the urban infrastructure. In the meanwhile, land value is governed mainly by the location and the development capacity. Denser development within a site means the government can generate more financial return from the land leasing. This partly explains why the government had no strong enforcement regarding the facade change, but easily agreed to increase the site's development density.
- ◆ The immature planning management mechanism provided a chance for the speculative developer to breach the rules. The lack of correspondence between the governmental departments, created a gap between the design management and the construction management, resulting the construction planning permit was issued before the project went through design management process. Learning from the lesson, the planning authority has improved this process now. Nevertheless, there was a lack of efficient enforcement to stop the illegal construction and to force the design changes. The efforts by the planning authority mainly focused on the technical levels dealing with pure design issues. The general reaction from the planning authority was to issue notices. But the notice did not mention any further legal actions. Perhaps the power of lawsuit is another tool for the planning authority to search to strengthen its planning function in the future.
- ◆ The low fine for overdevelopment encourages the developer to breach the floor space limits. According to the local ordinance, if the excessive part of the building is not to be demolished, 60 per cent of the construction cost would be the fine. But the excessive floor space was commercial office use. In the current market condition, the market value of 25,000 RMB per m² (Feng et al. 2007) is far more than the construction cost 1,476 RMB per m² (Shenzhen Futian City Management Enforcement Bureau 2006) in the project. The developer was happy to break the permitted parameters. Therefore, the penalty mechanism needs to be revised to discourage the speculation of this kind.

Case 2. International Chamber of Commerce Tower

2.1 Introduction

This is a successful case in Shenzhen's design control with effective design regulation when leasing the land for development. The site is located in the southern end of the CBD to the north of Shenzhen International Exhibition Centre (Casefigure 2.1). The surrounding sites are all for commercial office development. The site is slightly segregated by the roads to its south and west. Together with the other three sites within the block, the planning authority hoped to regulate a high quality commercial office quarter. The significant issue of this development was the increasing capability of the planning authority to cooperate with different developers of the adjacent sites to achieve a unified environment, which included the higher level pedestrian links between different sites, underground parking linkages and the public amenity provisions.



Casefigure 2.1 The site within the simple and functional 'modern' masterplan (Urban Planning and Design Institute of Shenzhen 2002).

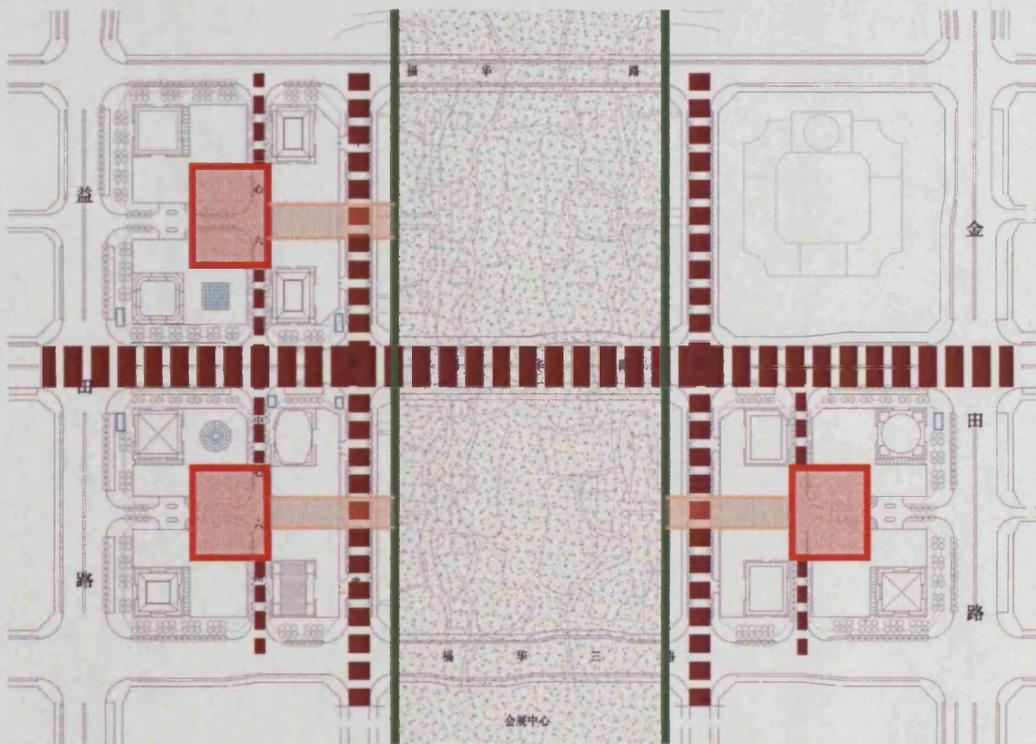
2.2 Development conditions

After the 2001 Obermeyer's masterplan, the form of this quarter was broadly decided. But to deal with the individual planning application, the planning authority needed more detailed guidance and parameters. In March 2002, the former planning authority commissioned the

UPDIS to prepare a set of urban design guideline for this important part of the new CBD. Although the guideline was not adopted as any of the official planning documents, its principles and the parameters were largely taken into account by the planning authority to deal with the planning control in these sites. Learning from the American designers (see Case 3), the UPDIS prepared the guideline according to the following principles:

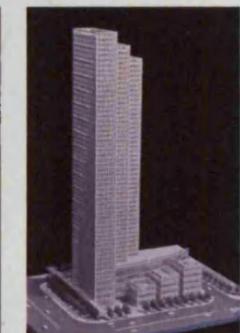
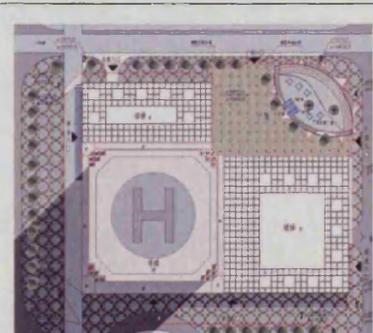
-
- To contribute to the modern CBD environment;
 - To meet the human needs;
 - To strengthen the north-south connection;
 - To create a green and comfortable business centre;
 - To create continuous street walls to address major public spaces;
 - To create acceptable building massing aesthetically and economically.
-

The study broadly followed the urban grid system presented in Obermeyer's masterplan. To fit the developments into the CBD's built form, it strengthened the south-north axis and the west-east axis; enclosed a public square for each block to provide more amenities (Casefigure 2.2); located retail, food and drink uses around the main streets and the public squares; and emphasised the facade designs facing the central park and squares.



Casefigure 2.2 Spatial sequence (Urban Planning and Design Institute of Shenzhen 2002).

Based on the design analysis, a set of key parameters to regulate the built form was produced. This includes the site boundaries, building setbacks, maximum building heights, locations for towers and podiums, enclosures for public squares, detailed requirements for street level pedestrian arcades and higher level pedestrian links and underground parking linkages (Casefigure 2.3). Notably, distinct from the previous urban design guidance, this study made additional efforts to achieve coordinated goals, especially to establish a high level public

| Site plans | Elevations | Jury committee's comments |
|--|---|---|
|  |  | <p>By Merchandize Architects (Shenzhen) Well articulated built form; good floor plans; economical construction; good working environments. Needed to refine the core, to reduce the split on the building top, to add north podium, and to consider energy saving strategy to avoid overheating from the west and the south.</p> |
|  |  | <p>By AUBE (France) Well articulated built form; good views on the typical floors; good energy saving strategy; good podium design. Needed to improve the building structure, especially for the core, to avoid visual disturbing on the typical floors, to increase the proportion of commercial use and the number of lifts.</p> |
|  |  | <p>By Creative Vision Global Ltd. (Hong Kong) Normal design approach to the built form. The structural columns outside the core may not be economical.</p> |
|  |  | <p>By China Construction Design International (Shenzhen) Normal design approach to the built form. The core is handled well.</p> |
|  |  | <p>By Nanyou Engineering Design (Shenzhen) Normal and plain design approach to the built form. The structural columns outside the core may not be economical.</p> |

Casefigure 2.4 Schemes presented in the design competition (Adapted from Huang 2002).

In November 2001, the developer applied for the Design Project Application with revision according to the planning authority's requirements. The planning authority permitted the application and further required the developer to reduce the floor space down to 106.5K m² and urged the developer to carry out detailed landscape design. Moreover, the planning authority raised other requirements such as designing the outdoor advertisement, revising the low-rise building's height according to planning requirements, adding a roof garden on the podium and requiring more detailed design for the pedestrian bridge (Casefigure 2.5).



Casefigure 2.5 Revised design for the Design Project Application (Source: Huang 2002).

The Land Contract was signed and the Land Use Planning Permit was issued on the same day in January 2002 (Shenzhen Urban Planning and Land Resources Bureau 2002a, b), just after the design competition. The key parameters of the urban design study were used to negotiate with the developer. Both of the Land Contract and the Land Use Planning Permit issued the same conditions as the follows:

Underground car park should link with the neighbouring ones to the north and the east on the -2nd level, by a connecting tunnel with 9 metres net width (with 3 metres for pedestrian path) and 2.5 metres net height. Developer is responsible to complete the construction of the urban roads to its north and east up to the midline. Service activities can be arranged underground.

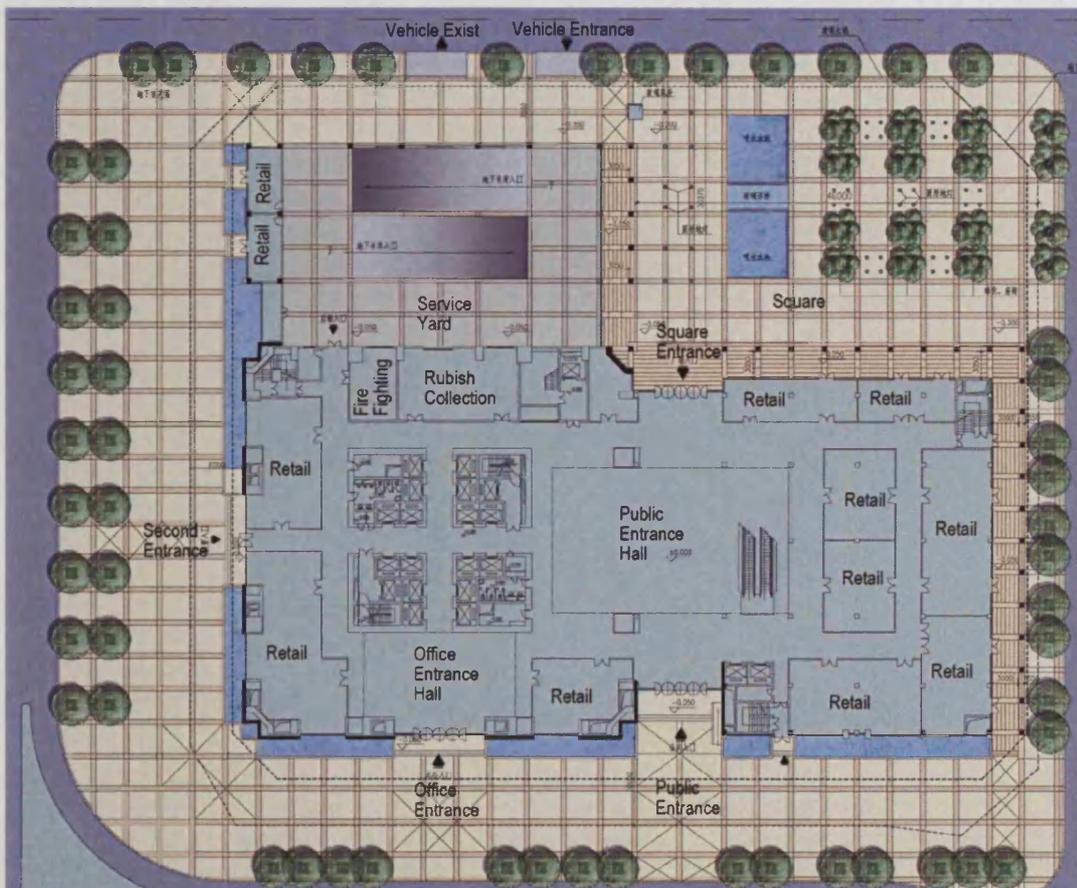
Building should set back 6 metres from the west, 3 metres from the north, 10 metres from the south, and 1 metre from the east. There should be a square on the north-east corner with 46 metres length and 30 metres width. Tower should be located on the southwest corner. Arcades should be introduced along the east of the site and around the square, with 3.6 metres net width and 5 metres net height. Low-rise buildings are should form a continuous and harmony street wall with the neighbouring buildings.

Along the west of the site within the site boundary, there should be a pedestrian bridge with 6 metres height and 6 metres width. The pedestrian bridge should connect comfortably with the both buildings to its north and south on the 2nd floor.

It is worthy noting that the design conditions issued by the planning authority did not rigidly follow the previous urban design study. The conditions required higher level pedestrian links on the west side of the development linking the buildings to the south and the north, instead of locating around the square. The rationale behind this was that the north-south pedestrian linkage was segregated by the west-east urban roads, which had more demands to strengthen this linkage. In August 2002, the Construction Planning Permit was issued. The parameters were almost the same as those in the Land Contract.

2.4 Design outcomes

The development was completed by the time this research was conducted. The planning authority achieved most of its objectives in this development. Retail units have almost filled up all the space on the ground floor, leaving only the necessary spaces for entrances, atriums, vertical circulations and servicing rooms. The back square seems successful, half enclosed by colonnaded low-rise podiums and faced by two retail units and a podium entrance. It enables the square to be populated by the office workers and other potential customers. It can be envisaged that this amenity will create a strong sense of place, when the building is fully occupied (Masterplanfigure 2.6).



Masterplanfigure 2.6 ICC Tower ground floor plan (Adapted from Merchandize Architects 2002).



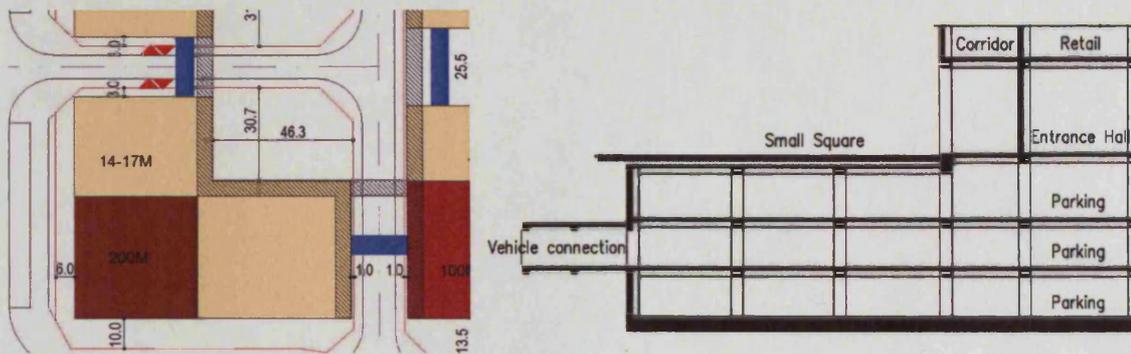
Masterplanfigure 2.7 Site photos

a.b. Continues street walls are achieved on site by using podiums to enclose the streets. Some retail units are facing the street to provide activity supports.

c. The back square is half enclosed by the low-rise podiums and faced by some retail units, providing the needed space for an active 'downtown' environment.

d. But the originally designed low-emissivity glass curtain wall was replaced by some normal glass, to save 20 per cent of the material costs (Interview with Merchandize Architects).

The shared underground parking was achieved (Masterplanfigure 2.8). Individual air-conditioning control has been the standard in Shenzhen's office development. It enables the tenants to manage their energy costs more efficiently, and at the same time reduces the overall energy consumption of the building.



Masterplanfigure 2.8 Underground parking connection in the ICC Tower. The blue lines in the left drawing indicate the vehicle connections (Adapted from Merchandize Architects 2002).

Soon after construction, the developer sold all the office space in the market to pay back the investment and kept the retail space under his ownership to provide a rental income (interview with the developer).

2.5 Evaluation

Overall, this is a case showing successful development control practice in terms of urban design. There are a few lessons can be learned from it:

- ◆ This case study shows how a development can contribute to the urban environment if a detailed urban design intention is established before the land release and is flexibly implemented in the planning management process.
- ◆ Moreover, this case shows that a design competition can introduce an innovative design solution based on the provided parameters, and that design competition can help the decision makers to decide the final design solutions.
- ◆ It signals that the planning management process slowly moved from individual site based control to the cooperation between developers in adjacent sites. This requires a coordinated vision before the development. The successful shared underground parking is a case in point.
- ◆ The semi-enclosed public square is a strong value-added element to this project. This was resulted from the detailed urban design study before the land leasing, which established some detailed parameters for project design, brought in design skills to the planning authority and resulted in an effective control.

Case 3. Guizhou Mansion

3.1 Introduction and site context

Guizhou Mansion (Casefigure 3.1) is one of the early investments in Block 22-1 & 23-1 (Masterplan 2). Within the 13 parcels, apart from one building built a few years before the tightened control, the other 12 parcels were soon attracted potential developers. To realize its ambition to build a design exemplar, the government did not grant any planning permission until the detailed urban design guideline was produced by SOM. Soon after the design guideline was adopted, the government imposed it strictly on every piece of development within the Block, by using the design guideline as one of the development conditions in the Land Contract.



Casefigure 3.1 Location of the Guizhou Mansion (Adapted from Li 2002).

3.2 Land release and development conditions

In December 2001, the Land Contract was signed between the developer and the Land Resources Bureau. Apart from the normal terms and conditions such as the validation period for the lease and the price the developer should pay, the Land Contract also required the development to be built according to the urban design guideline and stated that an international competition should be carried out for the architectural design, on the cost of the developer. It regulated the floor space to be 40,000 m² (commercial office 34,000 m² and small retail or food and drink use 6,000 m²) and the floor area ratio (FAR) of 11. Especially, the follows were written as the site planning requirements adopted from SOM's design guideline:

Building should set back from land boundaries 1 metre from the south and 3 metres from the north, east and west; tower should be located on the west of the site; continuous arcades should be located on the building's ground floor on its south and west facades, with 6 metres net height and 3 metres net width.

3.3 Design in the planning process

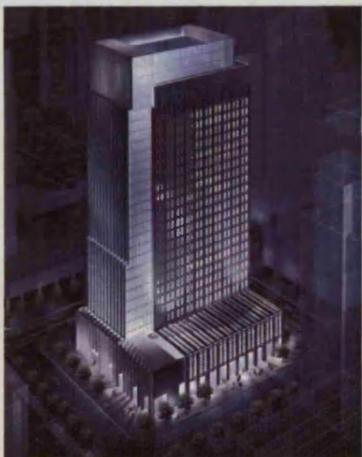
In March 2002, a design competition was held according to the principles and parameters stated in the Land Contract and the design guideline. Within the four entries the scheme presented by SBA was preferred by the jury team, and it subsequently won the competition (Casefigure 3.2). It was considered that the scheme complied with the urban design guideline, had a reasonable layout for the standard floors, and presented an elegant building form and facade design. The jury urged the design team to provide an active internal layout and commercial space for the podium if this scheme was to be implemented. Taking the experts' advice on board, the developer chose the SBA's scheme and took it to planning application. Since only the scheme which complies with all the design conditions could win the competition, SBA's scheme went through the planning process smoothly.



SBA



Zeidler-Canada



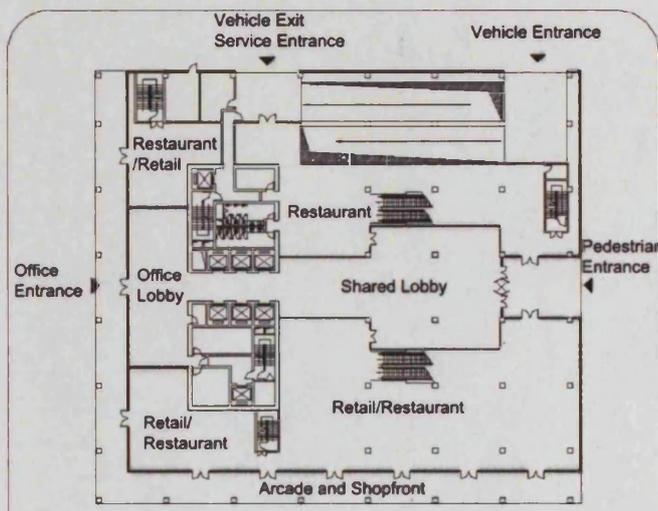
Urbanus-USA



HuaXingMao-HK

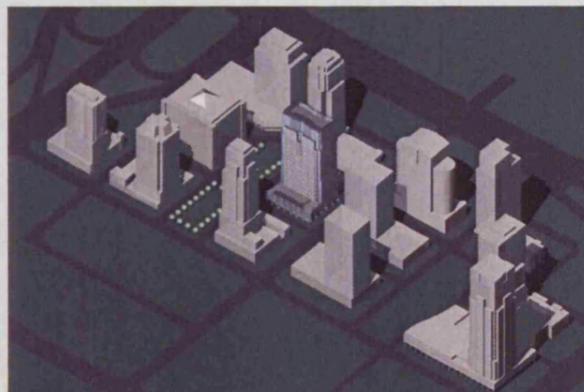
Casefigure 3.2
Schemes from the
four design
competition entries;
the scheme presented
by SBA won the
competition (Source:
Li 2002).

According to the design guideline, in the revised scheme, colonnades were now laid on the southern and western facades with retail and restaurant uses at the front. The northern side was mainly used to service the building with underground car park and service entrances (Masterplanfigure 3.3) (Li 2002). In addition to the required amendments, the developer asked for an increase in the floor space to 48,300 m². The planning authority considered that some increase in floor space was acceptable but only allowed the developer to increase it from 40,000 m² to 46,000 m² (Shenzhen Urban Planning and Land Resources Bureau 2003a).



Masterplanfigure 3.3 The Guizhou Mansion , the revised ground floor plan (Adapted from Li 2002).

Another significant discussion during the planning process was the orientation of the tower, which was required by the design guideline to be east-west oriented so that all the towers around the park could be grouped together to enclosure the urban park (Masterplanfigure 3.4). Both the architect and the developer considered that the building would be more energy-efficient if the tower could be south-north oriented. The original experts who judged the competition also supported the developer's opinion. Mr Li, one of the experts who commented: 'SOM worked on the urban design guideline, which of course brings in the techniques and skills we are current lacking. But designing south facing buildings has been an important part of the Chinese design tradition. In the case of the Guizhou Mansion, using the rear elevation to front the park does not make a significant change to the urban park.'



Masterplanfigure 3.4 Tower orientation (Source: Merchandize Architects and SBA Architects 2002).

In June 2002, after a formal checklist assessment of the submitted scheme (Masterplanfigure 3.5), the planning authority issued the Project Design Permit and accepted the increase in floor space and the rotation of the tower. The planning authority further urged some amendments to the detailed design, such as to meet the net height of 6 metres in the pedestrian arcades, to drop the residential use, to add a roof garden to the podium and to increase the parking spaces according to the increased floor space. These requirements then became additional conditions for the developer/architect to complete the design. It is worthy noting that the checklist for project assessment mainly focuses on the technical aspect of planning requirements, without a comprehensive set of criteria to assess the urban design quality of the scheme, which weakens the planning authority's scrutiny on the urban environment.

-
- Is the design in line with the requirements in the Land Use Planning Permit?
 - Is the design in line with the permitted site plan?
 - Is the design in line with the national standards and norms on architectural design?
 - Is the environmental design in line with the *Shenzhen Standard on Environmental Design*?
 - Does the detail of design meet the required depth?
 - Is the roof garden design in line with the relevant requirements?
 - Is the design contract in line with the relevant requirements?
-

Masterplanfigure 3.5 Checklist for the Architectural Design Application (Shenzhen Urban Planning and Land Resources Bureau 2002c)

In January 2003, the Land Contract Supplement was signed to allow the developer to develop the site from the permitted 40,000 m² to 46,000 m². In May 2003, the scheme was granted a Building Construction Planning Permit, which means it has gone through all the land administration and planning process.

3.4 Design outcomes

Comparing the development conditions in the Land Contract with the development result, it is fair to say that almost all the conditions have been met. Apart from some minor changes in the floor space and the tower's orientation, the requirements for land use, building coverage, materials used, building setbacks, tower's location, street wall requirements are all been met. Apart from the slightly increased floor space, a pleasant and active urban environment is presented on site. The streets are well addressed by human scale of pedestrian arcades and the three- to four-storey podium. The shared surface of on street parking achieves the proposed calming effect.

Apart from these, the original 'Restaurant Street' is not achieved. Instead of putting food and drink or retail along the street, a language learning consultant is occupied on the ground floor, resulting in pure glass walls facing the pedestrian arcade and not providing enough activity support to street (Casefigure 3.6 a). But the restaurant on the other two sides and the restaurant opposite to the street can compensate for this in some degree. The tower

facades are covered by low-reflective light blue glass, podiums are covered with marble cladding, and fenestration is just as what the design guideline required (Casefigure 3.6 c).



Casefigure 3.6 Guizhou Mansion on site

- a. the front entrance of the building facing east, with the restaurant entrance on the right, the good mixed of use of the building contribute to the street activities and for the convenience of the office workers;
- b. the southern streetscape with arcades to provide weather protection and some high-street activities on the ground floor level;
- c. The western streetscape with arcades facing the central park (waiting for the municipality to develop), with the second office entrance and some retails;
- d. The tower is now facing south to get more direct sunlight; the building envelop is confirmed with the design guideline to have certain setbacks; the proportion of the

fenestration is also inline with the guideline, but this is criticized by the users for its unnecessary blocking to some views.

3.5 Evaluation

It was the first time for the planning authority to introduce detailed design guidance to regulate development. The principles behind this design guidance have had a profound impact on the city's future urban planning management practice, especially for the concern on the quality of the street, and the way of sub-dividing urban land, the land use support and a well-organized circulation system. The process of planning management in this case reveals the planning authority's capacity to learn and to develop good practice, in particular:

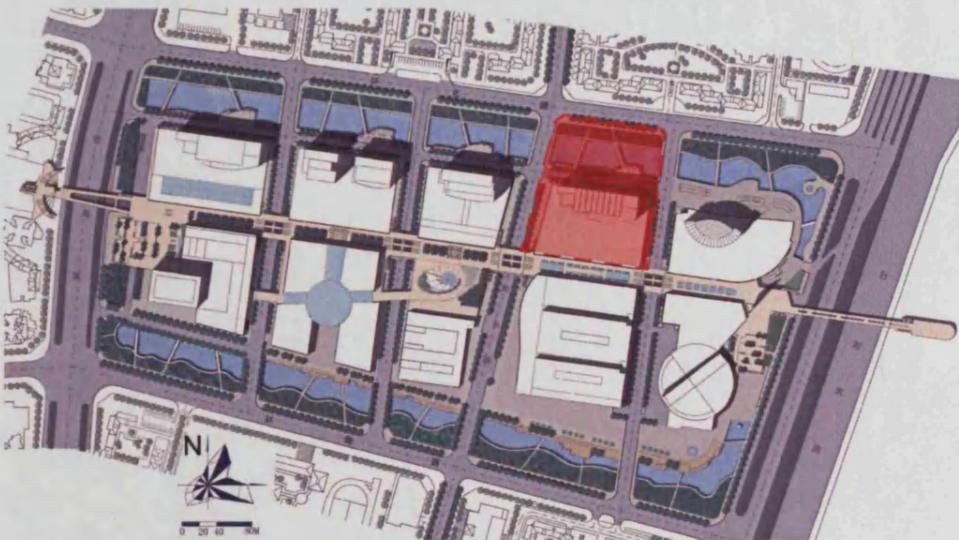
- ◆ The planning staffs all claim that this was a very successful lesson to learn in terms of the elements that should be addressed in development control. The clear requirements of pedestrian arcades, building entrances, continuous street walls, lower floor land use and layout indications, as well as the location and orientation of the tower all provide a set of effective and easily-followed parameters for architects and for planning officers. But the over-emphasized tower setback and the fenestration requirements diminished the quality of the urban design guideline, creating barriers for design innovation and even imposed inconvenience for the potential users.
- ◆ The external skill support was the key to success in this case. The planning authority relied on the well articulated urban design guidelines produced by overseas consultants and the external jury's judgement. The discretion of the planning officers was intended to reduce some potential conflicts between the guidance and the developer's interests.
- ◆ There was an obvious leak in the planning management process, albeit the design guideline was rigidly implemented by the jury. After the architectural competition, the developer was still able to increase the floor space from 40,000 m² to 48,000 m² and obtained consent from the planning authority in the design development process. The planner claimed that the required increased floor space was minor and would not affect the design outcome significantly (personal conversation with the planning officer). In this project, the charge for the additional floor space allowance was 2,375 RMB per m² (Shenzhen Urban Planning and Land Resources Bureau 2003a); according to the architectural bidding book, the construction cost was projected 3,000 RMB per m²; and the commercial office market price of this kind in that period was around 10,000 RMB per m² (DTZ 2004). This high profit margin (around 40 per cent) was the motivation for the developer to test the planning authority's limit. This reflects that the *laissez-faire* control tradition of development control still resides in the system.

Case 4. Coastal City – East Tower

4.1 Introduction

This project presents a rigorous and successful design control with design code derived from the masterplan (Masterplan 3) to govern the design development. The Coastal City Ltd. owns four plots in the core area of the Nanshan Central District. This was the first one to be developed. At that time, even the government had been advertising this sub-central business district for about ten years, developers were not confident in the future office market in this area. But this developer was confident in the retail elements in this project. He saw the potential market for retail space in this locate. He considered that if the retail component could be sold, he could pay back the whole investment, and the office component could be remained as profit. This strategy later turned out to be successful.

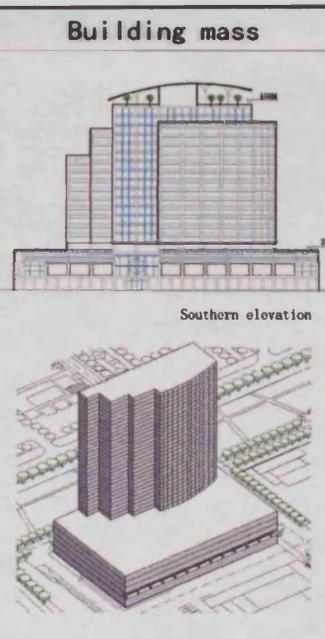
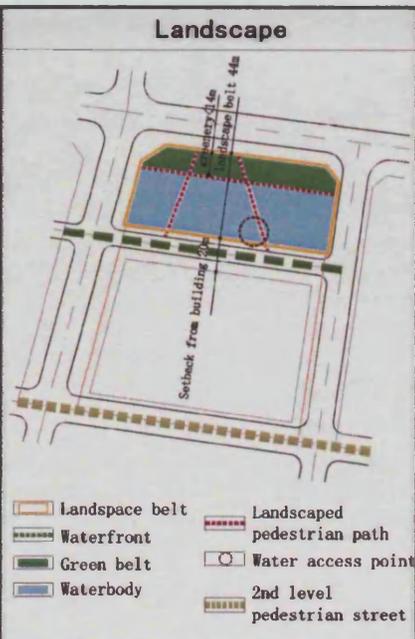
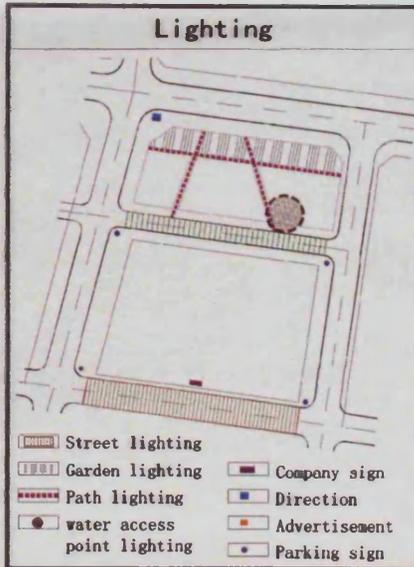
With the size of 16,800 m², the site is located in the mid-north of the core area of the Nanshan Central District (Casefigure 4.1). The site is surrounded by two vehicle access roads to its east and west, a proposed two-storey pedestrian system to its south and a 60 metres wide pond to its north.



Casefigure 4.1 Site location and context

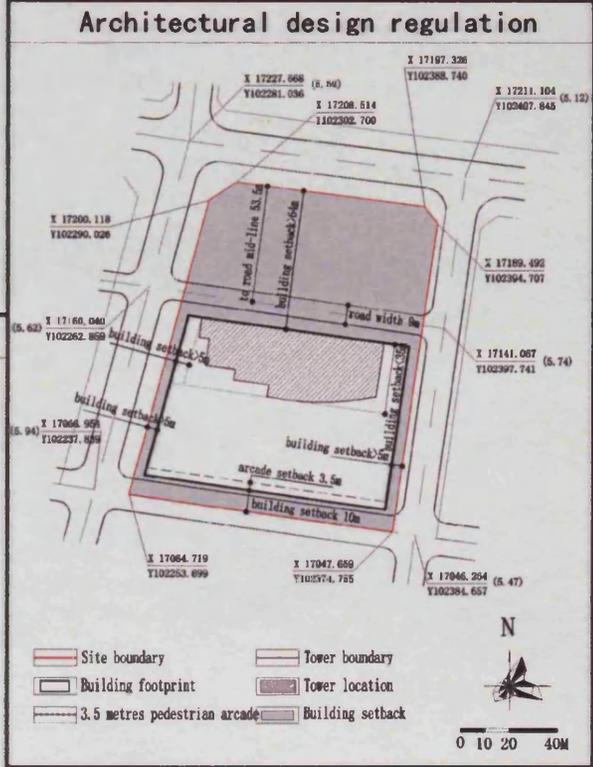
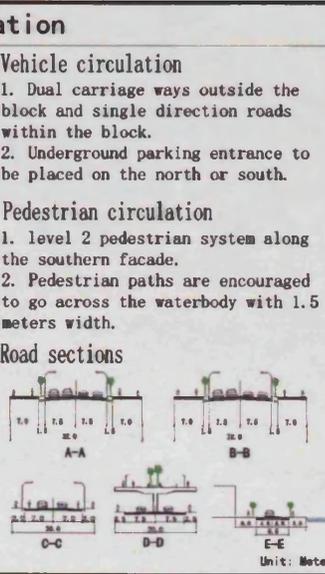
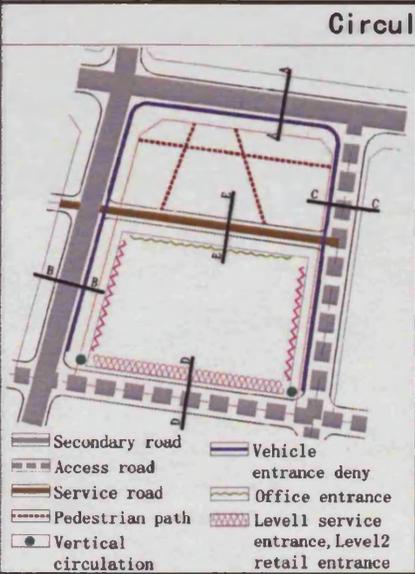
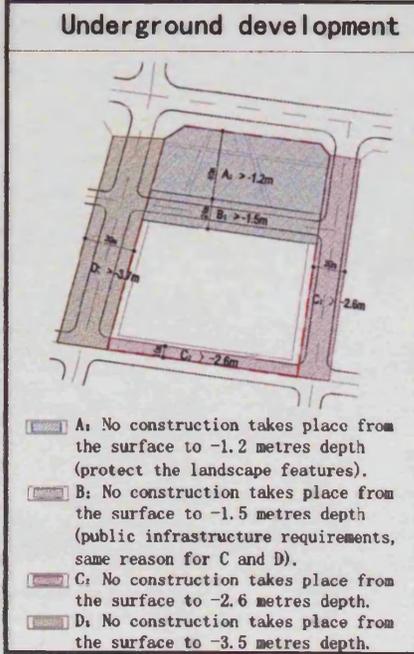
4.2 Land release and development conditions

The land was leased in April 2002 and the income was invested back in the elevated pedestrian system and landscaping in this central district. The Land Use Planning Permit was issued at the same time, together with a Development Code (Casefigure 4.2) derived from the masterplan to guide the architectural and landscape design. Its contents included the traditional planning parameters such as floor space, floor area ratio, building setback and building height. It also provided guidance on almost every aspects of environmental design, such as landscape, street furniture, building massing and circulation.



Development code

| Parameters | | Site location |
|------------------------------|--------------------------|---------------|
| Index | | |
| Land use | C5 | |
| Size(m ²) | 16845.5 | |
| Floor space(m ²) | 59200 | |
| Building coverage(%) | 45 | |
| Greenery(m ²) | 4600 | |
| FAR | 3.5 | |
| Building height(m) | Podium: 24 Tower: 100 | |
| Underground parking | 355 | |



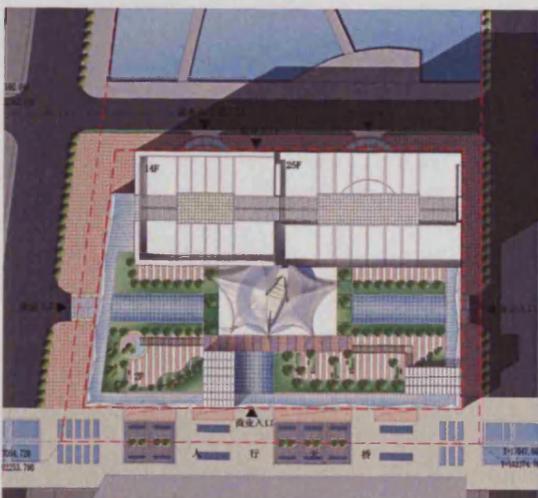
Casefigure 4-2 Development Code of Coastal City (East Base). Adopted by the researcher

4.3 Design in the planning process

In the Development Code, the form of the development was defined with the podium to house the retail component and the tower to accommodate office space. In addition to the government's requirements, the developer also had his own design criteria according to his marketing strategy. He required the building to be 'modern' and iconic, the office layout to be flexible to meet the needs of different tenants, maximum natural ventilation and solar gain control to reduce the tenant's energy costs, and indoor greenery to establish a comfortable working environment. A roof garden on the retail podium was also required, to form a comfortable semi-public space for the office users and the retail customers. Above all, he wanted to use some 'medium standard materials and engineering facilities' to achieve what was originally intended to be a 'high quality' scheme at a lower cost.

Design competition was held in July 2004, with a jury team formed by 7 jurors. Generally, the jury suggested the developer to form an integrated design strategy for his four pieces of plots within this core area to strengthen the company's image. The jury reviewed the three entries and preferred the one designed by the Merchants Architects (Casefigure 4.3). They considered it responded to the bidding book best and required the following amendments:

-
- Internal circulation needs to be better organised to separate the office workers from retail activities;
 - Pedestrian and vehicle entrances should be better connected with streets;
 - Outdoor advertisement in the podium needs to be considered;
 - Facade design needs more deliberations in terms of colour, form and material;
 - Sustainable design needs to be strengthened by introducing indoor gardens and roof gardens, as well as by maximising natural ventilation and by controlling solar gain;
 - The requirements on floor space and on podium height should be strictly complied with.
-



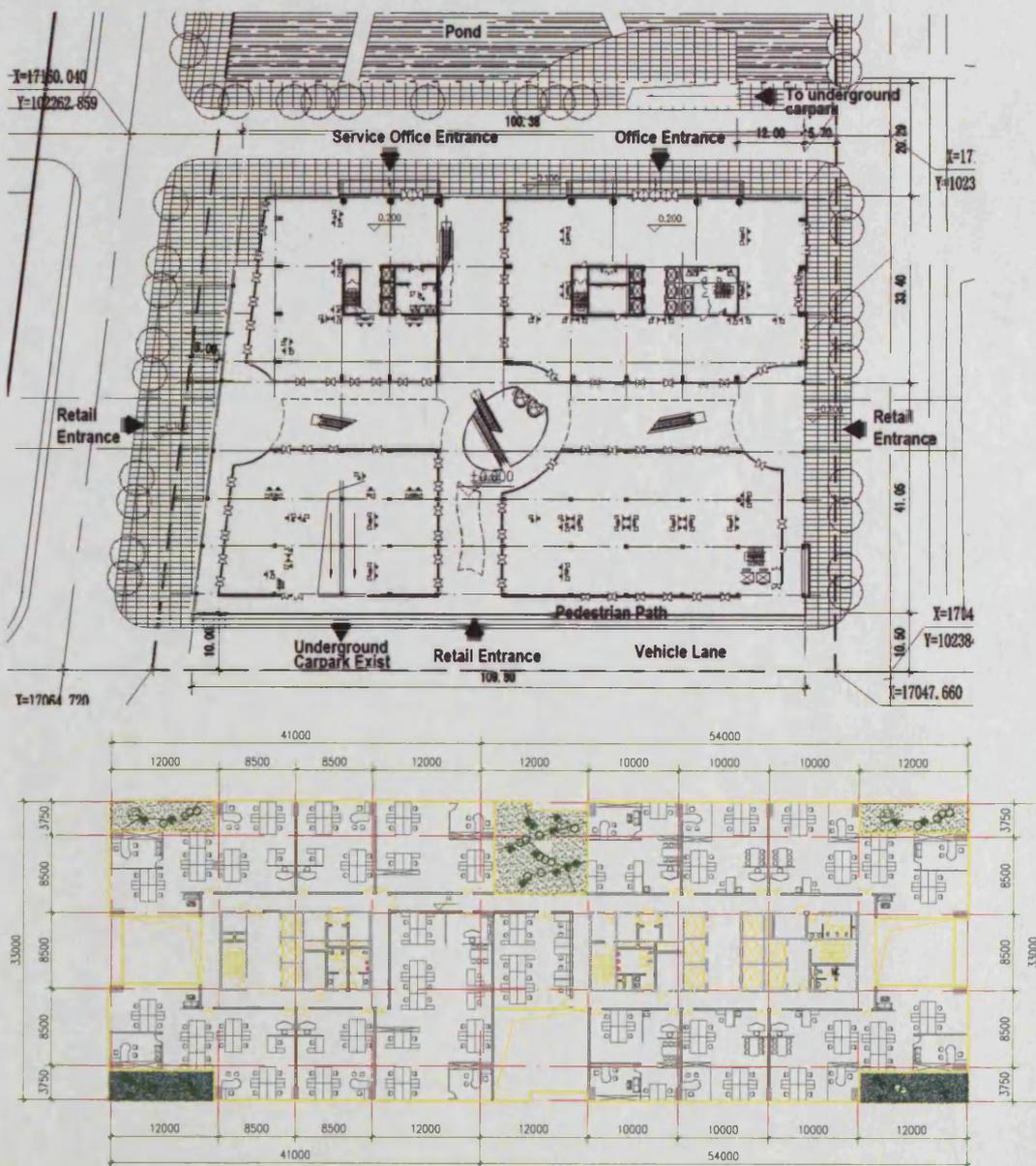
Site plan



Perspective from west

Casefigure 4.3 The preferred scheme designed by Merchants Architects.

In August 2004, the developer submitted a revised scheme for the Project Design Application. In this revised design, entrances for office space and retail space were separated, entrances for underground car park were better located, sky gardens and roof garden were added (Casefigure 4.4). The developer tried to replace the pond with greenery, due to the pond's potential difficulty to manage and not contributing to commercial activities. As the reply, the planner considered that the submitted design was emerged from a design competition, and was largely complied with the relevant planning requirements. But the planning authority had a strong will to implement the masterplan, and the pond had to be retained in the project. In the next design stage, landscape design around the pond was required to be carried out, the podium needed to be better connected with the elevated pedestrian system, pedestrian arcade along the retail podium needed to be added.



Casefigure 4.4 The revised design for Project Design Application. Top: ground floor plan; Bottom: typical floor plan for the office tower with small indoor greenery added.

In November 2004, the planning authority permitted the Pre-Construction Design Application. Until now, the key parameters such as floor space, floor area ratio and building height were strictly in line with the Development Code. In March 2005, the Building Construction Planning Permit was issued and the parameters were kept the same. The entire office component and the retail component were sold out at the end of 2007. Most of the buyers were small private investors.

4.4 Design outcomes

At the time when this research was carried out, the development was completed. In the interview, the developer's manager said that they believed the elevated pedestrian system would bring viable commercial opportunity for the first level retail spaces. But he admitted that ground floor retail space would be compromised, and criticized that the space under the elevated pedestrian path would not attract customers.



Casefigure 4.5 Site photos

- a. The residential development to the north has shops fronting the street. But the wide building setback has been used as a temporary car park, failing to provide a vital street;
- b. The completed tower is covered by curtain wall with low-emissivity light blue glass and shows a 'modern' and simplicity external appearance;
- c. The north entrance of the office tower shows no active frontage;
- d. The retail entrance to the west of the building with a huge distance of setback;
- e. The pedestrian space under the elevated pedestrian street, featuring a dark and unwelcome environment;
- f. The elevated 6 metres height and 20 metres width pedestrian street under construction, with good connection with the first floors of every building.

4.5 Evaluations

This case study illustrates a streamlined process of design control, which benefits from the quality of the detailed Development Code, with pragmatic considerations in many aspects of environmental design. Its successes and failures can be summarised as below:

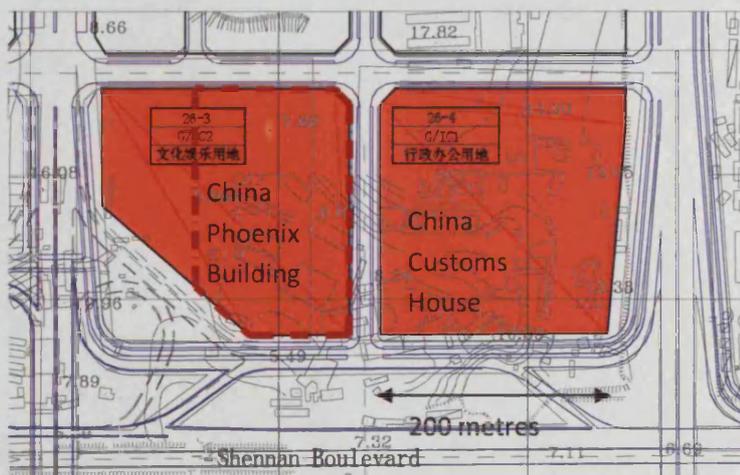
- ◆ The careful preparation of the design conditions has been the major reason for its success. The level of detail in the Development Code has provided enough mandatory requirements on the final design quality.
- ◆ Some sustainability considerations were emerging from the project design, mainly due to the developer's strategy to market the project as low energy cost and comfortable working environment.
- ◆ The mode of using private development to fund the public space is a good practice.
- ◆ But the extreme separation of vehicle and pedestrian on the ground floor level is questionable, given the high price to elevate the broad pedestrian bridge and the diminished quality of the ground floor pedestrian environment.
- ◆ The usability of the ponds is also questionable. The over-generous building setback to both sides of the road does not provide enough activity support to the street, and this space would be unattractive and dangerous at night. In this regard, the award-winning masterplan should be responsible for the above failures.

Case 5. China Phoenix Building

5.1 Introduction

This case study illustrates the importance of the external skill support to development control, shows that the capability of the planning authority can be enhanced when the Land Administration Bureau provides relevant support. It also signals design control moving from elevational control to address the quality of public realm.

The site with the size of 22,000 m² is located in the east end of the Futian CBD, next door to the new Civic Centre, south facing on the busiest arterial road – Shennan Boulevard. Located outside the original core area of the CBD, the site was not included in the 1996 CBD Urban Design International Consultation, and thus lacked clear guidance on the building form (Casefigure 5.1).

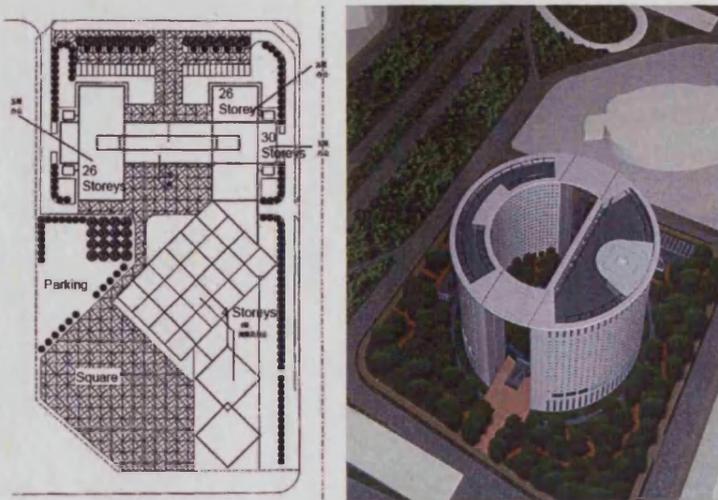


Casefigure 5.1 The site in the CBD Statutory Map 1998 (Adapted from Shenzhen Urban Planning and Land Resources Bureau 1998b).

5.2 Land release and development conditions

The local politicians were aware of the positive impacts of housing the internationally known Chinese TV broadcasting company on the city (Li 2006). In June 2001, the government signed the Land Contract with Phoenix TV allowing it to build up to 48,700 m² with the height limit of 90 metres, but no floor space was allowed to be used commercially. As usual, the Land Contract contained certain conditions such as the building setback, locations for tower and square, green ratio and the requirement for a design competition. Here, it additionally required the introduction of a broadcasting square open to the public either on the ground floor. But these parameters derived from the original Statutory Map failed to provide guidance on the built form. The planning authority was not convinced by the subsequent

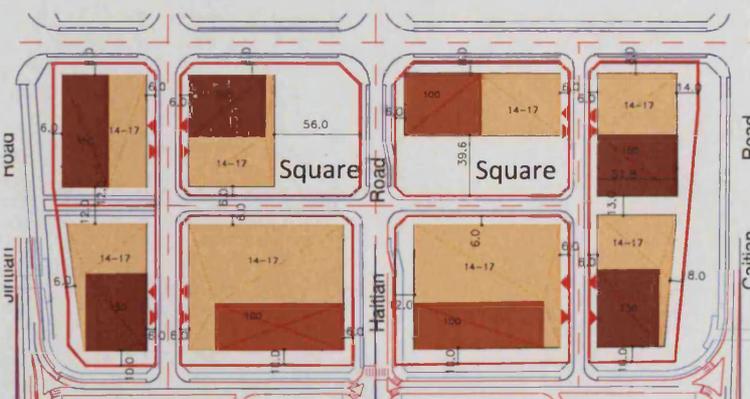
project designs in this block, as they did not present a 'unified and modern' environment (Casefigure 5.2).



Casefigure 5.2 left: the early application for the China Phoenix Building signalled two 110-metre towers in the north of the site, with a four-storey podium to the south enclosing a public square on the south-west corner; right: the early design for the China Customs House sit in the middle of the site with a defensive form (Source: Urban Planning and Design Institute of Shenzhen 2001).

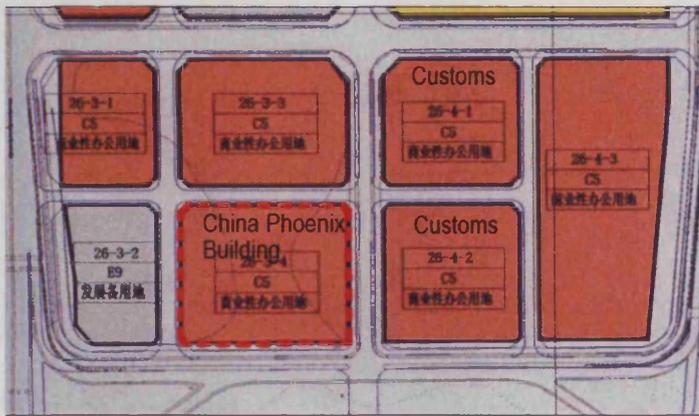
There were two factors influence the design approaches in this block. Firstly, in September 2001, Phoenix TV tried to increase the floor space to 80,000 m², with some extra commercial space to pay for the development costs. The planning authority was willing to consent the new requirement, but needed to wait for a formal amendment to the Statutory Map (Li 2006). Secondly, in 2001, the government adopted a comprehensive masterplan for the whole Futian CBD prepared by Obermeyer Planen + Beraten, with a more detailed sub-division of every urban block (Masterplan 1). This new masterplan provided a chance to amend the Statutory Map.

To make the proposals acceptable in this CBD location, the planning authority considered that an urban design study for this block was necessary to develop the design conditions. Working with the planning authority, UPDIS carried out an urban design study that divided this block into seven gridiron land parcels with narrow urban roads, increased the building density, used buildings to front the streets and to enclose small squares, allocated retail spaces on the ground floor level to activate the street, and regulated towers to form a unified built form (Casefigure 5.3).



Casefigure 5.3 Urban design plan for Block 26, prepared by Shenzhen's planners in 2001 (Adapted from Urban Planning and Design Institute of Shenzhen 2001).

Given a significant increase in building density, the planning authority could now negotiate with the developers to change the land parcel. As a result, this study reduced the plot size for Phoenix TV but allowed it to build the floor space up to 80,000 m². The government negotiated with the developer and claimed back the rest of the site. The Statutory Map was amended in 2002 following a formal procedure according to the study (Casefigure 5.4).



Casefigure 5.4 The block in the revised Statutory Map (Adapted from Shenzhen Urban Planning and Land Resources Bureau 2002e). This block had more development space from the cancellation of the flyover, and was subdivided into seven plots. The site size for the China Phoenix Building is now shrunk in half, so is the China Customs House. But their floor space allowances are increased.

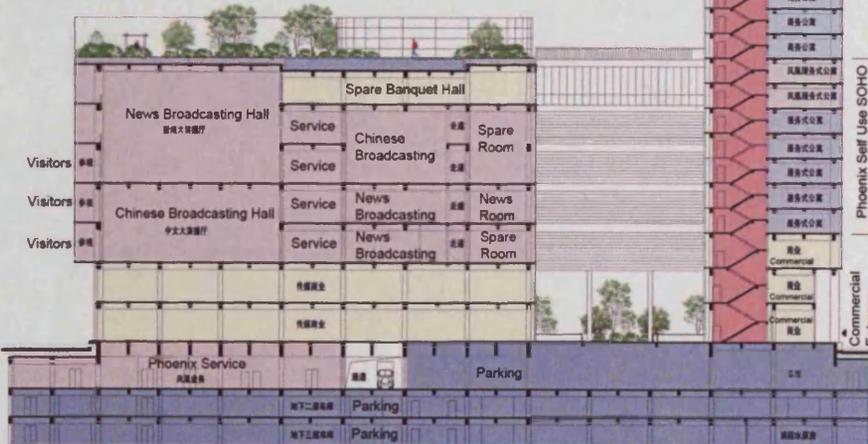
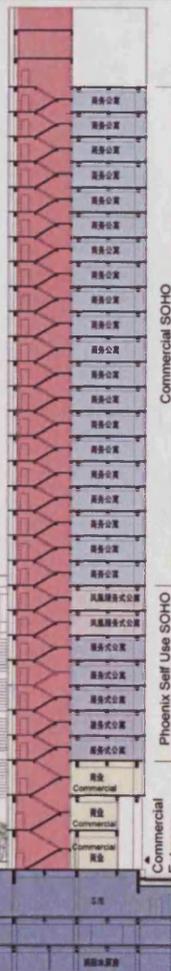
Two supplements for the Land Contract were signed in November and December of 2002 according to the new Statutory Map. In these two supplements, the government regained the plot on the north of the Phoenix TV site of 11,600 m², and Phoenix TV site shrank from 22,000 m² to 11,000 m². In return, the Phoenix TV was allowed to increase the floor space up to 80,000 m², with 35,000 m² of office (20,000 m² self use), 30,000 m² of SOHO (small office home office) (5,000 m² self use) and 15,000 m² of commercial space (6,300 m² self use) without paying extra fees to the government. In December 2002, the Land Use Planning Permit was issued according to the parameters in the Land Contract, and a regulated FAR of 7.25, building coverage of 70-80 per cent and building height of 110 metres.

5.3 Design in the planning process

Soon after the issue of the Land Use Planning Permit, the developer organized a design competition, but none of the entries satisfied him. In March 2004, a second design competition was held and the entry of UDS (Canada) won, because it complied with the design conditions and offered rational internal layouts (Li 2006). The site was proposed to accommodate three buildings of SOHO, Office and Phoenix Service with maximum height of 100 metres. A semi-public space was created between the three buildings with entrances from the major directions and surrounded by commercial uses. SOHO was located in the east mixed with commercial uses on the lower levels. Phoenix TV Service building locates in the north with public visitor corridors in its west. The office tower to the south has separate entrances for the commercial office and the Phoenix office. Two arcades were introduced into the podiums to the north and the east (Casefigure 5.5 & 5.6). In April 2004, the developer submitted this scheme for Design Project application. With minor amendments on the floor plans, the project was granted a Construction Planning Permit in September 2005.



Casefigure 5.5 Ground floor plan of the winning scheme.



Casefigure 5.6 Scheme section and the artist impressions.

5.4 Design outcomes

By the time of this research, the construction was nearly completed. The site was developed in accordance with the permitted drawings, arcades were built to address the streets, and the public space between the three buildings was provided. A pedestrian friendly environment was introduced by the development with shop fronts, arcades and building entrances fronting the street. The facade at street level was reduced to two floors height providing a human scale and continuous street walls. More importantly for this scheme, a staircase was constructed leading to the broadcasting halls for the viewing purpose by the general visitors. Overall, the development provides a positive impact on the street and adds value for the public by introducing a semi-public square and opening up its broadcasting halls for visitors. However, the site is still poorly accessible from the south because of the wide Shenzhen Boulevard.



Casefigure 5.8 Phoenix TV Building on site

- a. Phoenix TV Building with the China Customs House. A unified street wall is achieved by the two projects. But the highway isolates the site from the south.
- b. Two floors height pedestrian arcade in the northern facade. Shop front and plants gives the place a sense of life.
- c. The semi-public square within the building is surrounded by a few retail units, providing a sense of vitality to the project.
- d. Staircase leading to the broadcasting halls on the west.

5.5 Evaluation

This case is a successful attempt in design control. It adds value to the public and provides a harmonized urban environment. The process illustrates a number of key issues in design control:

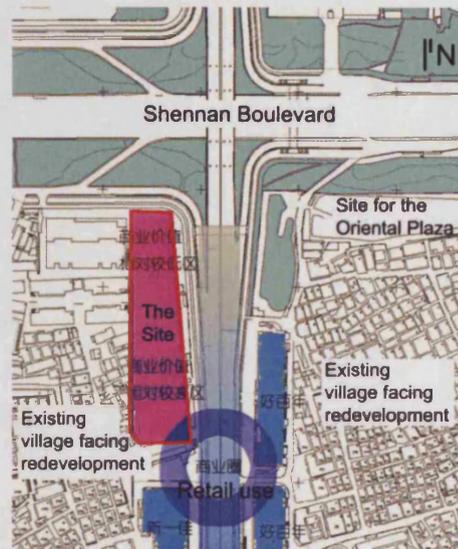
- ◆ The semi-public space introduced by UDS was neither required by the planning authority nor mentioned by the previous urban design study. Design innovation within the given design conditions in this case contributed significantly to amenities for the general public.
- ◆ Additional skill input is crucial for the planning authority to deal with planning applications, in which the local planning institute liaised with different interest parties to generate an acceptable and practical solution for development control. The urban design study enabled the planning officers to explore a deeper understanding of the site, the development capacity, the possible built form and the land uses, and provided detailed guidance for planning negotiation.
- ◆ In this project, without the Land Administration Bureau's support to negotiate with the developer to claim back a part of the site, the planning authority's desire to increase the development density and environmental permeability would be far more difficult to achieve. Shenzhen tends to have more inter-departmental cooperation than other Chinese cities. Possibly, the city Mayor's support was the key to enable these two departments to cooperate successfully.
- ◆ This case also signals that the emphasis of planning control starts to move from pure elevational control towards addressing the quality of the public realm. Pedestrian arcades, active and enclosed street frontages were all stressed in the planning control process. The zoning-like rigid Statutory Map originally only controlled the building envelopes and the density, and it is now compensated by an urban design study.
- ◆ The over-generous highway standard remains a major problem in this project. The urban arterial road isolates the southern part of the CBD from the north, given its 200 metres width highway structure (distance measured from the site boundaries along the road). It results in an uncomfortable and dangerous pedestrian crossing experience, and further cuts the possible interaction between the south and the north. This problem can only be solved at the strategic level, which would need to change the city's or district's transport system and the public transport provision.
- ◆ Sustainability was not mentioned in any part of the design control process. The features such as *energy performance of the building, natural ventilation and natural lighting* were not required by the planning authority.

Case 6. Galaxy Central Plaza

6.1 Introduction

This is a typical case study showing the negative impacts of the high road standards on urban developments. The linear site is located at the edge of the Futian CBD with the size of 11,700 m², next to a highway flyover. The vehicle bridge and the high standard arterial roads block the external pedestrian linkages. But the high-rise residential towers to its east and south have established a good model of bringing in commercial use in podiums. A community centre is established, albeit it is separated by an arterial road (Casefigure 6.1).

The land was collectively owned by Gangxia Village, and was now allowed for an urban development. The village invited Dongyongfeng Ltd as the co-developer. The site was originally occupied by two residential buildings, therefore, the new development should also compensate to the existing residents.



Casefigure 6.1 Site and the adjacent context

6.2 Land release and development conditions

The site was originally designated as residential use. But the planning authority considered that a certain amount of office use could be introduced in this site to strengthen the CBD's office sector. Meanwhile, the office workers and residents could share the car park within different timescale on a day, to maximise the car park's potential. In terms of the built form, planning officers considered that the adjacent residential projects were all 'boring boxes' with 100 metres height, and more interesting skyline could be introduced in this development to avoid this 'boringness'. Retail use on the lower floors was welcomed by the planning authority given its potential to activate the surrounding urban space. Some of the residential units were used to compensate to the original residents. As the major developer, Dongyongfeng Ltd was satisfied with this arrangement, as office space could introduce more market value than residential use. Therefore, an informal agreement was reached between the developers and the planning authority.

The Land Use Planning Permit was issued in September 2003, with the floor area ratio of 10, building height limit of 150 metres, and floor space of 117,000 m² (mixed with residential,

office and commercial uses). The Permit also required the building to set back 6 metres from the western boundary; 8 metres from the northern and southern boundaries. The building was allowed to not to set back from the eastern boundary, but a 4.5 metres width arcade should be introduced as the pedestrian path. The tallest tower should be located in the north to strengthen the CBD's gateway image; other towers should be placed in the south with 60 metres away from the northern tower. A roof garden should be provided in the podium (Shenzhen Urban Planning and Land Resources Bureau 2003b).

In addition, to meet the developer's requirement of increasing the floor space, the Permit also stated that 'when the requirements of solar gain, transportation and fire protection are meet, the floor area ratio can be increased to 10.5 (residential use can increase up to 55,000 m²) and the total parking space should be 640.'

6.3 Design in the planning process

In the design competition held in May 2004, five identical entries were judged by the jury and the Merchandise Architect's scheme was preferred. The scheme introduced a roof garden for residents and a square in front of the retail entrance. It also tried to maximize natural ventilation and sunlight by crossbedded residential floors, and also developed internal gardens in the office tower (Casefigure 6.2).



Casefigure 6.2 Winning scheme by Merchandise Architects. Top left: perspective; Top right: residential tower section to explain the solar gain and natural ventilation; Bottom: ground floor plan.

To help the developer to market the project, the scheme targeted young professionals for the service apartments with one-bed studios, and small business for the office space with individual-controlled airconditioning.

In May 2004, the developer submitted this scheme with a maximum floor space for a Land Use Application. As this scheme fully complied with the *Shenzhen Urban Planning Standard*, a new Land Use Planning Permit was issued with more floor space permitted in the same month. In August 2004, in the formal design project application, the planning authority urged the developer to reduce the building height, to narrow down the vehicle exit to 7 metres to form a more continuous pedestrian environment, and to revise the residential entrance and the service entrance. Accessibility for the disable was also required to be considered. Public toilet was urged to be located on the ground floor.

In September 2004, the Land Contract was signed with the same parameters as in the Land Use Planning Permit. As this land was originally collectively owned, no fee was needed to pay. In October 2004, in the Pre-Construction Design Application, the planning authority further required the pedestrian arcade to be continued throughout the site from the north to the south. Some minor changes in the residential layout were suggested. In January 2005, the Building Construction Planning Permit was issued.

6.4 Design outcomes



Casefigure 6.3 Site photos

- a. The office tower stretches out from the context to provide an iconic image for the developer to market the project and a sense of arrival for the Futian CBD. But its gateway status was soon challenged by the project next to it (Case 8).
- b. The nearby residential developments (on the left) with the similar linear and segregated site condition. The only pedestrian connection between these two sites are the dark pedestrian path under the arterial road's flyover (on the bottom left of the picture) and a pedestrian bridge on the far background;
- c. The flyover on the corner of the site limits the accessibility to the site by vehicle or by foot; drivers may find it hard to find the access to the site too.
- d. The retail entrance of the podium provides a welcome façade to the square in front of it.

6.5 Evaluation

This is a constrained linear site segregated by the surrounding arterial roads and a flyover. But the planning authority managed to regulate the built form to introduce more active public space.

- ◆ The quality of the urban environment is challenged by the surrounding wide roads. The fast speed urban roads only allow the pedestrian to walk to the site under the flyovers, where they are vulnerable to street crimes such as robbery and most likely noise and air pollution. The generous 200 metres wide Shennan Boulevard makes it even harder for the pedestrian to cross the road. The flyover originally intended to increase the vehicle traffic efficiency now confuses even the drivers trying to find their way around. Although the project provides a welcoming entrance plaza and tries to increase the connections throughout the site by introducing some cross-site pedestrian footpaths, the flyover makes it difficult for pedestrians (or motorists) to connect the project to the east and to the north.
- ◆ It was the pre-planning negotiation stage that decided the current form of the development. The planner's input in design condition was important in this case to inject office use into the site, so that the office users and the residents can share the parking space in different time on a day.
- ◆ Sustainability was considered by the designer, as a means to help the developer attract potential buyers (sky garden, individual air-conditioning).
- ◆ Roof garden and the commercial square in front of the building provide the necessary amenity in this extreme dense environment. Planning officers' inputs in this case were crucial for this achievement.

Case 7. Holiday Plaza

7.1 Introduction

This is a citizen appeal case, showing the pressure from the lack of public participation in the planning process. The site is located to the north of Shennan Boulevard, surrounded by leisure facilities and residences. A theme park is located in the opposite side of the road. To its east, it is a five-star Hotel. To the north of the site, there is a large residential area. The site is connected to a metro station (Casefigure 7.1).



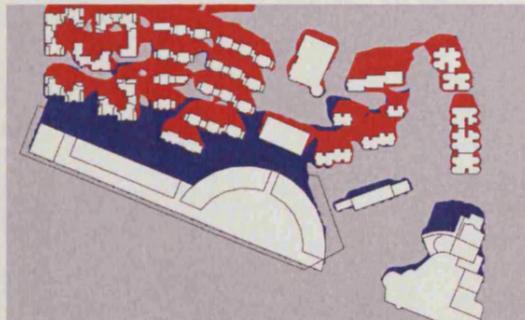
Casefigure 7.1 Site and the adjacent context.

7.2 Land release and development conditions

The developer emerged from the local residential sector, and later expanded his profile at national scale in apartment and retail developments. In 1993, the Land Use Planning Permit was issued with the floor area ratio of 2.4 and total floor space of 310,000 m², for a major residential development mixed with office, hotel, commercial, and leisure uses. To maximum the profit, the developer kept trying to increase the floor space. The planning authority agreed the increase of the floor space to 453,000 m² in 1996, 511,500 m² in 1998, and 524,808 m² in 1999. The land price was paid respectively in different stages of changes. In 2002, the developer subdivided the site into a few parts, and this development was the last part to be developed with the floor space of 134,623 m². The planning authority approved the Pre-Construction design (Casefigure 7.2). Within this process, no attention to the urban environment was paid, and no public consultation was carried out.



Casefigure 7.2 The Approved Detailed Architectural Design in 2000.



Casefigure 7.3 The Analysis of Building Shadow of the Approved Detailed Architectural Design.

Before the construction, the local residents were aware that the new development would affect their sunlight right (Casefigure 7.3) and appealed to the planning authority. They also used the local media to make a stronger case. When reviewing the project, the planners found that the proposal blocked the original view corridor of the tourism area, and the massing of the development brought negative impact to the urban image (Casefigure 7.1).

The planning authority took active response to this development. From 2002 to 2004, the planning authority commissioned CAUPD to carry out design studies according to the maximum floor space for an acceptable building form. A scheme was initiated fulfilling the sunlight requirement (Casefigure 7.4). But the planning authority was not satisfied with the massing and believed that the original permitted floor space would not lead to a good solution, for it being too bulky and not responding to the established context, especially to the Eiffel Tower. So, the planning authority suggested to reduce the maximum floor space of the development (Shenzhen Municipal Urban Planning Bureau 2004).



Casefigure 7.4 The 'extreme' design, which was the only massing option to meet the sunlight regulation and the maximum floor space.

On the other hand, a land use study was carried out. Casefigure 7.5 shows that the site was surrounded by a large scale of residential areas (in yellow) and leisure facilities (in green), signalling the need to infill more retail, office and commercial services. The site was in the right location to provide such services. During the negotiation, the developer agreed to change the major land use from residential to retail, office and commercial services, which in some degree could compensate for his lost from the reduced floor space.

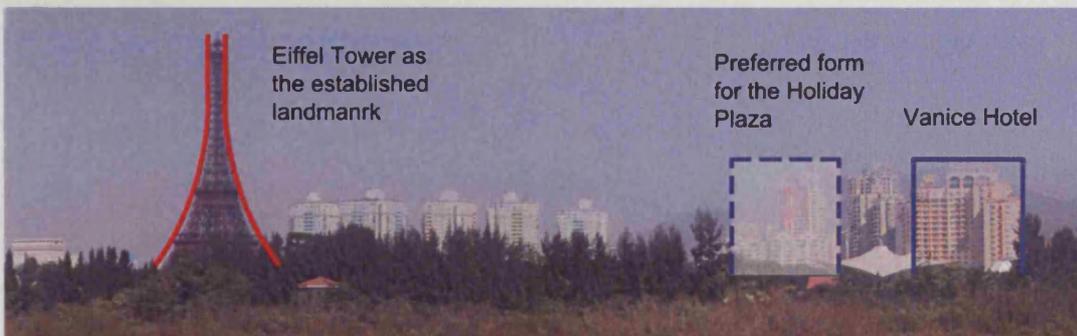


Casefigure 7.5 Contextual land use.

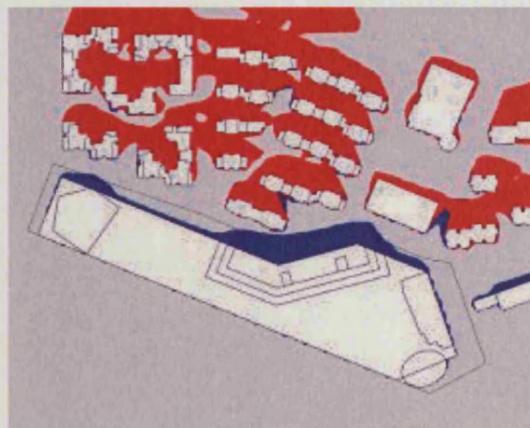
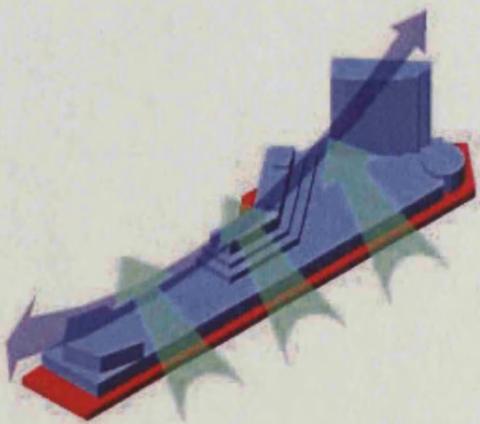
In terms of the built form, the analysis showed that a tower could be built along the axis from the Eiffel Tower to strengthen the original axis. Also, the tower needed to be the same scale as the Venice Hotel (Casefigure 7.6)



Casefigure 7.6 Top: the relationship between the development and the Eiffel Tower; Bottom: Analysis of the Scale and Massing.



In early 2004, an indicative built form was initiated in light of the above studies. The total overground floor space was reduced to 60,000 m² and the number of dwellings sheltered was zero (Casefigure 7.7).



The Scale and Massing

The Sheltering Analysis

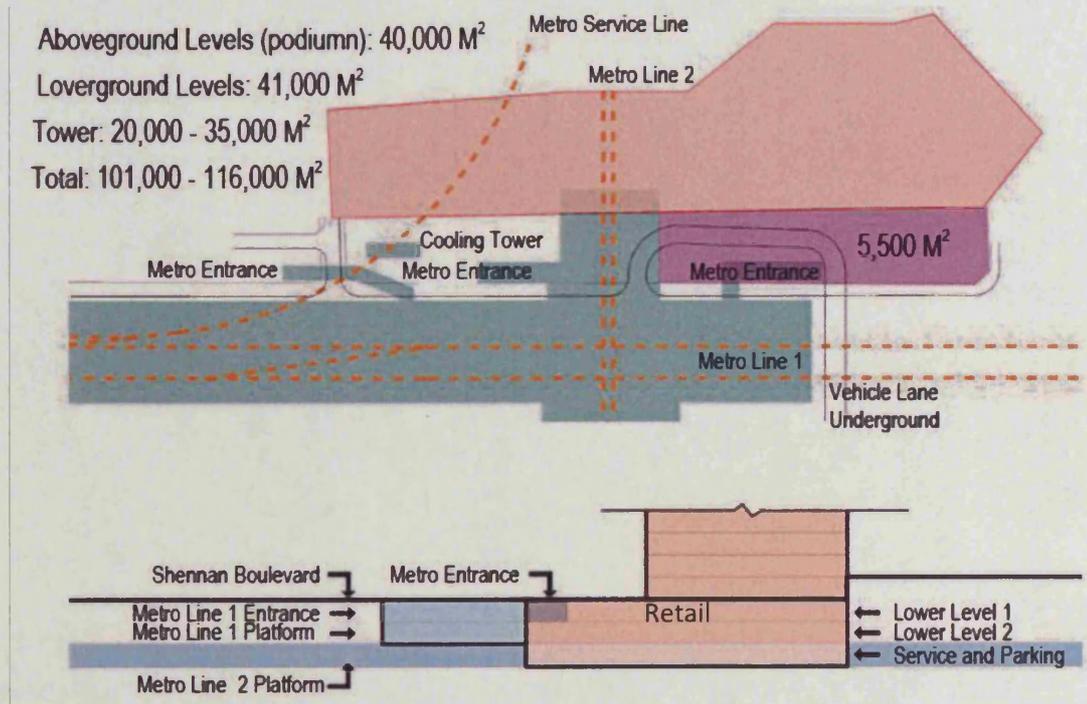
Casefigure 7.7 The indicative built form resulted from the urban design study (Source: Shenzhen Municipal Urban Planning Bureau 2004).

In early 2004, the final planning parameters were decided in the light of this study. The developer was happy to accept this built form and the change of use. In the subsequent

public consultation, and the planning authority received 477 returned questionnaires from the local residents, around 90 per cent of whom agreed with the changes.

In August 2004, the developer formally agreed the amendments suggested by the planning authority, so far, the original permitted 134,000 m² floor space has been reduced to 100,000 m² with 55,000 m² above ground (10,000 m² for office, 20,000 m² for apartment hotel, 25,000 m² for retail) and 45,000 m² below ground for retail as bonus (Shenzhen Yitian Real Estate 2004). Some of the floor space allowance was transferred to another site that the developer owned. To maximise the profit, the developer intended to make the development as a modernised shopping mall with distinctive 'international' character, mixed upper-market apartment and office services.

In September of 2004, a new Land Use Planning Permit was issued. The planning authority also required the developer to cooperate with the metro company to connect the metro with its retail development. This arrangement provided the developer with a financial incentive to improve the pedestrian connection underground while costing the municipality nothing (Casefigure 7.8). In May 2005, some detailed amendment was made due to the complicated underground development, and the above ground floor space was increased to 58,200 m², with the total floor space remain 100,000 m². A new Land Use Planning Permit was issued (Shenzhen Municipal Planning Bureau, 2004 c).



Casefigure 7.8 The planning authority required the developer to cooperate with the metro company to connect the metro with its retail development (area in pink) (Adapted from Shenzhen Municipal Urban Planning Bureau 2004).

7.3 Design development process

In 2005, according to the design conditions attached in the Land Use Planning Permit, the developer organized an architectural design competition for the project design. The design result was largely in line with the requirements in the urban design study (Casefigure 7.9), and it soon went through the rest of the planning process quickly.



Casefigure 7.9 Perspectives of the schematic design.

7.4 Design outcomes

The project was still under construction at the time of this research. There was not enough information collected for the final schematic design. But from the available design drawings, it can be concluded that the scheme adds value to the urban environment by providing a sunken garden and by introducing underground retail connections to the metro station. The site is well served by public transport and the building design is simple and elegant. It has achieved the planning authority's objectives on this site.

7.5 Evaluation

This is a start of planning participation, but at a very immature stage. The increasing significance of private property rights will challenge the traditional approach to development control. The old framework of permitting development without any public consultation will soon be phased out. As China's amendment of the *Constitution* (National People's Congress 2004) and the adoption of the *Real Right Act* (National People's Congress 2007) to formally protect private property rights. If the planning permitting process still excludes the public, the potential conflicts will appear at the later stages of the planning process, which puts the local government in a reactive position. Therefore, urban plans will have to consider these rights and make allowance for them. Public consultation should also take place not only in the plan making process, but also in the planning permitting process.

It also reveals the tightening development control climate in Shenzhen, which has moved from unconditional approval of the increase of floor space (although the land price needed to pay) in the 1990s, to some concerns on the city's image within its wider context, although this latter cityscape image analysis was not very convincing. The local urban designers provided crucial skilled support for the planning officers, and the use of development right transfer has provided the planning officers another opportunity to improve the project design.

Case 8. Oriental Plaza

8.1 Introduction

This case study shows how a notorious developer could use a skilful developer to negotiate with the planning authority and successfully get the planning permission. This linear site is located in the east of the Futian CBD, to the east of Galaxy Central Plaza (Case 6). It is isolated by three strategic transport corridors and two huge flyovers (Casefigure 8.1).



Casefigure 8.1 Site and the adjacent context

8.2 Land release and development conditions

The information for the land release process was not collected in the fieldwork. The case officer provided two early schematic designs for this mixed-use development (Casefigure 8.2). These proposals from a design consultation did not satisfy the planning authority in terms of the building forms. The planning authority then considered that an urban design was necessary for this site to consider it with wider context.



Casefigure 8.2 Proposals in the design consultation.

In early 2007, the planning authority commissioned UPDIS to carry out an urban design study for a large area, including this site. This area was adjacent to the CBD, separated by two arterial roads, connecting the Futian CBD and a traditional commercial centre to its east. This area was separated into four parts and each part was governed by different Statutory Maps (Casefigure 8.3), lacking a unified approach to the built form with poor pedestrian connections. The planning authority aimed to connect the two centres, in terms of land use, built form and pedestrian connectivity. The task for this urban design study was to generate some practical solutions for these four separated parts for planning control and environmental improvement, with regards to the existing land ownership and development feasibility.



Casefigure 8.3 Four separated parts governed by four Statutory Maps.

The urban design study tried hard to connect these four separated parts and to introduce some acceptable built forms to strengthen the gateway image to the Futian CBD. To the south of this 350 metres linear site, the medium high apartments built in the late 1990s (Casefigure 8.4 left) were now deemed to be unsuitable for modern living, due to their super-high density, the lack of solar gain, the lack of fire protection, and being 'out of character' with the CBD 'modern' image. With the higher land values, these villages were facing demolition and re-development. Given these facts, the urban designer interviewed who carried out the urban design study for this district said '... there is almost nothing in it (the village) worthy referring to ...'. Due to its close location to the CBD, the urban designer considered this linear site should reflect the CBD's modern and unified environment. As the result, four identical high-rise slab boxes were proposed on the site making a great contrast to the building scale and massing of the village (Casefigure 8.4 right).



Casefigure 8.4. Original village (bottom left, photo by Nan Yang, 2006) behind the proposed development (right, source: Urban Planning and Design Institute of Shenzhen 2006), shows the contrasting building density and massing.

The study also introduced some pedestrian routes and public spaces within the site (Casefigure 8.5). In August 2007, based on this urban design study, the Land Use Planning Permit was issued for this site. It regulated the building to set back from the south boundary by 13 metres, from the west by 8 metres, from the north and from the east by 8 metres. It required the group of buildings to be innovated and elegant, and to comply with the CBD image with high quality construction and decoration. Access route from Shennan Boulevard to the site should be secured with active public space provision. The total floor space allowance was 148,800 m² (20 per cent for commercial/retail, 30 per cent for office, 20 per cent for hotel, and 30 per cent for service apartment).



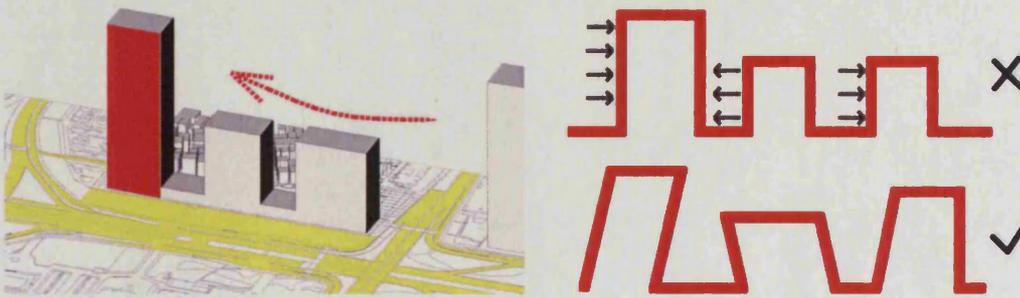
Casefigure 8.5 The proposed site arrangement.

8.3 Design in the planning process

The developer previously developed a poor relationship with the planning authority due to his lack of cooperation in the Great China Exchange Square project (Case 1). In this project, he selected the architect regarded by the planning authority as an 'expert' to deal with the planning application and negotiation because he was aware of the local authority's

scepticism. Planning negotiations took place only between this architectural 'expert' and the case officer with smooth communications.

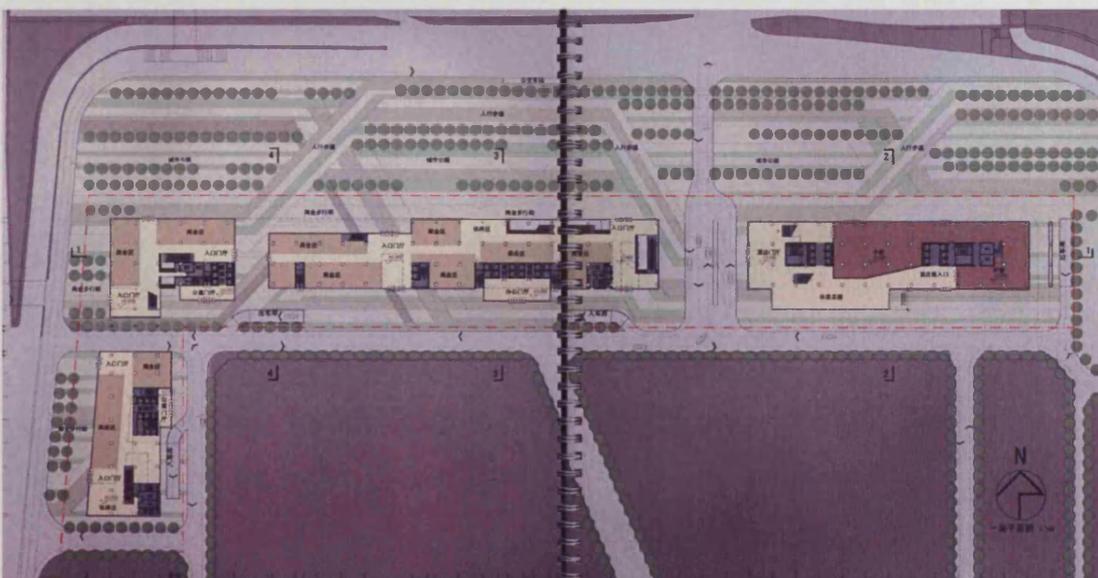
The designer understood the planning authority's requirement on this project, which was to block the 'negative' image of the 'urban village' on the back. To make the development iconic, the designer tried to avoid the even spread of the building massing, and put the tallest tower in the east to avoid potential visual conflict with the Galaxy tower (Case 6). The architect wanted this group of high-rise buildings to be simple and to be easily identified by the passengers in the fast moving vehicles in Shennan Boulevard, with gradient towers (Casefigure 8.5). Due to the smooth communication, this project was soon granted planning permissions and it is on site now.



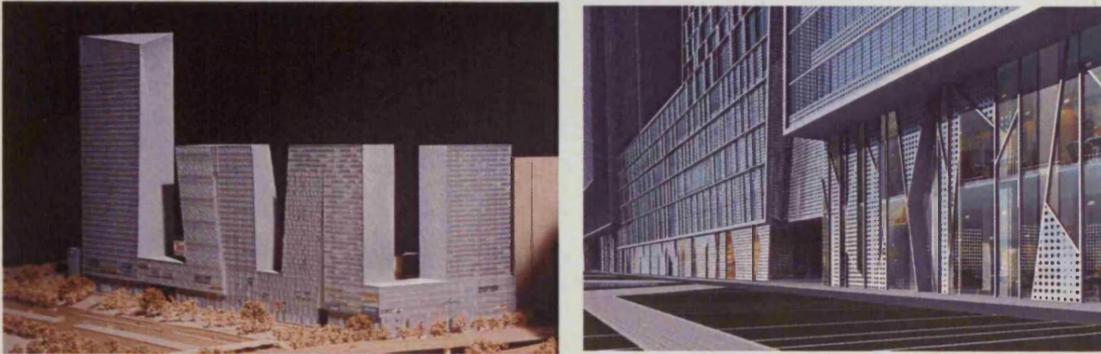
Casefigure 8.5 conceptual design

8.4 Design outcomes

In the final schematic design, a few north-south pedestrian paths were introduced. A group of gradient towers with simple elevational design was achieved (Casefigure 8.6 & 8.7).



Casefigure 8.6 Ground floor plan for the final schematic design



Casefigure 8.7 Perspectives for the final schematic design

But the design solution at site level could not resolve the fundamental problem of poor accessibility caused by the generous urban road standard. The distance between this project and the building across Shennan Boulevard is some 200 metres, with 40 per cent of the section occupied by vehicle lanes, and 60 per cent by pedestrian walkways and road greenery (Urban Planning and Design Institute of Shenzhen 2006) (Casefigure 8.8). The buildings and the spaces between hardly have any dialogue, and the space seems to be redundant and unusable. The greenery in front of the project is still a 'left-over' place. It was designated as the green belt to minimize the noise and air pollutions from the road to the surrounding buildings, and is outside the project's site boundary. Although the project is still under construction, from Shenzhen's experience, this greenery will remained inaccessible for the general public. This project also has a significant increase of scale when comparing to the 'urban villages' to its south and the generous urban road to its north, failing to introduce the high density and mixed-use environment that a traditional 'downtown' should have.



Casefigure 8.8 The distance between the Oriental Plaza and the building on the other side of the road.

8.5 Evaluation

This is a difficult site segregated by the over generous wide urban roads. Although the urban design study tried to reconnect the project with its surrounding sites, it had very limited achievements. The developer's tactic to use an architectural 'expert' to deal with planning application was successful, in terms of securing the planning permit for this project. But this 'expert' had very limited inputs on improving the urban environment. The solutions to this difficult site may need more strategic thinking outside the site boundary, to change the urban road standard, to reduce the generous building setbacks, and to make the urban greenery usable to the general public with activity supports.

Case 9. Kingkey Finance Tower

9.1 Introduction

This case reveals the developer and the local politicians' obsession on 'iconic' and 'landmark' buildings. It is an urban redevelopment project within Shenzhen's old financial district – Caiwuwei Area in Luohu District. Caiwuwei housed half of Shenzhen's commercial office floor space before 2005. Having been the most flourish district in Shenzhen, and now facing the challenge from the new Futian CBD, the Luohu District government decided to regenerate this area to maintain its economic strength.



Casefigure 9.1 Site and the adjacent context

The site is slightly separated by two office buildings from Shennan Boulevard – the Agricultural Bank of China and the People's Bank of China (Casefigure 9.1). One of Shenzhen's major landmarks – the Shun Hing Square of 383.95 metres height – is located in the triangle junction to the east. Opposite to Shennan Boulevard, there are the important commercial and financial buildings for stock exchange, shopping malls and banks. A metro station entrance was reserved for the site.

9.2 Land release and development conditions

In 2003, the CAUPD prepared a materplan for the Caiwuwei Area with the size of 4.69 ha. The proposal divided the site into six urban blocks with a regular urban grid (Casefigure 9.2). The two blocks in the west were later developed according to the parameters set in the masterplan. The four blocks in the east were left waiting for a third party developer for the comprehensive development. The tallest building in this masterplan was around 150 metres to preserve the Shun Hing Square's landmark status.



Casefigure 9.2 The masterplan by CAUPD in 2003 (Source: China Academy of Urban Planning & Design 2005). Six urban blocks were formed providing a permeable environment. The site for the Grand Theatre seemed to have over-generous building setbacks and provided a large urban plaza in its front. The site for the two important banks were enlarged to allow additional office space to be built for financial sectors, but the existing ground floor car park for the south-east site was retained, providing an unpleasant environment. The three residential blocks to the north mixed with commercial uses were building to the site edges, with a central green in the middle.

In May 2004, the Kingkey Group successfully bid the four urban blocks in the east for a comprehensive redevelopment. The Land Contract was signed and a Land Use Planning Permit was issued according to the parameters set in the masterplan (Casefigure 9.3). But the developer wanted to develop more floor space to pay for the compensations to the original residents, and proposed to merge the four urban blocks.

| | | 2003 Masterplan | 2004 negotiation | 2005 Land Use Planning Permit | 2007 Land Use Planning Permit |
|--------------------------|-------------|--------------------|--------------------|-------------------------------|-------------------------------|
| Tower height | | | | 300 metres | 439 metres |
| Floor space above ground | | 330 m ² | 380 m ² | 355 m ² | 355 m ² |
| subdivision | Residential | 110 m ² | 135 m ² | 135 m ² | 135 m ² |
| | Office | 175 m ² | 110 m ² | 85 m ² | 165 m ² |
| | Hotel | | | 30 m ² | |
| | Apartment | | 45 m ² | 45 m ² | 45 m ² |
| | Commercial | 20 m ² | 65 m ² | 60 m ² | 10 m ² |
| | Others | 25 m ² | 25 m ² | 0 m ² | 0 m ² |
| Underground commercial | | 0 m ² | 0 m ² | 35 m ² | 35 m ² |

Casefigure 9.3 The evolution of the change of the floor space allowance. Underground commercial development is not counted in the total floor space.

In the same year, after the negotiation with the government, the developer gained a preliminary consent to increase the total floor space from 330,000 m² to 380,000 m² (Casefigure 9.3) To test the possible built form with the increased floor space, an international architectural consultation was required. In this consultation, all the entries broke the original building height limit with high-rise office towers to demonstrate the scheme's significance. The scheme by Terry Farrell and Partners (now Farrells) was preferred and the Kingkey Group was keen to realize this high-rise tower form. But the planning authority was concerned about two issues: the relationship between the high-rise office tower and the Shun Hing Square, and the publicity of the urban roads swamped by site amalgamation.

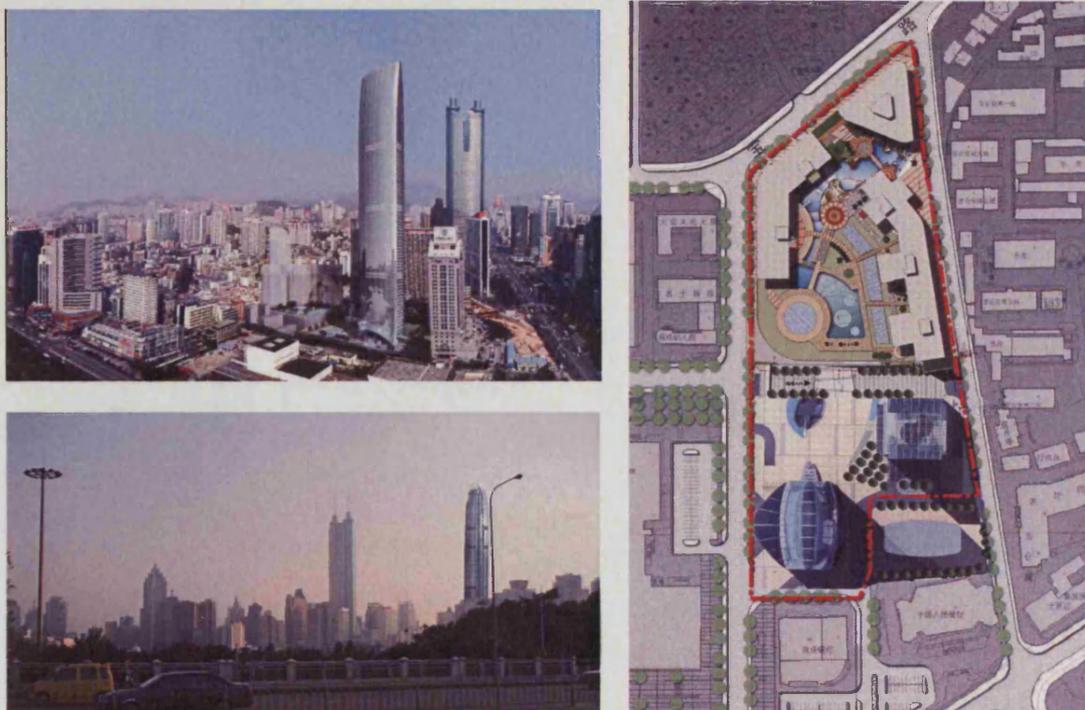
To convince the planning authority, in late 2004, the developer commissioned the CAUPD for a study of the relationship between the proposed high-rise office tower and the Shun Hing Square, and to work out a suitable urban form for the increased floor space. At this stage, a conservative consideration was made that the new tower should not be taller than the established landmark. Therefore, after a viewing point analysis, the tower height limit was set to 300 metres. This study also proposed to allocate some of the commercial space underground, so that the above ground built form would not be too bulky. With this study, the Land Use Planning Permit was revised in 2005 to add the additional underground floor space and to limit the building height (Casefigure 9.3 & Casefigure 9.4).



Casefigure 9.4 2005 urban design study that gained planning consent (tower of 300 metres) (Source: China Academy of Urban Planning & Design 2005).

But to make a stronger impression in the market, in 2007, the Kingkey Group submitted an application to increase the tower's height from 300 metres to 398 metres (slightly taller than the Shun Hing Square) with the tower floor space increased from 115,000 m² to 165,000 m² (the floor space for the whole development remained unchanged). The tower would house

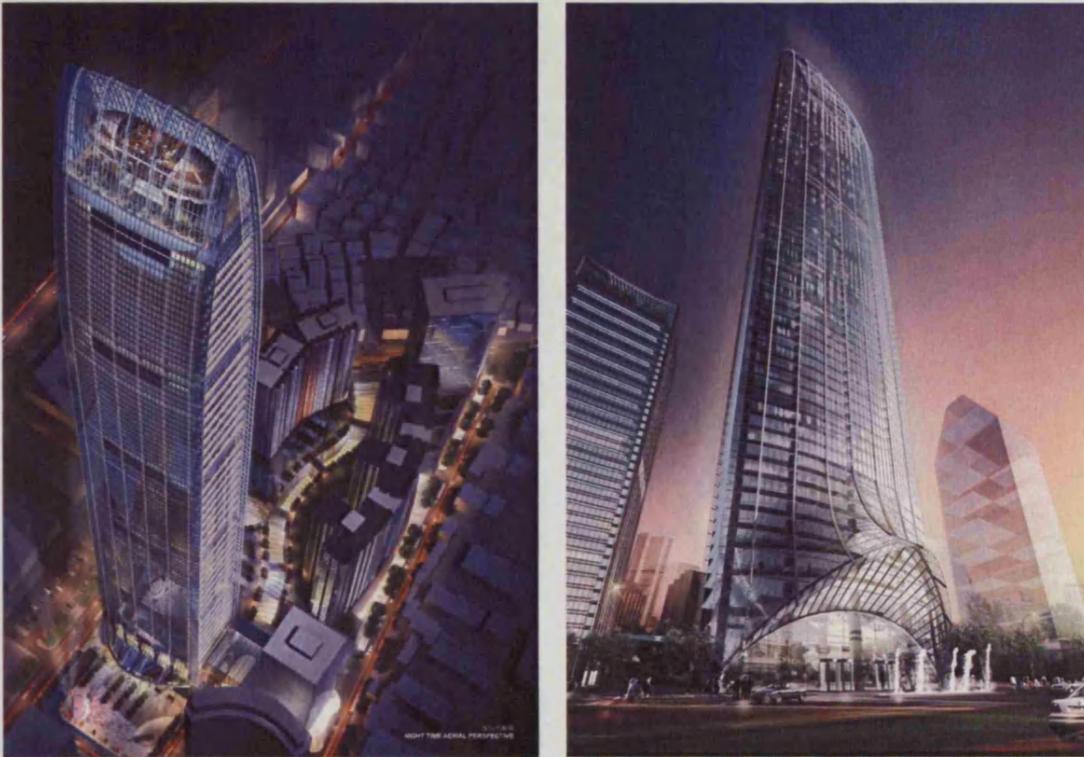
Grade A office and a 6-star business hotel. A technical support by CAUPD was attached. The technical report claimed that the increase of the floor space in the tower would not affect the capability of the public infrastructure too much. Furthermore, the developer argued that a 'group landmark' would further strengthen the city's image (Casefigure 9.5). The planning authority and the local politicians accepted this argument, and later further approved the increase of the tower height to 439 metres (Casefigure 9.3).



Casefigure 9.5 Urban design study in 2007 (Source: China Academy of Urban Planning & Design 2007).

9.3 Design in the planning process

The project was still in the planning process during the field work to Shenzhen. The developer's manager expressed that a 'modern' and high quality landmark building was hoped to attract some international financial service companies. He believed that Farrells' international experiences could bring the project to an 'international standard', in terms of the building external appearance and the high quality materials they would use. The proposed commercial restaurant on the top floor of the tower was also hoped to further strengthen the project's significance (Casefigure 9.6).



Casefigure 9.6 Final schematic design (Farrells 2007)

9.4 Design outcomes

The building is on site now, and the parameters defined in the 2007 Land Use Planning Permit are still governing the current development process. The final schematic design presents a high quality of design, especially:

- a. The internal road remains open to the public event the four blocks were amalgamated by the same developer. This has ensured a permeable pedestrian environment.
- b. A prestige and high quality architecture is presented in the traditional financial district, to help the locality to maintain the economic strength.
- c. The development contributed an entrance to the metro station.
- d. The top floor sky garden is to be public accessible. Although it is a highly commercialized place, it nevertheless provides a new strategic viewing point to the city for the general public to enjoy.

9.5 Evaluation

This case study shows the attitudes of the developers and local politicians on iconic buildings, and shows the importance of the masterplan as the basis for design negotiation. In particular,

- ◆ Developer and local politicians all believe that a 'modern' and iconic landmark can have a positive contribution to the development project and also to the urban environment. But this has encouraged the developer to keep lobbying the local politicians to break the original height limit.
- ◆ The masterplan has successfully secured an acceptable urban environment in this high density development. Although the four urban blocks have been amalgamated by the same developer, the pedestrian and vehicle linkages are still retained. The later urban design study also provided 'evidence' to support the local politicians' decision making, although this study was initiated by the developer.
- ◆ This case also shows that a rich developer with a long-term vision to the development would construct a high quality building, in terms of building design.

Case 10. Shenzhen Stock Exchange

10.1 Introduction

This case study reveals how a powerful developer can make the local government compromise its planning requirements, and shows the developer and local politicians' obsession on 'iconic' design.

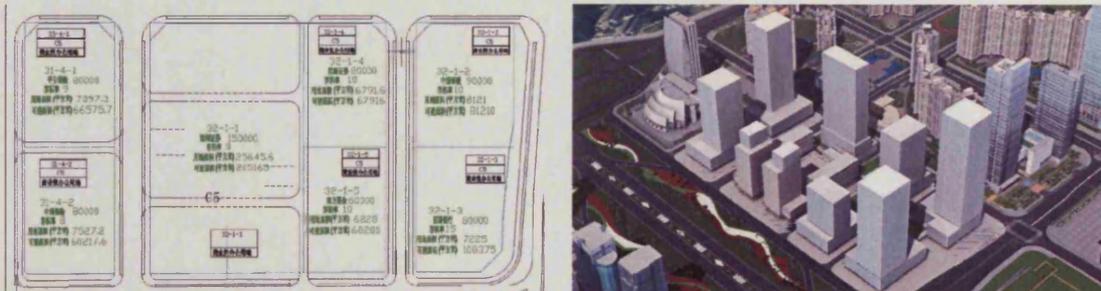
The site was to the west of the new Civic Centre, to the north of Shennan Boulevard. It was a brownfield site originally occupied by a low density exhibition centre (Casefigure 10.1).



Casefigure 10.1 Site and the adjacent context

10.2 Land release and development conditions

The site was intended to provide floor space for Shenzhen's financial service sector. In March 2005, as Shenzhen Stock Exchange refused to be housed in the Great China Exchange Square (Case 1), Shenzhen's politicians decided to allocate some land in this location for this economically important organization. The site for Shenzhen Stock Exchange was 25,600 m², with developable floor space of 150,000 m². Learning from the previous practice, the planning authority commissioned an urban design study to guide the form of these developments. The masterplan presented an ordered built environment using building podiums to front the streets and to enclose public squares (Casefigure 10.2).



Casefigure 10.2 Land subdivision of the site (left) and the built form guided by the masterplan (Source: Shenzhen Municipal Urban Planning Bureau 2005b).

10.3 Design in the planning process

In April 2006, the developer invited five well known international architectural practices for a design competition, including Forster & Partners (Britain), SOM (USA), OMA (Netherlands) and GMP (Germany), with a hope to buy in innovative designs. This was an open-ended competition to choose three preferred schemes for further development, followed by subsequent competitions. Due to the Shenzhen Stock Exchange's amalgamation to the four urban blocks, none of the entries reflect the original urban design study. The schemes by SOM, OMA and GMP were shortlisted in the first round, and the choices between the schemes by SOM and OMA were highly contested in the following two competitions by the jury and the planning authority (Casefigure 10.3).



The OMA's scheme features a single tower block located in the south with an elevated podium. An interesting public space was created under the podium and the podium's roof garden was to be a recreation ground. But this scheme left a huge empty open space in the north without any enclosure or activity support. This design was appraised by the jury as innovated, memorial and being able to reflect Shenzhen's economic ambition, albeit some of the jury members questioned if this kind of design suitable in inner city area. The planning authority welcomed this innovation but remained a concern on the public space between buildings.

Casefigure 10.3 Shenzhen Stock Exchange proposals by OMA and SOM.



The scheme by SOM took a totally different approach by introducing a group of buildings to form a peripheral block with some lower floor openings and upper floor connections. It was praised by the jury as it created some conventional streets and contributed an internal public square, but its bulky massing and the potential structural uncertainty were criticized. The subsequent design development focused on the feasibility study of the construction, the refinement of the building massing and the degree of the square's enclosure.

In September 2007, a final jury meeting was held, with the jury formed by the local politicians and the key decision makers from the developer side. The decision makers in the meeting all found it difficult to choose between an unobtrusive scheme (by SOM) and the radical one (by OMA). But a decision must be made. Finally, the city Mayor made a final decision to choose the scheme representing Shenzhen's brave and innovative tradition of urban management – the OMA scheme.

10.4 Design outcomes

On 19 November 2007, the city Mayor, Shenzhen Stock Exchange managers and the architect Rem Koolhaas laid down the basestone for the project. The final design outcomes are to be evaluated after the construction, but some preliminary evaluation can be made based on the drawings. The unusual building design provides the project a strong identity and the public space under the raised podium potentially can provide an interesting space for the public to enjoy. But the huge empty space behind the building seems to be redundant, and its design and management are crucial to generate a useful and enjoyable place. This is a large scale building with large scale public space, with a strong monumental sense. This sense seems to be contradictory to this financial district, which supposes to be a vibrant 'downtown' with some retail and cafe spaces, and some nice human scale meeting places.



Casefigure 10.4. The final schematic design for the Shenzhen Stock Exchange.

10.5 Evaluation

This is a politically important project due to the Shenzhen Stock Exchange's significant economic contribution to the city. For this reason, the developer had a strong power to achieve his design ambitions. He ignored the urban design guidance, and invited five prestigious international architects to a design competition. This resulted in proposals for a single free-standing building. The planning authority's regulatory function has been weakened when facing the developer's strong political lobbying power. This case study also revealed the local politicians' priority on urban design, which has prioritized the symbolic value (economic value) of the design projects over the quality of the public space (public value). This preference potentially encourages designers to generate more iconic designs.

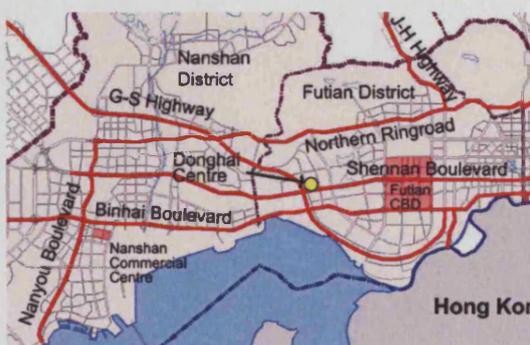
Case 11. East Pacific Centre

11.1 Introduction

This is a mixed-use development with a significant increase of density, involving a complicated and lengthy negotiation on the key design parameters.

The site is in a gateway location to Shenzhen's traditional city centre, next to the interchange of Guangzhou-Shenzhen Highway and Shennan Boulevard (Casefigure 11.1). Shennan Boulevard blocks the north-south connection in terms of vehicle and pedestrian movements. The only available north-south vehicle connection locates to the east and west of the site, with around 1,000 metres distance between (Casefigure 11.2). There are two subway stations to the site's west and east, each has 500 metres distance from the site. There is a pedestrian bridge and an underground pedestrian link to the south along the 300 metres linear site. As the other sites along Shennan Boulevard, it is difficult for pedestrian to go across the 100 metres wide road.

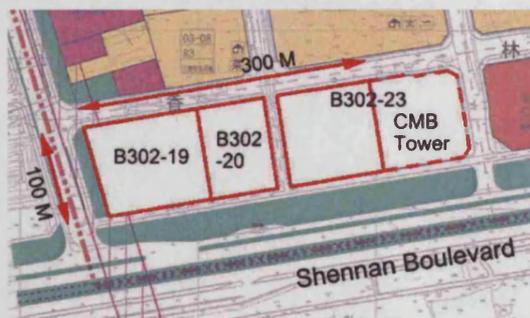
The site for development was containing three individual plots leased to different developers in 1994 and 1995 (Casefigure 11.3). Donghai Group Later assembled all the sites and intended to develop the whole block together.



Casefigure 11.1 Location of the site.



Casefigure 11.2 External connections.

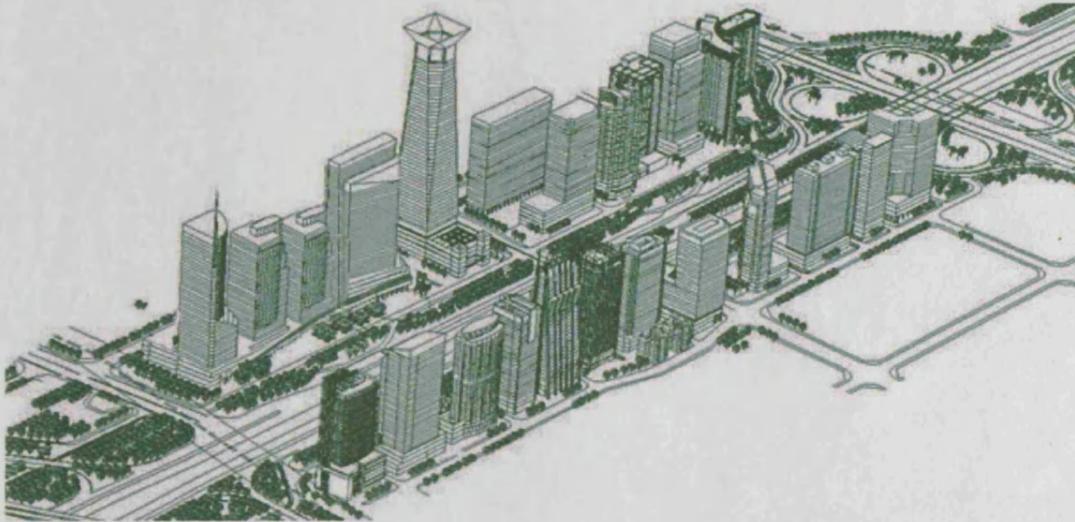


Casefigure 11.3 Boundaries for the sites.

11.2 Land release and development conditions

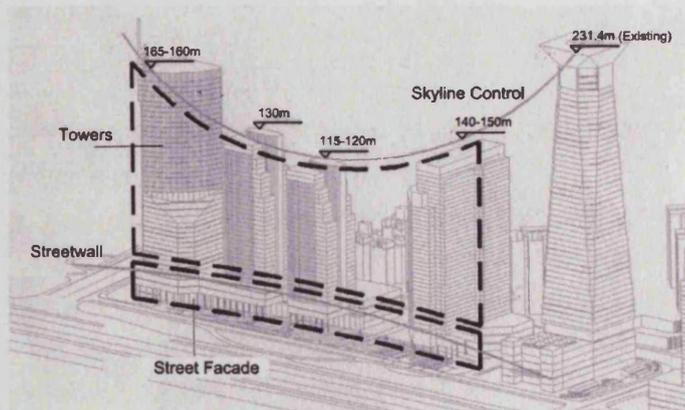
In January 1995, the government leased site B302-23 of 21,700 m² to Donghai Group for free with the uses regulated as commercial, office and hotel. In 1997, the site was split into two parts. Donghai Group developed China Merchant Bank (CMB) Tower in the eastern site and

retained 102,700 m² floor space allowance on the rest of the site. In 2000, when all the three developers were all proposing to develop these sites, the planning authority commissioned CAUPD to carry out an urban design study to this linear area in order to form an ordered urban form (Casefigure 11.4).



Casefigure 11.4 Urban design intension for the area around the site

In October 2001, the planning authority suggested the three developers to cooperate to develop the three sites, in order to establish a coordinated urban design strategy, to build a central plaza, and to link the site with the metro stations. In December 2002, the planning authority recommended the developers to consult CAUPD to carry out an urban design study for the three sites. The proposal was to protect the landmark status of the CMB Tower, to provide an open space and to establish a unified and interesting skyline. A set of detailed design parameters was provided subsequently (Casefigure 11.5).

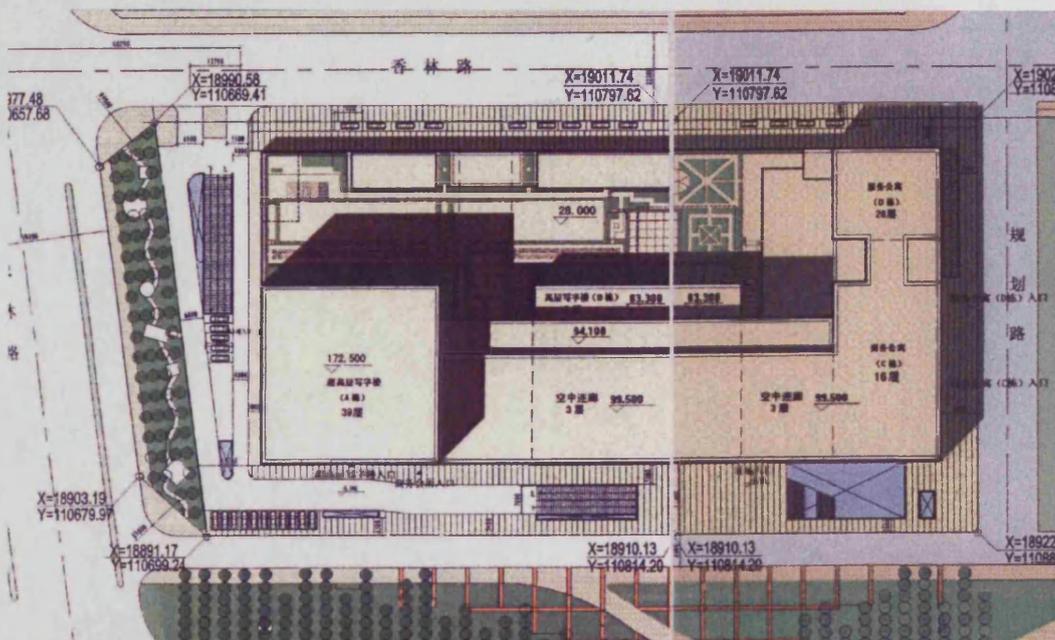


Casefigure 11.5 Key parameters to the three sites

Taking the CAUPD's design advice on board, all the three developers started their individual planning applications. But these developers failed to coordinate with each other due to their different investment strategies. By 2005, all the three sites had planning permits (Casefigure 11.6). But the schemes had shadowing issue to the northern residential area. The three sites were to be fully covered by buildings, without active public space and with a lack of consideration to link the underground development to the subway station (Casefigure 11.7). These schemes were not developed due to Donghai Group's assembly of the three sites.

| | 1994-1995 | 2003 (after the CAUPD urban design study) |
|----------|---|---|
| B302 -19 | Parameters in Land Contract: Plot size: 12,700 m ² ; Floor space: 92,500 m ² . | Land Use Planning Permit (08/2003): office 91,000 M ² , commercial 29,000 m ² ; Height: 190 m. |
| B302 -20 | Land Contract (09/1994): Plot size: 8,100 m ² ; Floor space: 65,000 m ² | Land Use Planning Permit (08/2003): commercial 25,000 m ² , apartment 40,200 m ² ; Height: 130m. |
| B302 -23 | Parameters for the rest of the site in 1995 Land Contract Supplement: office 86,500 m ² , commercial 15,300 m ² . | |
| Total | | Floor space: 287,400 m ² (commercial 69,350 m ² , office 86,450 m ² , apartment 131,600 m ²); Floor Area Ratio: 9; Height: 190m |

Casefigure 11.6 The changes of the key parameters for the three sites.



Casefigure 11.7 The permitted designs for all the three sites.

In October 2005, after assembling the three sites, Donghai Group lobbied the government in order to increase the floor space allowance. To increase the floor space has been harder and harder under the tightening planning control. Potentially, the developer needs to gain

support from the local politicians, as well as to provide sound reasons to persuade the planning authority and the Planning Committee to change the existing Statutory Map parameters. Now, the developer was willing to increase the floor space from 287,400 m² to 360,000 m² (a 25 per cent increase), which was more than the permitted parameter in the Statutory Map for the site. To test the possible built form and development capacity of this strategic located site, an architectural concept design consultation was carried out (Casefigure 11.8).



Archurban (Singapore)



Archurban (Singapore)



Woods Bogot (Australia)



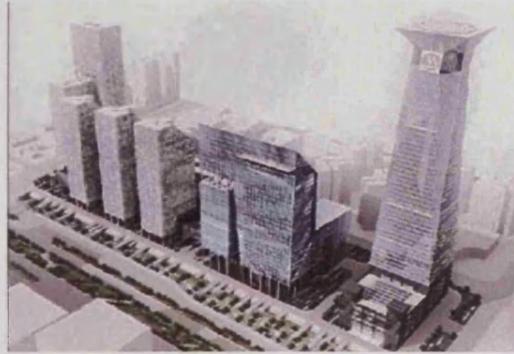
Epstein (USA)

Casefigure 11.8 The first design consultation.

The planning authority was not satisfied with the consultation schemes, on the ground that they did not provide active public space, and neglected the existence of the CMB Tower. In April 2006, taking the previous lessons, the developer carried out another architectural consultation (Casefigure 11.9).



Archurban (Singapore)



AUBE (France)



Obermeyer (Germany)



Gensler (USA)

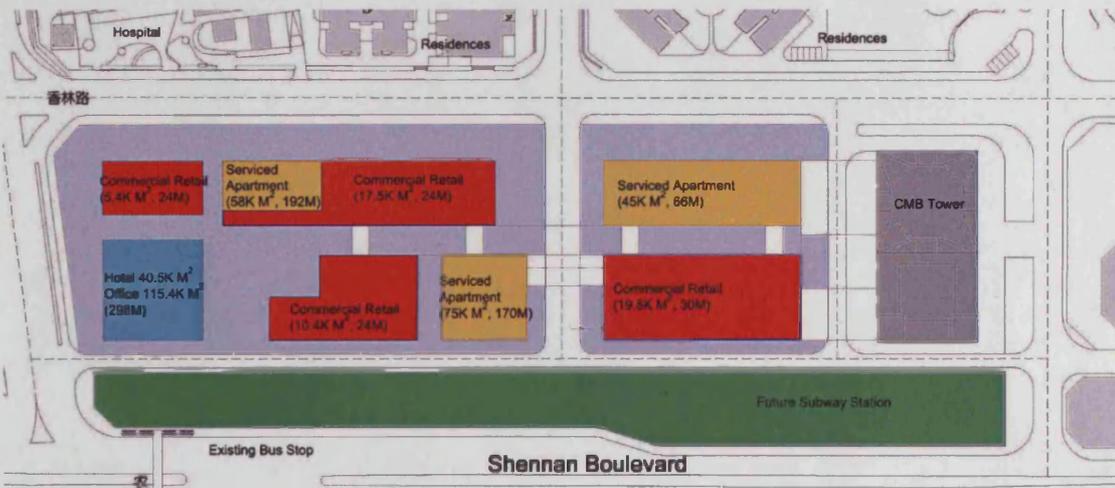
Casefigure 11.9 The second design consultation.

The planning authority was again not satisfied with the results and required the developer to reconsider the design based on the development density, the quality of the public space and the relationship to the CMB Tower from different directions and distances. When the developer realized that design competition could no longer convince the planning authority for some greater floor space allowance, in July 2006, he invited AUBE architects to negotiate an acceptable building form. In these negotiations, the planning officers tended to agree that given the proposed high density, if the original height limits were to remain, the proposed development would be too bulky (Casefigure 11.9 left). They considered that a taller tower on the site seemed to be more suitable (Casefigure 11.9 middle), but it should be placed far away from the CMB Tower, to avoid a feeling of overcrowding (Casefigure 11.9 right).



Casefigure 11.9 Models used to discuss the built form between the architect and the planning officers.

The planning officers urged the architect to work out the details of the urban design before the scheme was presented to the city Mayor for political support. These included the new design approach to this gateway location, the quality of public space, the relationship with the underground development, the land use, the issue of connectivity, and the shadowing issue to the north. The architect finally worked out an indicative scheme that met the planning officers' requirements (Casefigure 11.10). So a taller tower was located away from the CMB Tower to strengthen the site's gateway image, and some active public space is enclosed by the towers and podiums. In 2007, the city Mayor agreed with the planning authority's argument on this gateway site, and the Planning Committee approved the amendment of the Statutory Map, and the planning authority permitted this application subject to the urban design conditions (Casefigure 11.11).



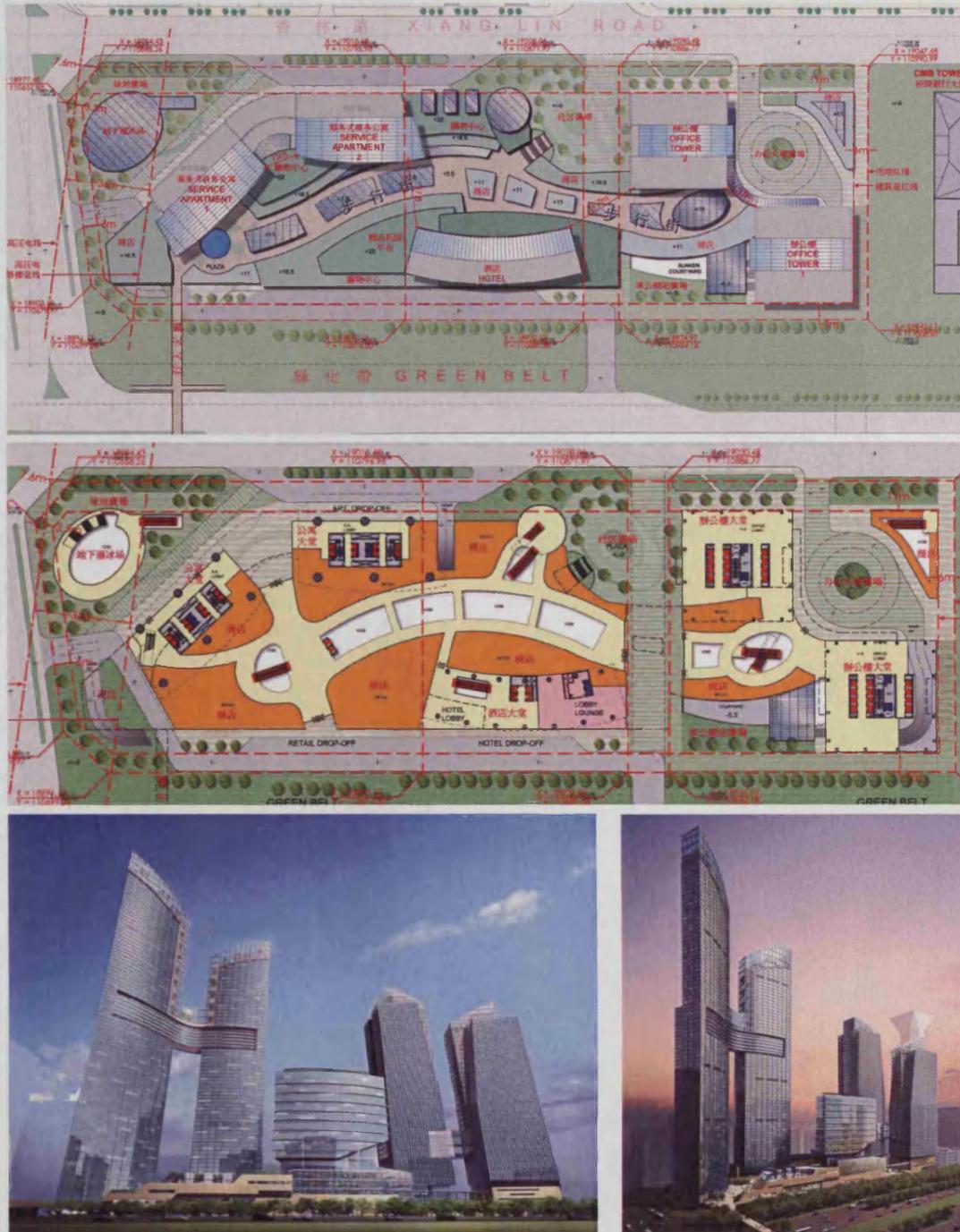
Casefigure 11.10 Indicative scheme as the result of the urban design study (Source: Shenzhen Municipal Urban Planning Bureau 2006)

| Plot size | FAR | Above ground floor space | | | | underground space |
|-----------------------|-------|--------------------------|-----------------------|------------------------|-----------------------|-----------------------|
| | | office | hotel | apartment | retail | |
| | | 360,000 m ² | | | | |
| | | | | | | retail |
| 34,805 m ² | 10.35 | 99,500 m ² | 44,135 m ² | 181,000 m ² | 35,365 m ² | 30,000 m ² |

Casefigure 11.11 Final parameters approved.

11.3 Design in the planning process

Based on the above design conditions, the Hong Kong architectural practice of Wong and Ouyang was commissioned to carry out a schematic design in July 2007 (Casefigure 11.12). This scheme strictly complied with the planning parameters, located the two tower blocks to the west of the site, and introduced a semi-public commercial street running throughout the site. This scheme went through planning process quickly and it is on site now.

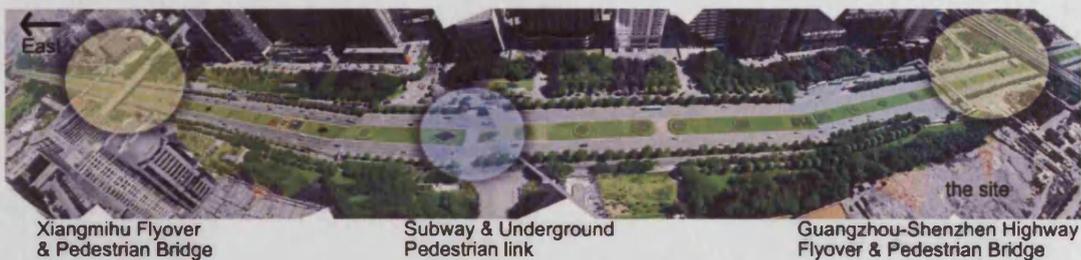


Casefigure 11.12 Final architectural schematic design. Top: site plan with ground floor arrangement; middle: lower ground floor with sunken plaza; bottom: artist impressions.

11.4 Design outcomes

The urban design studies for this scheme had been carried out for two years to negotiate a possible built form for this mixed-use development. A lot of attention was paid to relate the proposed development to the established landmark CMB Tower, and the result was to propose the tallest tower far way from the CMB Tower, to make the built form less oppressive. The semi-public commercial street throughout the site is a possible contribution to the urban environment, providing some crucial activity support in this highway dominant site.

But the pedestrian connections between the project and the sites opposite to Shennan Boulevard are still not improved, having only two pedestrian connections for this 500 metres long linear site (Casefigure 11.13). During the urban design studies, no building form study was carried out to relate the proposed development to the residential buildings, although the potential shadowing effects from the towers was considered. In this process, the planning authority seems to have had no problem with the highly contrasting scale between the proposed development and the residential buildings. The residents were well aware of the development, but the shading issue was resolved by financial compensations, and they seemed to accept this (Casefigure 11.14).



Casefigure 11.13 Urban environment on pedestrian level (Shenzhen Municipal Urban Planning Bureau 2006), adapted by the author.



Casefigure 11.14 East Pacific Centre urban design study (left, by AUBE Architect, 2007) (Source: Shenzhen Municipal Urban Planning Bureau 2006) shows a great contrast in building massing with the residential development behind (right, photo by the author, 2005).

11.5 Evaluation

This is a difficult site segregated by high standard urban roads, and it is a gateway site with a huge pressure for intensive development. But planning officers has successfully achieved some public benefits from the project. In particular:

- ◆ The high standard urban road has been the major design challenge and it weakens the pedestrian connectivity. Without the change in highway design, urban design at site level will have very limited achievements. The urban design study over the years in this project has not yet solved this problem.
- ◆ The urban design studies in the early years at pre-planning stage have been the crucial skilled supports to the planning officers. These studies have helped the planners to understand the site's development potential, illustrated the possible impacts of the building form to the urban environment and the possible achievements the planners could achieve.
- ◆ Planning officers have had major inputs on the final form of the design. The negotiations with the developer and architects were arguably constructive, with clear implications on what should be achieved in design terms. More importantly, planning officers' strong skills in design enable them to study the possible built forms with the architects.
- ◆ One of the most successful achievements for the planning officers is the active public space generated in the project. Although the actual design outcome will need some post-occupation evaluation, the schematic drawings show a continuous and enclosed semi-public commercial street supported by retail use.
- ◆ But throughout the design and negotiation process, there has been a lack the concept of contextual analysis. Attention has been paid to the relationship to the landmark buildings, which could enhance the city's image, but the relationship to other strategically less important new buildings. For example, the residential area to its north has not been a major concern. A significant change of scale on building height has been witnessed between the residential buildings and the proposed tower blocks, resulting in an uncomfortable street environment.
- ◆ During the design development, no attention was paid to sustainable design from the control side.
- ◆ The established Statutory Map amendment mechanism has been a strong institutional backing for the planning officers to negotiate public realm improvement. Although gateway location has been a strong argument for the developer to increase the floor space, the Statutory Map amendment mechanism has forced the developer to provide some convincing reasons for this increase, which usually is the public realm improvement.

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