Urban Planning, Policy and Everyday Use of Green Space: A case study of Huangpu District, Shanghai

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Abstract

This thesis examines historic and contemporary relationships between landscape design, housing and everyday uses of green space in urban China. In doing so, it draws together writing focused on theorizing nature and everyday life, to offer critical insights into urban political, economic, social and cultural change in Chinese cities. The thesis begins with a review of religious philosophies and cultural traditions relating to the development of Chinese gardens and then discusses the impact of the introduction of 'western' style public parks alongside the emergence of modern urban planning and design, in order to understand urban change in China. It then critically considers the contemporary political, economic and policy context and everyday practices associated with housing development and green space and residential life at different urban spatial scales. Evidence from in-depth interviews with key stakeholders and local residents highlights the diversity and complexity of everyday relationships between urban planning, housing and the use of green space, and shows that changing notions of nature and everyday life can be mapped onto housing development and associated urban, social and spatial inequalities. The thesis concludes with theoretical insights and also offers key recommendations for policy and practice based on empirical evidence which highlights routes to developing a more progressive relationship between landscape design, housing and the everyday use of green space in Chinese cities.

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Chapter 1   Introduction

1.1   Context of Research Problems

There has been increasing concern across the social sciences that urban research has been overly dominated by theoretical and empirical perspectives developed through the study of a small number of 'archetypal' cities in Europe and North America, thus, there is a need to focus on a more diverse range of cities around the world (Robinson 2002; Edensor and Jayne, 2011). This research will contribute to a growing body of writing focused on urban change in China (see for example, Wu, 2006 and Whitehead and Gu, 2006). While increasing research projects have focused on a diverse range of topics various cities have been introduced as case studies. Pow (2011, p. 47) argues that research tends to fall into the trap of assuming that 'political and economic effects peculiar to China have rendered the Chinese urbanization trajectory *more different* than similar from Anglo- American cities … [and accepted rather than critiqued how the] Chinese state in particular is seen to respond to and/or create conditions and institutions that render urban China's experience as unique and exceptional' (Pow 2011, p. 47). The focus of this research then is to contribute to understanding Chinese urbanisation through empirical research undertaken in Huangpu, a central urban district of Shanghai, focusing on the relationship between open space and housing.

However, while there has been a small number of academic studies into the positive and negative impacts on human life that are bound up with the relationship between housing and open space in China (Jim and Chen, 2006; Xu *et al* 2011), more focus has been paid to the wider development of housing (Wang and Murie, 1999; Tomba, 2005; Wu, 2004; Zang, 2010). Such writing has focused on the development of urban housing in relation to historic and traditional Chinese design for living, the legacy of colonial planning and design, to the emergence of state socialism, through the 1950s to 1970s, when political dominance of work-units (*danwei*) were responsible for planning and providing public housing. Since 1978, the emergence of an 'Open Door' policy has ensured a shift from a 'national housing allocation system' to the building of 'commercial housing' dominated by the market economy, alongside a parallel provision of high-density, high-rise state housing (Wang and Murie, 1999). More recently, influenced by a real estate boom there

has been a growth of 'gated communities' throughout China which seek to attend to the desires of increasing numbers of middle-class residents who are seeking to achieve traditional notions of a 'good life' based on both social and physical distinction which is, in turn, profoundly transforming urban landscapes (Zhang, 2010). More specifically, such urban change is characterised by an increasingly eclectic mix of 'western' building styles becoming popular in cityscapes, as well as a re-emergence of interest in historic Chinese design features that includes a re-articulation and connectivity with, and desire to live with nature (Zhang, 2010).

1.2 Theoretical Background

In order to understand the relationship between landscape design, planning and everyday use of green space in Huangpu District, Shanghai, this research will draw in particular on two bodies of literature – engagement with 'nature' and 'everyday life' - from which the research questions, research design and methodology have been developed.

1.2.1 Nature and the city

Throughout the social sciences, writers have discussed the environmental basis of urban living, and how the 'urban natural environment' and 'nature' itself are subject to political, economic, social and cultural definitions, understandings and influences (Benton-Short and Short, 2008). With this background, I will consider 'nature' as 'a contested concept' that is deserving of critical attention (Ginn and Demeritt, 2009). The thesis will devellop this perspective in order to engage with writing which considers the 'commodification of nature'. For example, research in China includes Li's (2012) study of Shanghai's Houtan Wetland Park that was developed for the Expo 2010, - a post-industrial site based on the cultivation of an urban 'wildspace'. Also of particular importance is Zhang's (2010, p. 91) work on the growth of gated communities in the suburbs and central city that points to historic motifs which 'make people who live [t]here feel they have returned to nature even though they live in the heart of the city'. Iossifova's (2011) research considering how the close proximity of new urban gated communities have led to 'public space' being enveloped - a greening and 'fencing-off' of areas of the city, in contrast to disadvantaged localities where 'nature' may only be glimpsed in 'window-boxes', vegetable plots and

by the side of the road will also be of particularly importance to this research. Such writing will be discussed with reference to research focused on the conflicts and tension that are bound up with green space, 'nature' and urban living from elsewhere in the world (see for example Heynen *et al* 2006; Whitehead, 2005; Zerah, 2007; Loram ,2007; Hebbery, 2008; Pauleit, 2003; Shillington, 2008; Sullivan *et al* 2004; Hindagneu-Sotelo, 2010; Woolley, 2010; Beer *et al* 2010; Pauleit *et al* 2003; Bhatti and Church, 2004).

1.2.2   Everyday life and the city

This research will also engage with theoretical discussion of 'everyday life'. In doing so my study will focus on the relationship between green space and residential areas with reference to typologies developed in the Chinese Ministry of Housing and Urban-Rural Development's 'Classification Standards of Urban Green Space CIJ/T85-2002' which included 'public spaces' (such as parks, woodland, cultivated flowered and grassland areas and so on) and 'private' spaces (gardens, courtyards, allotments). My research will also focus on conflicts relating to boundaries and the 'fuzziness' of the use and experience of 'public' and 'private' with regards to green spaces and residential areas (Bromley, 2004). For example, Bromely, 2004) highlights a continuum of 'public' and 'private' space, and that 'gardening' is often a good example of how private encroachment effects public land where 'private' activities in a 'public' domain tend to be associated with 'informal' or even 'illegal' activity. However, Bromley (2004, p. 294), nonetheless argues that there is a 'moral' logic to such actions – rather than people just 'taking possession of public space in a selfish way'.

In these terms the study will consider how 'public' and 'private' are not exclusive or exhaustive categories but instead are socially and politically formulated and that 'popular meanings can be produced through dialogical encounters … [where] respondents look to the material form of the site, and its location, in order to discern the intent of the space and thus shape a moral and aesthetic response to it' (Bromley 2004, p.294). Such concerns will be drawn out with reference to the critical and influential writing of De Certeau (1984) and Lefebvre (1971) who highlight experiential dimensions of urban life and that the city is significant as a site of struggle and resistance between the powerful and those who are less powerful. Indeed, Schmid (2012, p.58) suggests that 'the point of

departure for critical social theory should always be everyday life, the banal, the ordinary … changing everyday life: this is the real revolution … and any point has the potential to become central and be transformed into a place of encounter, difference and innovation' of a collective movement and asserting a 'right to the city'.

1.3   Research Aim and Objectives

The aim of the research is to explain the interaction/ associations between urban policy, planning and use of green space in residential areas in Shanghai.

Objective 1): To understand historical changes in the design, form and function, and relationship between the provision of housing and green space in Huangpu District, the research will:

- develop an understanding and their relationship of historic conceptions of 'nature' and 'public' and 'private' space have informed the development, design, provision and - experience of green space in Huangpu district, Shanghai;
- develop an understanding of the historic development of urban planning and policy of Huangpu District in Shanghai;
- map the diversity of both green space and housing in Huangpu District;

Objective 2): To critically consider the contemporary political, economic and policy context and everyday practices associated with green space and residential life at different spatial scales in Shanghai, the research will:

- investigate contemporary public and private sector agendas relating to urban planning, housing, and housing policy of green space design and provision at the spatial scales of residential district, quarter and housing cluster;
- offer detailed insights into everyday practices of residents and policy makers with regards to perceptions and experiences relating to green space and provision at different urban scales;
- explore differing patterns of the design and provision of green space in diverse residential areas and at different urban spatial scales

Objective 3): To offer policy suggestions regarding the planning, design and provision of green space in residential areas in China, and to emphasize the diversity and complexity of green space provision in residential areas.

1.4   Thesis Structure

This research begins with an introduction that includes an overview of key theoretical debates, research aims and objectives, rationale and justification of case study location, methodology and research design and a brief chapter-by-chapter summary of the content of the thesis. Chapter 2 outline the key theoretical debates that will underpin the thesis. I begin by discussing historic and contemporary relationships between landscape design, housing and everyday uses of green space in urban China. Drawing together writing focused on theorising 'nature' and 'everyday life', I develop critical insights into urban political, economic, social and cultural change. The chapter includes a review of religious philosophies and cultural traditions that underpin the development of Chinese gardens and then focus on the impact of the introduction of 'western' style public parks alongside the emergence of modern urban planning, landscape design and 'greening' policies. I then discuss how changing notions of 'nature' and 'everyday life' can be mapped onto contemporary housing development and associated urban social and spatial inequalities within Chinese cities. The main aim of this chapter is to highlight how critical insights at the intersection of thinking on 'nature' and 'everyday life' can inform urban development, planning and policy.

Chapter 3 highlights how the theoretical framework outlined in chapter 2 influenced the formulation of the methodology and research design, the subsequent coding and analysis of data, and structure and argument of the thesis. In doing so, I focus on the philosophies and practicalities of the methodology and research design; including a rationale and justification for the choice of mixed-methods research – textural/discourse analysis of historical and archival material; mapping of Huangpu district using maps and photos; textural analysis of contemporary policy and plans; in-depth interviews with key actors and householders in the case study locations, and participant observation in public and private spaces). The chapter will also include a brief introduction to the case study research in relation to international, national and city (Shanghai) and local (Huangpu district) policy and research agendas. I highlight how the methodologies complement each other and how they work together to generate robust data sets that are relevant to the aims and objectives of the research.

Chapter 4 includes a detailed introduction to the case study element of the research. This will include details of the justification and selection of the case study areas based on a review of general profile data (population size, socio-economic characteristics such as age, gender, household income etc.). I will also outline a detailed introduction to 'housing types' (historic Chinese and colonial housing; state built housing (1960-90s); high rise private housing (gated communities) and traditional working class housing) and their role and position within the overall housing market of Shanghai and Huangpu district. The chapter will also map (through the use of photographs and official maps/statistics) the changing relationship and physical re-development of; housing and green space, commercial/residential land-use etc. with regards to both Shanghai and Huangpu district. The rationale and aims of this chapter is to offer a detailed and critical understanding of changing social and physical changes taking place in Shanghai and Huangpu district in order to contextualise the material presented in the subsequent chapters.

Chapter 5 is a critical review of national and local policy in China. This substantive chapter is the first to integrate the theoretical arguments and debates outlined earlier in the thesis, with the empirical evidence generated through the robust research methodology and design. More specifically this chapter draws on a specific mix of data sets from the empirical research (textural analysis of historical and archival material; and textural analysis of contemporary policy and plans) in order to highlight key themes that have emerged from the research findings. In doing so the chapter considers how planning and policy changes highlight changing histories and cultures bound up with relationships between 'nature' and private and public space; how such discourses are included in technical specifications of housing and green space planning; as well as constitutive of policy transfer relating to policy and planning system and decision making in the case study locations and from national, urban and local levels which highlight the extent to which there is 'joined-up' policy and practice. The rationale and aims of this chapter is to offer comprehensive understanding of policy frameworks and context relating to landscape design, housing and green space in order to allow critical reflections on the strengths and weaknesses of policy and resultant practice at national levels, within the context of Shanghai and at the local level of Huangpu district.

Chapter 6 is the second substantive chapter of the thesis and will focus entirely on Huangpu district, and the five housing types that are the focus of the research. The evidence presented in the chapter is taken from the textural analysis of historical and archival material; mapping of Huangpu district using maps and photos; textural analysis of contemporary policy and plans; in-depth interviews with key actors and householders in the case study locations, and participant observation in public and private spaces. The chapter highlights the relationship between policy and practice and complexity/diversity of urban spaces. In combining findings relating to policy documents, interviews with stakeholders and evidence from residents this chapter offers insights into disagreements, conflicts and tensions between policy/planning and residents views on strengths and weaknesses of landscape design, housing provision and green space; similarities and differences between 'district', 'local ' and housing type (historic Chinese ; colonial housing; state built housing (1960-90s); high rise private housing (gated communities) and traditional working class housing) policy/planning challenges and views of local residents from each housing type and in terms of socio-economic profile. The rationale and aims of this chapter is to offer insights into similarities and differences between professional planning/policy priorities and agendas and local residents' views on landscape design, housing and green space.

Chapter 7 is the final substantive chapter of the thesis and will focus exclusively on the data generated from the in-depth interviews with local residents and participant observation in public and private spaces. The chapter will question the key differences and similarities of residents living in different housing types, from different socio-economic backgrounds and within the diverse spaces of Huangpu district in terms of the context and importance of green spaces. The rationale and aims of this chapter are to understand the diversity and complexity of everyday relationships between landscape design, housing and use of green space; with regards to changing; socio-economic structures; work and leisure practices; the physical re-development of the city; changing views on the place of 'nature' and attitudes and conceptions of 'public' and private. The chapter will conclude by reflecting on the material and findings presented in chapters 5 and 6 in order to cross-reference professional and residents' views/perceptions/priorities with regards to landscape design, housing and green space.

Finally**,** Chapter 8 will conclude the thesis by drawing together connections and dialogue between key arguments for the academic literature with reference to the findings from the research as outlined in each substantive chapter. This thesis then outlines the findings and key recommendations from the research in order to inform a more progressive relationship between landscape design, housing and everyday use of green space in Chinese cities.

Chapter 2   Literature Review

2.1 Introduction

This chapter seeks to understand historical and contemporary changes in the form and function of Chinese cities. The first section will be a brief introduction to feudal, semi-feudal and semi-colonial China in order to understand 'traditional' conceptions of 'nature' and 'home', underpinned by a more sustained engagement with Chinese culture and the essential philosophies of classical gardens. It is recognized that the application of cultural symbols and their constitutive semantic meanings continue the traditional and historical context of Chinese gardens, which reflects the rational brilliance of the ancient Chinese people's construction activities and represents their ideal of a harmonious spiritual and living environment. Section 2.3 highlights how the modern urban public park emerged in semi-colonial, semi-feudal Chinese society and its cities and focuses on the events leading to the creation of green space amenities in Shanghai's foreign settlements and examines how this new type of space - called 'a park' - altered notions of 'public' space that have informed the development of cities in China ever since. This research considers the ways in which Western ideas have been transmitted and adopted in China and traces ideas introduced from Western sources that have become hybridized within Chinese society.

Further, section 2.4 mainly provides a more sustained engagement with various periods of communist urban and housing reform associated with 'the great leap forward', the post-Mao era and the 'open door' policy. A more detailed investigation of the contemporary policy and everyday experiences of green space in diverse residential areas in Shanghai will be undertaken. This offers a critical understanding of the ways in which academic debate at the intersection of landscape design and broader urban theory can help inform socially and environmentally progressive urban development, planning and policy. Finally, section 2.5 explores the understanding of the perspectives of nature, a re-articulation of traditional religious philosophies and a cultural preoccupation with 'everyday' connections with nature in the city. In addition, it seeks an understanding of the extent to which nature has become commodified in these contemporary changes.

2.2   Overview of Chinese Traditions and Classical Gardens

In China, the classical gardens are one of the most valuable, tangible and cultural heritages. They are historical and cultural carriers of a true reflection of the ancient Chinese dynasties in different historical stages. They have influenced social and economic development and increased the level of technology and horticultural construction (Li, 2009). Moreover, the traditional gardens reflect the Chinese people's view of nature, such as the 'harmony of heaven and men' and 'letting things take their natural course' (Hu, 2013, p.13) as well as capturing the spirit of nature as an essential and unifying force in everyday life. In line with the essential philosophies of Chinese traditions and religions, the classical gardens reveal a thorough knowledge of the theories and concepts of Taoism, Confucianism, Buddhism and *Fengshui* (geomancy). As a valuable historical legacy for mankind, Chinese classical gardens have their own unique cultural style that has earned them the title of the "Mother of World Gardens'. The Hon. G.A. Jellicoe, who was the first president of the International Federation of Landscape Architects, claimed in an article *The Search for A Paradise Garden* that the gardens of almost the whole world are based on the Chinese, the Western Asian, and the Ancient Greek (Li, 2009, p.3).

Therefore, a detailed study of these Chinese traditions and classical gardens creates a basis for us to understand the evolution of green space or nature in cities and to acquire a thorough knowledge of the interaction between green space and housing. Moreover, this section aims to provide the context of the origins of gardens, an overview of the history of Chinese classical gardens and to develop an understanding of the traditional ideas of 'nature' and a 'good life' underpinned by social and philosophical distinctions which is, in turn, profoundly transformative within urban everyday life.

2.2.1   The origins of the traditional garden

The concepts of a garden as a Paradise on Earth suggests the ideal place for humans to live, work and engage in recreation. From the point of view of linguistics, the word 'Paradise' entered the English language from the French word 'Paradis', inherited from the Latin 'Paradisus', from Greek 'Paradeisos' (park, paradise, Garden of Eden), and

from an Old Iranian root, attested in Avestan as 'Pairidaeza' of which the literal meaning in the Eastern Old Iranian language is 'Enclosure, Park'. Francis Bacon, an English philosopher, statesman and scientist, in the opening lines of his essay 'Of Gardens' claimed that:

> *"God Almighty first planted a Garden. And indeed it is the purest of human pleasures. It is the greatest refreshment to the spirits of man; without which buildings and palaces are but gross handyworks; and a man shall ever see that when ages grow to civility and elegance, men come to build stately sooner than to garden finely; as if gardening were the `greater perfection'"* (Bacon, 1909, p.14).

However, gardens have not always existed; they began at a certain period in the evolution of society and are required to create a place for people's recreation activities to restore mental and physical strength after daily work. They came into being as a result of a natural necessity, and are also based on the wish to live in a mutual integration with nature, a beautiful living environment in which people's practical needs are fully coordinated, and they will continue only for as long as this need persists. For thousands of years, humans have been taking advantage of elements of the natural environment, the use of water, soil, rocks, plants, animals, buildings and other materials to create a pleasant recreational realm. As Bacon wrote, the 'life of humans still had an intact relationship to nature and was transacted within nature, of which it was a part. Such as in the garden, art does not imitate nature but joins with nature, and becoming one with her' (Bacon, 1909: 22).

Throughout the world, the origins of gardens have been influenced by religious beliefs. Some worshipped great mountains whilst each river was felt to be ruled by a spirit who had supernatural power for the local inhabitants. However, the most fundamental function of gardens was the use of vegetation which humans could adapt to secure life-enhancing products and increase the functions of public, recreational and cultural activities as part of social and economic development (An, 1991). Early civilization grew up along the Tigris and Euphrates rivers of the Middle East during the apex period of ancient Egypt around 3000 B.C. The first mention of intentional and cultivated non-productive use of vegetation was related to the Hanging Gardens of Babylon (Miller,

1997). Vegetation found in the early settlements had previously only been cultivated for food (Koch, 2000), and trees have been important to urban life since that time.

In ancient China, the origins of the Chinese garden were underpinned by the idea of 'benign nature' as mysterious and formidable, leading people to feel disheartened about their own strength and to marvel at the greatness of nature rather than their own backward production (Huang, 2008). From the Shang era (1600-1039 B.C.), people had already settled down to agriculture and paid homage to the soil in what has been called 'a religion of agricultural fertility' (Keswick *et al.,* 2003). The original form was an attempt to make peace with the gods by offering sacrifices to secure control of natural phenomena which they saw as being under the authority of the gods; the emperors built platforms called '*Tai*' and '*Xie*', to contribute to the power and authority of gods by communicating with them. As a symbol, people could look up to high mountains or the sky and down to the earth to seek the origins of the land and its people. One the oldest Chinese celestial myths gives an illuminating picture of how modestly the Chinese regarded their own symbolism of nature, it is associated with the mythical *Xi* Goddess living in the '*Yao-Chi*' - the abode of immortals - which is described as a beautiful garden and an ideal place for human life (Feng, 1990). Moreover, another later creation myth reported by Liezi, who was a sage and lived in the fourth century BCE, shows a quest derived from the Yellow Emperor's dream:

> *"On the islands in the eastern seas are immortal beings who live on dewdrops and pine cones. They do not eat grain, they feed on the wind and vapour, and their minds are as clear and still as the mountain lake … The sun and moon send a gentle light, the seasons are never harsh, the earth is rich, and the inhabitants are kind. The deities bless the land, and the monsters never go near it. This is the land the Yellow Emperor visited in his dream"* (Wong, 1995, p.53).

The Chinese character for 'immortal' (*Xian Jing)* shows a man beside a mountain and water. It reduces to mean the life between the spirit world and the natural world, it symbolizes the fairyland wherein lives the deity in a place of immortality without death. Therefore, the Emperors wanted to display their supreme power and created scenic, aesthetically tasteful gardens built with 'one pond with three celestial hills or islands'. This was the typical mode in Chinese classical (or imperial) gardens during the Qin and

Han Dynasties right through to the Qing Dynasty more than two thousand years later. This layout feature of classical gardens has to create a miniature mountain and stretches of water like the 'hills or ponds' by simulating natural environments (Feng 1990, p.16), with the pond symbolizing a sea and the three islands symbolizing a celestial island based on the ancient Chinese mythology. When interacting with people, the Chinese traditional garden theory offered a model to maintain the harmony between human beings and nature, indicating how the people should behave with the harmony of mutual friendship with humanity and nature. This idea has proved enlightening for many aspects of human relations with nature, such as the traditional notions of nature in everyday life, and has helped to develop an understanding of the cultural symbols and philosophy which have, in turn, profoundly impacted upon Chinese garden designs.

2.2.2 The culture and essential philosophies of Chinese gardens

From the very beginning, Chinese gardens represented the desires and ideas of the 'mystic orient', imperial power and ordinary nature. In addition, the Chinese classic garden also reflected the social and moral ideology passed down through thousands of years. Gardens offered people psychological compensation and an opportunity to pursue a spiritual ideal that had accumulated profound cultural connotations (Hu, 2013, p.53) since the specific garden architectures, plants and general layouts in classical gardens are symbolic artistic entities, which conjure up the concentration of traditional cultures and philosophies. To be able to recognize why Chinese gardens developed in the way they did, it is essential to understand both the culture and philosophies that led to the emergence of an artistically reproduced natural beauty in gardens, as well as to the underlying principles of the art of making classical gardens in China (Cheng, 2012).

Although the highest artistic state of traditional Chinese garden construction can be 'made by a human, but looking like nature', it is necessary to take advantage of various natural resources to secure the well-being of mankind, which is considered to involve respecting nature, and something spontaneously derived from nature, or a creation that grows out of it. Hence, the classical gardens are an expression of artistic conception inspired by Chinese philosophy and cultural life, which is always sticking to the fundamental principle of learning from nature and an emphasis on the relationship

between man and nature which is an essential feature of traditional Chinese culture. The most important tenet of Chinese philosophy and culture is the theory of '天人合一(*tian ren he yi*)' – the theory of harmony of Heaven and Man – as stated by Mr. Ji Xianlin (1911-2009) who was the famous historian and Great Master of Chinese traditional literature. His explanation of the theory refers to Heaven (*tian*) as the natural world; while what is referred to as Man (*ren*) is humanity or human society; the '*he yi*' is the greater unity between humanity and nature. Thus, the complete meaning is to understand the harmony of the mutual friendship between humanity and nature that places humanity as an integral part of nature.

However, the search for harmony and the relation between man and nature has, since ancient times, always been one of the fundamental issues of Chinese traditional philosophical thought. The Grand Historian of the Han Dynasty, Ssu-ma Ch'ien, stated the purpose as the author of *Shih-chi (Historical Records)* with 'I wished to examine into all that concerns heaven and man, to penetrate the changes of the past and present, completing all as the work of one family (Watson, 1958, pp.57-67)' This expresses clearly that what most people refer to as Heaven is the vastness of nature, that nature is a realm full of vitality, creation, and evolution. They seek to elucidate their own distinctive views on the harmony of heaven and man, and to understand its historical development from past to present. Therefore, the 'Harmony of Heaven and Man' is the core foundation of Chinese philosophy and constitutes the Chinese culture, it has a long history as it can be found in the important philosophies of Confucianism, Taoism, Buddhism, and other schools of thought.

Confucianism

Confucianism and Daoism form the two basic main doctrines of the philosophical, metaphysical and historical context which created the palimpsest of meanings implicit in the characterization of the Chinese Garden since the 6th century BC (Hu, 1991). Their origins lay in the teachings of Confucius (551-479 BC). The philosophy of Confucius was based on Chinese tradition and belief. It emphasized human relations through ancestor worship, the championing of strong family loyalty and respect for elders, rather than the utilitarian. It aimed to realize the personal and governmental morality, correct

social relationships, justice and sincerity. Confucianism espoused the well-known principle of the 'interplay between Heaven and Man', and pioneered the thought that the ultimate aesthetic standard was that of nature, he believed that being in accord with nature could affect an interplay between heaven and man, and that man could be tempered by nature and thus achieve human morality. As in *Verse 21* of *the Analects of Confucius* (论语，*Lun Yu*) Chapter 6, Confucius discusses the idea that "The wise, like water, are flexible in their thoughts. The benevolent, like the mountain, are resolute in their beliefs. The wise take actions on matters, while the benevolent think through reasoning. The wise are joyful, while the benevolent are long-lived". Thus, water and mountains are metaphors for the human personality and inspire human thought based on nature as a spiritual carrier of human expectations and that nature is thereby connected with the moralities of noble people. It was the Confucian idea that nature is the bridge that brings spirituality, spontaneously derived from nature, to humanity thereby inspiring the aesthetic aspirations to create a garden that "although man-made, is yet no less beautiful than the creations of nature herself" (Cheng, 2012, p.61). Thus, the 'nature' of Confucian philosophy reflects a simple view of nature whereby the construction of Chinese gardens was not merely a miniature representation of real mountains and waters, rather it was an aspiration towards a harmonious human living environment in co-existence with nature.

Taoism

Taoism (modern name 'Daoism') was hardly a new philosophy at the end of the Han dynasty when it was a contemporary of Confucianism. Taoism is the highest ideology and a religious tradition of Chinese origin that emphasizes living in harmony with *Tao* (also *Dao*). The word 'Tao' literally means 'the way', by which they meant the method of proper conduct each considered to be the right one if the world was to run harmoniously. However, the word came to symbolize the 'universal laws', it was more than merely a 'way' to follow (however successful), it actually was the whole process and the way we should live (Herlee G. Creel, 1970, p.2), as it denotes something that is both the origins of, and the driving force behind, everything that exists. Moreover, the *Tao* can also be found in Chinese philosophies as the ultimately ineffable. 'The Tao that can be told is not the eternal Tao' (sometimes rendered as 'The Tao which can be spoken is not the real Tao' as the totality of all things whatsoever) in the first chapter of the

famous book called *Tao Te Ching* by Laozi (6th Century BC), whose name means the 'Old Master'. This legendary figure was the founder of Taoism whose texts laid the foundation principles of Chinese philosophy. He had written his keystone work to draw on the cosmological notions within the *Fengshui* theory from *The Classic of Changes* or *I Ching*. The German philosopher Hegel (1770-1831) deemed it to be a true oriental philosophy providing a representative statement that emphasizes the trinity of Heaven, Earth and Man whilst considering the unity of the universal and advocating both the reforming and adapting of nature. From Laozi's viewpoint, "humans follow the examples of the Earth, the Earth follows those of Heaven, Heaven follows those of Tao, and Tao follow those of nature" (Laozi, 1993). It clearly expresses that nature is the origin of the human spirit and values, which advocate nature, pursue quietism and yearn for a primitive living state (Lui, 2011). Nature should be adjusted to meet the wishes of man, who is, however, only a human being, an organic ingredient of nature rather than its dominator. Taoism points out explicitly its aim to maintain the harmony between Man and Nature.

Moreover, the next Taoist philosopher Zhuangzi (369-286 BC, also known as *Zhuangzhou* continued to build on the founding principles of Taoism after Laozi, whilst maintaining the idea of the "Harmony of Heaven and Man … without external interference" and conforming to the view that natural beauty is the highest aesthetic criterion. Zhuangzi writes in Chapter 2 of his book *Knowledge Wanders North* (知北游 *Zhi Bei You*) that "the magnificent beauty possessed by Heaven and Earth, the changeless order of the four seasons and the mature laws that all creatures follow never explicitly suggested themselves." He points out explicitly that nature is the origin of beauty in accordance with the fundamental law of Taoist practice: observing and learning from the natural world. So, by combining art and science it is possible to achieve unity, truth and beauty, e.g. by 'concealing ingenuity behind simplicity' and creating 'real simplicity without exaggerated artificial ornaments' (Chad Hansen, 2003, p.145). In addition, the philosophy of Buddhism also pursues quietism (Zhang, Z., 2003) and the spirit of nature as they mentally escape from the chaos of this world. Thus, a new interest in Taoist views of nature influenced Buddhism after its arrival in China in 67 CE. The Taoist philosophy of Zhuangzi developed further and proved hugely influential in Taoism's transformation from a school of philosophy into a religion. Thus, imperial parks developed a new role during this initial period of Taoism.

Chinese cultural life

The expression of three philosophies: Taoism, Confucianism and Buddhism, laid the ideological foundation of Chinese gardens, and further developed into a rich, unique and fascinating contribution to Chinese culture through painting, poetry and the art of gardening (Keswick, 2003). The specific feature of Chinese culture is awakening to the beauty of nature, and the emergence of the garden architectures, plants and general layouts in gardens that are artistic, symbolic entities, which transform a cultural conception into one of the most exquisite artificial environments ever created by mankind (Cheng, 2012).

Chinese culture refers to the ideology of Chinese philosophies and their combination with the arts of literature, poetry and painting. It attributed great importance to such notions as the sense of liberty, 'presenting more with less,' and 'the environment should stem from your state of mind and scenic spots should be designed in accordance with their surroundings' (Hu, 2013, p.53). However, Chinese classical gardens are closely related to the philosophy, always sticking to the principle of 'learning from nature' and a 'harmonious relationship between man and nature'. It is recognized that the application of cultural symbols and their semantic meanings still continues in the traditional arts and the historical context of Chinese gardens, which reflects the brilliance of the ancient Chinese people's construction activities and represents their ideal of a harmonious, spiritual living environment.

2.2.3   The history, development and types of Chinese garden

Chinese classical gardens have a long history of over 3000 years between the Shang Yin Dynasty (1600-1100B.C) and the end of the Qing Dynasty (1911). The essential types of classical gardens were divided into six genres: imperial gardens, imperial mausoleum gardens, temple gardens, residence gardens, 'scenic spot' gardens and literati gardens (Hu, 2013). However, based on kinships, functions and artistic styles, the main types are imperial, private and temple gardens. Meanwhile, after the creation and development of successive great craft techniques, Chinese classical gardens have reached an excellent

level of artistic achievement and formed a unique national style. This artistic style could be roughly divided into five stages in the history of garden construction (Zhou, 1990).

2.2.3.1 The Garden of the Germination Stage - the Slave Society (1100-300BC)

The germination of the traditional garden began during the Shang Dynasty (11B.C.) in the later slave society period, when a privileged social class emerged. Originally, gardens were a site for the slave owners to pay homage to their ancestors by offering sacrifices, worshipping divinities and praying for immortality, they were also limited to hunting, production and entertainment. The initial form was called You (囿, hunting garden), the place usually is in a designated region which delimits the scope, or within a construction wall. Inside, natural vegetation is planted and birds and animals breed. Indeed, such gardens may be regarded as a multi-purpose natural Zoo for hunting and recreation for the Monarchs and Nobles (An, 1991). A platform or *tai* was the most important architectural feature in a hunting garden, it functioned initially as a place for people to use for observing celestial phenomena, worshipping deities and praying for immortality, but later it became a vital construction in gardens for people to enjoy the landscapes in remote places from a lofty position. According to the reliable historical records revealed in *The Book of Songs*《诗经》and *Shih-Chi* 《史记》, the last emperor of the Shang era, the Emperor Zhou who built a Shaqui Garden, and Emperor Wen, the founder of the Zhou Dynasty (1152-1056 BC), constructed gardens with three parts: Ling Tai (灵台，Nimbus Platform), Ling You (灵囿，Nimbus Hunting Garden), and Ling Zhao (灵沼，Nimbus Pond); Ling Tai was a series of high platforms, while Ling You was a bird and animal zoo, and Ling Zhao was a fish pool. However, China was transformed from a slave society into a feudal society, during the Spring & Autumn and Warring States periods. The powerful principalities competed with their rivals in building comprehensive gardens and large luxurious palaces. The possession of lofty platforms and splendid palaces and halls became a trend among the rulers of principalities who wanted to boast of their wealth.

2.2.3.2   *The Growing Stage – the Qin and Han Dynasties(300BC-300)*

The growth of gardens and the emerging giant, centralized, feudal conformity under the imperial authoritarian regimes enabled the imperial garden to become established as an individual type of Chinese classical garden when the Emperor Qin Shihuang ended the Warring States period by completing the conquest of China and who founded the Qin Dynasty from 220 to 210 BC. Gardens in this period were to create the traditional garden with a layout featuring 'one pond with three hills' in accordance with ancient Chinese mythology. This arrangement symbolizes a fairyland with a living space for the deity and a deathless place of immortality. This pattern also displayed the supremacy of the imperial power and revealed gardens as scenic, aesthetically tasteful spaces (Feng, 1990, p.16). Moreover, the ideas of 'embodying the heaven and earth' and 'weaving yin and yang together' were also adopted as guidelines for garden construction (Hu, 2013). However, the early imperial garden was still limited to sheer objective reflection of natural beauty and lifted to a level beyond nature. In the later Han Dynasty, the private garden appeared and applied to private gardens the same elements and patterns found in imperial gardens, but on a much smaller scale.

2.2.3.3   *Transformation stage—the Era of Wei, Jin, and the Northern and Southern Dynasties (220-589)*

The era of Wei, Jin and the Northern and Southern Dynasties was a period of civil war and associated political chaos; but it was also a time where arts and culture flourished, technology advanced and the philosophies of Buddhism and Taoism were spreading. It became one of the most exuberant and energetic times both in the history of the Chinese classical garden and philosophical development. During this transformation stage, the emperors were desperately eager to amass more wealth and to be indulged in the most dissolute and luxurious lifestyle, such as treating the gardens as an aesthetic enjoyment (Wang, Q., 2006). The classical garden features established a principle of the representation of natural beauty as an aesthetic system for garden landscape appreciation, and gradually replaced with animals the content of hunting and producing food. In this period, the temple gardens appeared, and the private and imperial gardens developed simultaneously.

2.2.3.4   Bloom Stage – the Sui and Tang Dynasties (581-907)

Creating the Chinese classical garden was a golden time which began to bloom during the Sui and Tang Dynasties, when the Southern and Northern Dynasties came to an end and China once again became a giant united empire. The Sui Dynasty was short-lived, but it handed down a great quantity of precious heritage to later generations, such as the Grand Canal, Chang'an city and some of the Sui's imperial gardens. As the successor to the Sui Dynasty, the Tang Dynasty was a glorious time of culture and arts development, surpassing its predecessors both in military and cultural accomplishments. During this era, the traditional gardens developed to explore the principles of classical garden design by regarding it as an art - as Feng, 1990, p.22, notes, 'all gardening is Chinese landscape painting, [it] is also called mountains-and-waters painting'. The arts of landscape painting and poetry began to influence and blend into the Chinese classical garden, as the renowned intellectual *An huaiqi* remarked in his *History of Chinese Gardening* 'Poetry, Painting and Gardening, Nature or the Sciences of Landscape' were the 'new Graces who dress and adorn Nature, or a condensation of Nature, in Gardens'. As a result, gardening increasingly began to carry the connotation of a spiritual quest, or to symbolize how one's lifestyle is removed from worldly temptations, with the mind and spirit freed from social obligations.

However, the Sui and Tang dynasties were periods when the development of imperial gardens, private gardens and also a host of temple gardens flourished. The features of the imperial garden shrugged off the roughness, spaciousness and the simple imitation of nature, and became an independent art form worthy of aesthetic appreciation. In addition, the private gardens constructed by the literati and scholar-bureaucrat class became a magnificent genre of Chinese poetry, and reflecting the cultural psychology and artistic spirits of these classes as they began to seek refuge in the pastoral life in order to avoid the social and political turmoil. At the same time, temple gardens gradually developed into a heyday of Buddhism and Taoism, a host of temple gardens began appearing in mountainous and scenic sites, as well as in the cities.

2.2.3.5 The Mature Stage – the Song to Qing Dynasties (960—1911)

After over 2000 years of advancement in the field of garden construction, Chinese classical gardens entered into their mature stage in the Song to Qing Dynasties. In the time of the Song, the vitality of the garden arts reached a very sophisticated level with the development of construction techniques, animal breeding approaches and planting methods. As Italian traveller, Marco Polo, described the Song's imperial garden in his travel notes saying that 'the palaces deserve to be ranked as the largest scaled construction in the whole universe … the enclosed garden could house extreme splendour and entertainment' (Hu, 2013, p.33). In the meantime, the literati became directly involved in garden construction activities in order to understand the merging of poetic sentiments and picturesque concepts in gardens and the creation of gardens no less beautiful than nature itself. This awakening to the beauty of nature was a specific feature of Chinese culture which integrated poetry and painting to transform from a realistic reflection of the natural world into a recreation of the spiritual world, thereby bringing into being the most exquisite artificial environment ever created by humans (Cheng, 2012).

From the later Ming [1368-1644] to the Qing Dynasty [1644-1912], the garden construction activities reached their supreme accomplishment when the economic prosperity provided adequate material and technical supplies for full-time gardening activities to increase. Moreover, many advances in gardening theory emerged during this period, which had a profound effect on gardening construction, as *The Construction Method* (营造法式 *Yingzao fashi*, compiled by Li jie) and *The Craft of Gardens* (园治, *Yuan Ye*) by Ji Cheng, *Records of Superfluous Things* (长物志, Chang Wu Zhi) by Wen Zhenheng were several significant monographs on gardening theories. The mature garden construction theories and techniques, and talented designers represented the highest artistic achievements of Chinese garden construction. Consequently, in this late feudal society era, the art of Chinese classical gardening was actually the culmination of several millennia's worth of experience in garden construction.

2.3   The hybridization of ideas about Public Parks

An overview of the history of the Chinese classical gardens from the Shang-Yin Dynasty (1600-1100 B.C) until the later Qing Dynasty reveals the rational brilliance of the ancient Chinese people's gardening construction activities and represents their ideal spiritual and living environment as being harmonious. However, to develop an understanding the historical and contemporary changes in the form and function of Chinese cities and green spaces, will require a brief engagement with feudal and semi-colonial China in order to understand the transmission and adoption of Western ideas in China so that ideas were introduced from various Western sources and hybridized within the society adopting them. Thus, it examines the ways in which the public park was employed within a semi-colonial, semi-feudal Chinese society and its cities, by focusing on the events leading to the creation of open-space amenities in Shanghai's foreign settlements, and, by examining the process by which the new type of space called 'a park', as well as the notion of 'public' space, has informed the development.

In addition, after a decade of political isolation, the end of 1911 saw a dramatic political revolution that removed the Qing feudal regime (1636-1911) and established the Old-New Democratic Revolution (1912-1949). The whole process of change that took place around 1949 created what has become known as the People's Republic of China (PRC), which is a socialist society based on a single-party state governed by the Communist Party (**Table 2.1**). This political change was achieved without the involvement of the public or any major warfare which might have damaged the cities. It brought dramatic change to the whole society, in terms of shifts in political and social structure, with the introduction of capitalist enterprises and industries. A more detailed investigation of the contemporary policy and everyday experiences of green space in diverse residential areas in Shanghai will be undertaken.

Table 2.1: Different eras of Chinese green space

Ancient era(BC221-1840) Feudal society	Modern era (1840-1949) Semi-feudal society and Semi-colonial		Contemporary era (1949-present) Socialist society	
Before the Opium War of 1840 China (1911Cancel the monarchy)	1840-1911 (Later Qing Dynasty) A semi-feudal and Semi-colonial society.	1911-1949 In 1911 China overthrew the monarchy. The old-new democratic revolution	1949-1979 The socialist ideology of the Mao era	1979 The post-Mao era and the 'open door' policy
The Chinese classical gardens	The hybridization of ideas on Public Parks		The contemporary green spaces	

(Source: The modern era garden history of China-part one, China Building Industry press, Zhu, 2012)

2.3.1 The Treaty of Nanking that established the foreign settlements

China faced radical change in the latter half of the nineteenth century when the country became reduced to the status of a semi-colonial, semi-feudal society after the First Opium War, also known as the Anglo-Chinese Opium War, in 1840. Western culture flooded through the few ports prepared for trade, with consequent cultural impacts on Chinese traditions when the Qing government opened itself to international trade in the Treaty of Nanking (南京条约 *Nan Jing Tiao Yue*) after having shut down all contacts with the outside world for more than two centuries. The treaty of Nanking that ended the first Opium War in 1842 was the first of the unequal treaties between China and foreign imperialist powers, with the main purpose of changing the framework of foreign trade which had been imposed by the Canton system and abolishing the former monopoly of the Cohong and their Thirteen Factories in Canton (Ma, 2009). The treaty stipulated that an additional five treaty ports would be opened for foreign trade alongside Coanton: Canton (*Shameen* Island from 1859 until 1943), Amoy (*Xiamen* until 1930), Foochowfoo (*Fuzhou*), Ningpo (*Ningbo*) and Shanghai (until 1943), which were to be agreed upon between the British and the Qing governments (Darwin, 2007). Britain also gained the right to send consuls to the Treaty Ports, who were given the right to communicate directly with local Chinese officials and agreed to establish a "fair and reasonable" tariff, as Article II of the treaty stated:

His Majesty the Emperor of China agrees, that British subjects, with their families and establishments, shall be allowed to reside, for the purposes of carrying on their mercantile pursuits, without molestation or restraint, at the cities and towns of Canton, Amoy, Foochowfoo, Ningpo and Shanghai; and Her Majesty the Queen of Greet Britain, will appoint Superintendents, or Consular officers, to reside at each of the above-named cities or towns, to be the medium of communication between the Chinese authorities and the said merchants, and to see that the just duties and other dues of the Chinese Government, as hereafter provided for, are duly discharged by Her Britannic Majesty's subjects (Treaty of Nanking, 1842).

Moreover, the Qing government was obliged to pay the British government a total sum of 21 million silver dollars in war reparations for the cost of the opium war (Article VII), and also agreed to make Hong Kong Island a crown colony, ceding it to the British Queen in perpetuity in order to provide British traders with a harbour where they could unload their goods (Article III). The Second Convention of Peking in 1860 further extended the colony to include the Kowloon peninsula and expanded the colony with the 99-year lease of the New Territories. Nevertheless, the importance of the Treaty of Nanking led to the British and Qing representatives agreeing a supplementary treaty that established more detailed regulations for relations. Thus, after the Treaty of Nanking, both governments concluded a supplementary agreement in October 1843 - the Treaty of the Bogue (虎门条约 *Hu men Tiao yueē*) - at Bocca Tigris outside Guangzhou, known historically as Canton (Fairbank, 1953).

The Treaty of the Bogue is widely regarded as an imperialist one, paving the way for the subjugation of China to Western imperialism. The treaty facilitated the further 'opening' of China to foreign trade in the wake of the First Opium War and laid down detailed conventions for Sino-British trade and specified terms where Britons were allowed to buy property and reside with their families in the newly opened ports of Shanghai, Ningbo, Xiamen, Fuzhou and Guangzhou. The treaty became the first of a series of commercial treaties, and granted extraterritorial privileges to British subjects and most favoured nation status to Great Britain, which meant that the latter would enjoy any privilege granted to other Western powers. In 1845, the local Qing authorities and the British authorities promulgated the 'Shanghai Land Regulation' (Ma and Feng, 2001),

which paved the way for the foundation of the Shanghai foreign settlement and created a social divide between the Europeans and Chinese citizens in the cities (**Figure 2.1**).
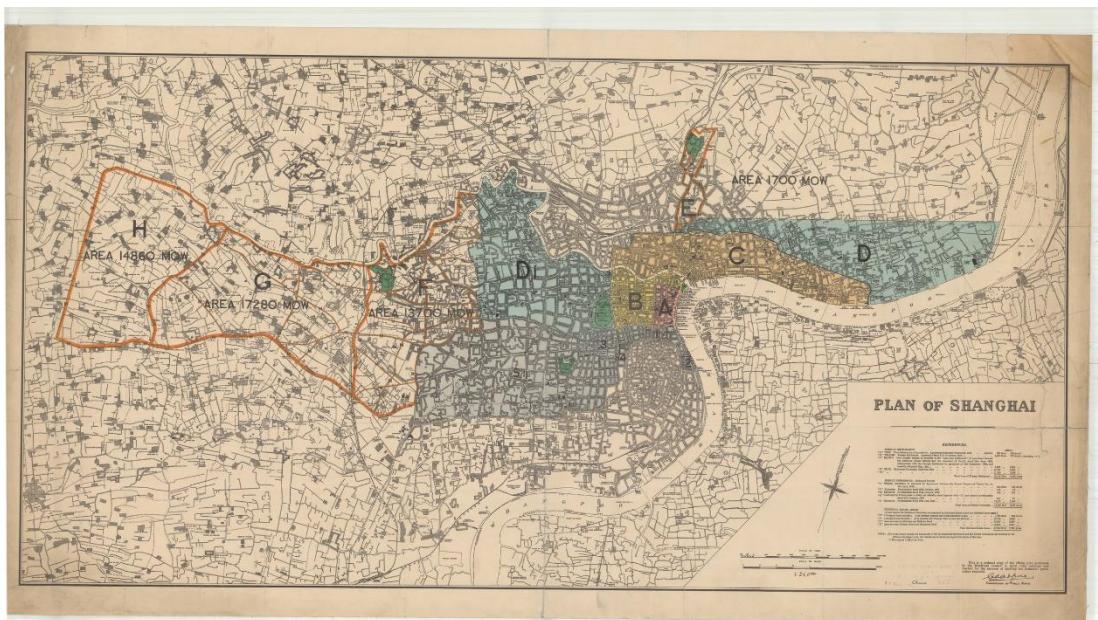
Figure 2.1: Map of the Shanghai Foreign Settlements of 1884
(Source: a 1975 revision of map originally drawn by *Xu Yucang*, shows foreign settlements in Shanghai, Scale ca. 1:5400.)
∗   The *British Settlement* in blue, the *French Settlement* to the south in faded red and *American Settlement* to the north in faded orange; the *Chinese part* of the city to the south of the French Settlement in faded yellow.

The construction of the Shanghai foreign settlement was determined after the Treaty of Nanking and following the Treaty of the Bogue. While the foreign powers had shown interest in Shanghai's strategic position as a port, the settlement in Shanghai for foreigners was established by Great Britain along the banks of the Huangpu River in order to further their commercial interests (Figure 2.1. the British settlement in blue). American and French involvement followed closely on the heels of the British, with distinct areas of settlement for the French in the south and the Americans to the north drawn out of the British settlement (Edward, 1896). In 1854, the three foreign countries created the Shanghai Municipal Council to serve all their interests and formally united to create the Shanghai International Settlement in the next year. However, the international settlement included British, Americans, Danes and Germans. In reality, the treaty initially forbade non-foreigners from living inside its boundaries until 1928 when Chinese residents were permitted to join the council in the International Settlement.

2.3.2   Introduction and translating Western ideas of a Public Park

The modern era of China from 1840 to 1949 lasted more than a hundred years during which western culture flooded through the biggest port - Shanghai - for trade, with consequent cultural impacts on Chinese traditions. This was particularly so in the Shanghai International Settlement, where residents practised their own lifestyles and introduced architectural forms, including translating western ideas of a public park. With the establishment of the geographically enclosed area of the settlement, foreign residents demanded improvements to their living environment through the establishment of specific urban facilities to match the standards they enjoyed in their home countries. As the 1845 first lease regulations for the settlement lands had been signed between the local government of the Shanghai prefecture and British ministers to plan the construction of the settlement (Ma and Feng, 2001), they established offices and houses, and also a school and a hospital, as well as extensions to the market and the graveyard for foreigners living in the settlement (Zhu, 2012). It also agreed the construction of an open space with leisure amenities as an essential part of the communal facilities for the use of all Western residents. Further negotiations allowed more western countries to expand the area of the international settlement.
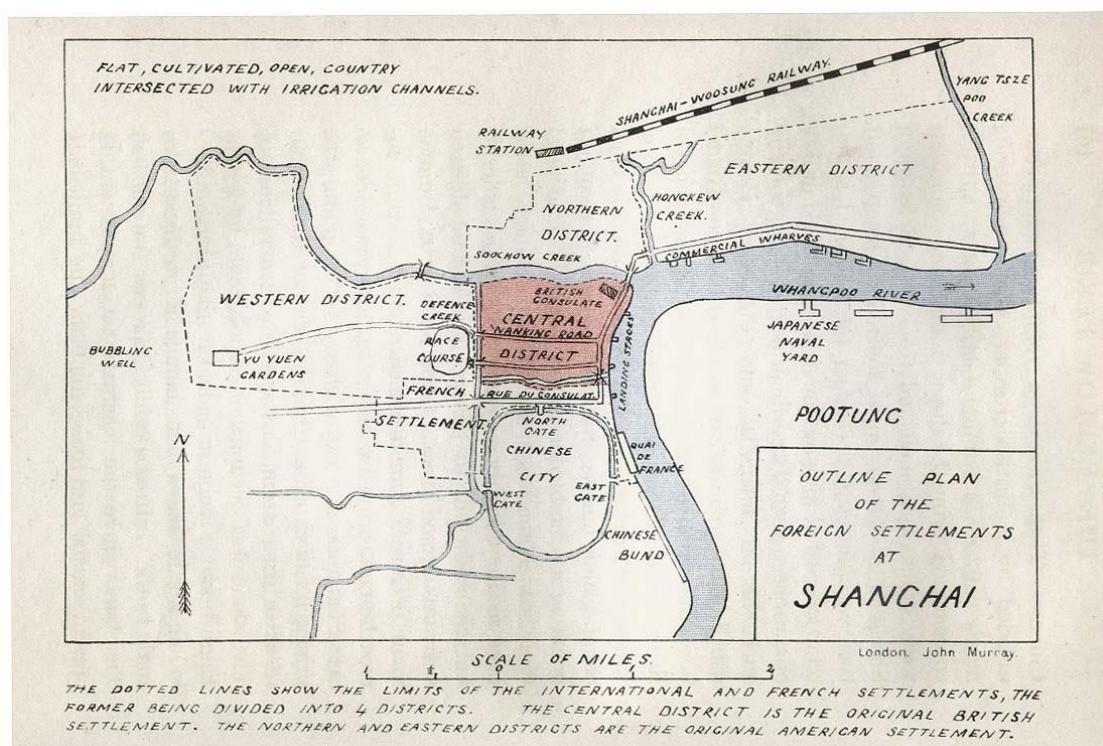
Figure 2.2: Map of Shanghai Central District in 1907
(Source: by courtesy of Shanghai Map Archives of History)

After the 1860s, the area of the Shanghai international settlement was laid out with a new road on land clearly detached from the existing local prefecture for the use of all foreigners. This gradually evolved into a semi-colonial and commercial zone at the core of the city (**Figure 2.1**). The western community in the Shanghai settlement, however, requested the establishment of new roads, broad wharfs and Western-style buildings which provided a bund along the seashore for foreigners living in the settlement (Tang and Shen, 1988). As a result, the "standard pocket of western society" (Tang and Yu, 2003, p.427) was in the international settlement. Thus, external pressures from Western countries eroded China's isolation policy and forced the local government to take Western political, cultural and social systems as models. Thus, the earliest Chinese modernization started from the Westernization on show in the international settlement (Zhou and Chen, 2009). However, the hybrid cultures involving several Western cultures rather than any one specific nation bloomed with the combination of diverse Western and Chinese native traditions. **Figure 2.3** shows the view of the Bund with hybrid buildings.

Figure 2.3: The Bund, Shanghai in 1928, showing a view of the World War I Memorial.
 (Source: photograph from internet http://virtualshanghai.islyon.cnrs.fr/Image.php?ID=15087)

Following Shanghai's opening as a port, the Western countries in the international settlement requested the establishment of urban facilities for the recreation and

entertainment of foreigners living in the area (Yang, Zhu and Xong, 2003). It contained agreements for the construction of a horse racetrack, and grandstands to watch it as a social activity, as well as extensions to the theatre, dance halls and pubs or bars etc. (Zhou and Chen, 2009). In addition, skating and rowing became established in the Old Park in 1851 and in the New Park in 1854 in response to requests for the exclusive use by foreigners of the racetrack and the grandstands as a recreation facility (Chen, 2001). However, the first Park at the settlement was established in 1868 with the simple name of 'Public Park' - also known as the 'Bund Garden' - and was the first park in China open to the public (Yang, 2012, p.83). In contemporary photographs of the Bund Garden (**Figure 2.4**), which was designed by a Scottish gardener in the European style; the park was removed from Chinese traditions. It included a resting pavilion in the Western style and some chairs sitting on the large tracts of grassland reserved for well-dressed European ladies and gentlemen of the foreign community.

Figure 2.4The Bund Garden- the First Public Park in Shanghai - in 1868
(Source: by courtesy of Shanghai History of Hundred - the Architecture and Landscape in the historical changes of the Bund)

This first attempt to create a Western park in Shanghai, following the expansion of the international settlement area encouraged the new government to establish a modern

society in order to catch up with the Westerners. After the old-new democratic revolution, the settlement area was established with 22 public parks in total from 1868 until 1943 (Chen, 2000). However, the creation of a public park as an open space amenity in the Shanghai foreign settlement was forced by the translation of Western ideas and styles into cultural aspects of the Chinese tradition (Zhu, 2012). This may be possible reasons for the struggle to apply terms for Western public parks. Until the People's Republic of China independence in 1949, the Chinese had developed a wide range of garden styles, designs and techniques. These were ways for the new Chinese government to create a modern city in Shanghai. The parks seemed to be one of the most fundamental urban elements of a city. This was in contrast to the various attempts to translate 'public' into Chinese whilst paying attention to their style (Chen, 2000, p.116-126). The translation of the concept of a 'public park' was simply that they were open to the people.

2.4   Green spaces and housing in contemporary Chinese cities

China is the most populous country in the world; with the urban population growing very rapidly after the People's Republic of China (PRC) was established in 1949. According to the official sources, over a period of 34 years from 1949 to 1983, China's level of urbanization (the ratio of non-agricultural population to the total population) rose from a mere 11% to 22%. Yet, in the 17 years after that, urbanization reached 36% in 2000 (National Bureau of Statistics of China, 2001). However, China can be seen as "under-urbanized" in light of its relatively high level of industrialization in comparison with its low urbanization rate. It is predicted that the urbanization level will reach 50% in 2020 and will reach 75% by 2050 (UNCHS, 2001).

Along with the rapid urbanization and population growth, China's cities are growing rapidly, both in quantity and their sizes. The National Bureau of Statistics shows that at the end of 2008, there were 655 cities in China, 41 of which had a population of more than 2 million and 264 less than 0.2 million. The number of cities has increased by 151% during the last two decades, while the total urban built-up area has been doubled. Moreover, the housing demand in the urban areas, especially the commercial housing development, is increasing dramatically. However, most urbanized cities are suffering

serious problems of housing development including the lack of appropriate legislation and control, the mismatch of housing supply and affordability and the underdeveloped nature of the urban housing market.

However, urbanization and housing growth are underlying global trends which accelerate and affect our environment directly or indirectly (Sandstrom and Angelstam, 2006) as there has been a significant decline in the quality of public open space. The 2009 UN-Habitat - Planning Sustainable Cities global report makes the point that developing cities will result in negative environmental impacts through the consumption of natural assets and the overexploitation of natural resources. It is observed that the rapid expansion and sprawl of built-up housing areas has reduced green spaces and resulted in a fragmentation of wildlife habitats (Swenson and Franklin, 2000). In many cities in China, urban areas are rapidly encroaching into farmlands and cultivated land, enveloping villages and towns (Seto, 2004; Schneider *et al.,* 2005). Protected areas have become an island of nature, while the increasingly urbanized landscape has become more diverse compositionally, geometrically more complex and ecologically more fragmented (Zhang *et al.,* 2004). The situation has had negative impacts on human life in cities, as well as on the essential functioning of natural systems that support both the environment and housing in China.

2.4.1 The history of housing development in China (1949-2010)

Traditional Chinese urban housing was provided within a socialist system in China for over 30 years since the People's Republic of China (PRC) was established in 1949. Through the 1950s to 1970s, urban housing was an investment and construction by state or local units, and provided different types of workers with low-rent, long-tenure housing under a physical housing allocation system. In addition, at the same time, all infrastructure facilities in cities were very weak, and urban green space extremely limited, also the urban housing neglected the interconnections between housing and green space. However, green space has become an increasingly prominent concern vis-à-vis housing since China faced radical changes in its urban housing system in the late twentieth century when the country initiated its economic reforms and embarked on an 'Open Door' policy in 1978, predominantly within commercial housing.

This section aims to examine the different stages of the typical housing from the 1950s to the 2010s, and also to discuss how housing in cities has been provided with green spaces; to review a basis for the understanding with the introduction of urban housing system reform which allowed commercial housing and market forces to play an increasing role in the economy as a whole and in the production and consumption of housing in particular. Thus, green spaces play a vital and valuable role in Chinese cities.

In 1950s

In the early 1950s, after the Second World War and China's Civil War, a dramatic political revolution removed the semi-colonial and semi-feudal society to establish the socialist country. The whole process of change that took place after 1949 has created the PRC. It brought dramatic change to the whole society in terms of shifts in political and social structures with the introduction of socialist construction and industries. The PRC government moved towards establishing social institutions and industrial modernization as well as to quickly transform China into an industrialized nation. At the same time, China's economy was in a recovery phase; all industries and infrastructure construction in cities were very weak after the warfare which damaged many cities. Therefore, the studies of Chinese modernization and industrial construction have taken the Soviet Union as an example of a Socialist country with a supposedly successful experience of Socialist institutions and modernized industrial processes.

The PRC government took the Soviet Union's political, social and cultural systems as models; the type of housing and city planning drew especially heavily on the 'Soviet Model'. The encounters with Soviet civilization and the political revolution of the PRC modernization radically transformed traditional Chinese housing styles and patterns of urbanization. The review of housing during the 60 years since 1949 involved studying both the processes of housing and green space transmission in parallel so as to explore the complicated processes of hybridization involved in adopting external concepts of planning and design from a different culture to fit with traditional ideas of housing within China. In particular, it starts with a description of the construction of housing from its inception to the establishment of residential housing for the working class (**Figure 2.5**).

Figure 2.5: The Cao Yang New Residential Housing in the 1950s
(Source from: Liu, 2009. The housing history in China between 1949-2009)

With the establishment of the residential district for the working class, the residential housing types adopted an integrated mode of living, such as the Shanghai Cao Yang new residential district, and improved the theory of residential area planning by the end of the 1950s. The integrated mode of living demanded about five or six hectares for each neighbourhood, and enclosed the surrounding area to plan for a residential courtyard. This enclosed courtyard should have provided a quiet living environment for the residents, but the symmetrical planning of the perimetric pattern of housing caused problems by making many blind angles and diminished the ventilation and the amounts of sunshine in the living areas (Liu, 2009). However, with the first 'Five-Year Plan' (1953-1957), the first priority was to emphasize the industrial construction and the basic infrastructure, and then to consider the quality of life. In addition, the 'Five-Year Plan' was part of the programme of China's national economic plan, which was mainly to plan and propose a development strategy for constructing a socialist infrastructure and industrial construction projects. The nation's economic development aims and objectives were reviewed every five years after 1953.

After following the strategy of the 'Five-Year Plan', it is significant that the PRC's socialist industrial construction took place quickly and dramatically, especially when compared with the much longer process of change in many Socialist countries. However, the urban planning system neglected the interconnection of green space and housing, with urban green space being extremely limited. Therefore, the Urban Planning Law (after 2008 re-named 'Urban and Rural Planning Law) includes the 'Urban green space system plan' within the City Master Plan. Moreover, the idea of compact cities was enshrined by the government through construction of an urban green structure which follows the 'Soviet Model'. Urban planning of green space was undertaken for the recreation of the urban population, and demand was to structure the public green space with a *per capita* measure of public green space area and different types of green space within the total land use (Zhang, 2008). Hence, the government has shown growing concern for the quality of the urban environment through a 'Conservation-oriented Greening City' that is measured by the ability of urban planning to deliver sustainable development. Urban planning of green space started with the first 'Five-Year Plan', stopped during the ten years of the 'Cultural Revolution', and has re-emerged to now be considered as an essential part of the quality of life in densely-populated urban areas.

In the 1960s

After the first 'Five-Year Plan', Mao Zedong contributed the concept of 'turn the land green with parks and woods', in order to promote the growth of gardens, vegetable fields, fruit orchards, nurseries and parts of farmland, all of which are counted as urban green space "to achieve laying out a Greening City that, as it creates greening within all mountains and rivers, would become a Beautiful Nature City with public parks and the required abundant woodland" (Chen, 2002, p.10). The movement is considered to be a cornerstone of modern urban planning in general, but during the ten years of the 'Cultural Revolution' (1966-1976), the opposition to construction infrastructure facilities in cities was a serious setback to urban green planning in particular.
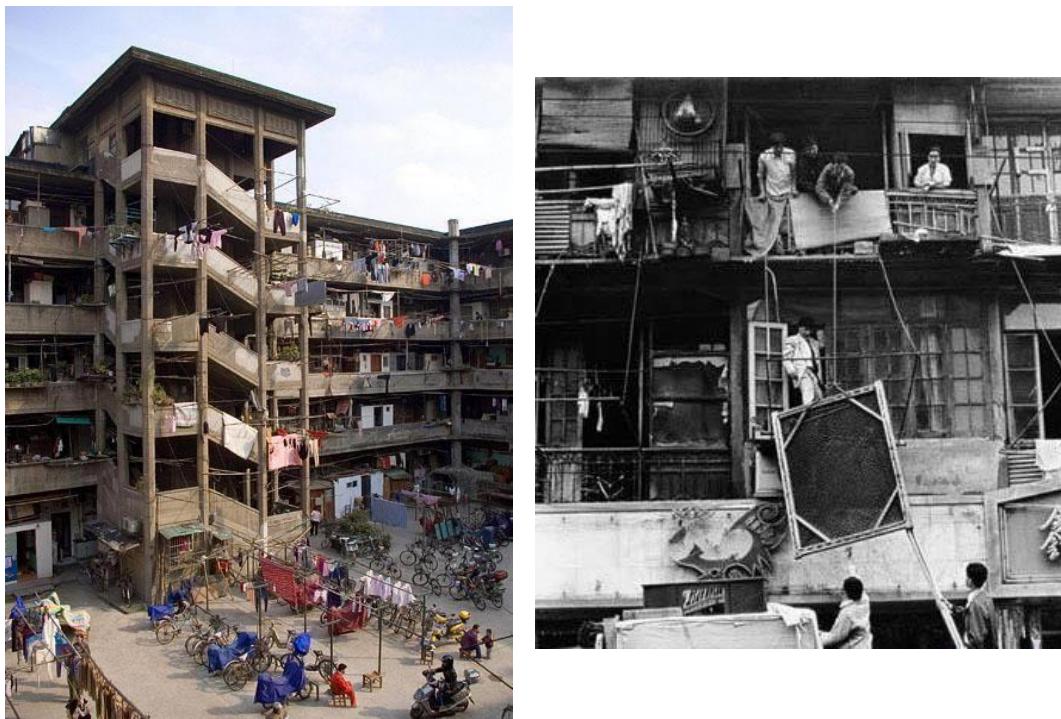
Figure 2.6: The Tube-Shaped Housing in the 1960s
(Source from: Liu, 2009. The housing history in China between 1949-2009)

The Cultural Revolution, also called the Great Proletarian Cultural Revolution, was a socio-political movement set into motion by Mao Zedong. This movement was designed to further advance socialism in the country by removing capitalist structures from Chinese society, and imposing Maoist orthodoxy. In effect, the Cultural Revolution brought chaos, as social norms were overturned and the previously established political institutions disintegrated at all levels of government. The country was economically and socially damaged by this movement; the housing construction of cities also suffered a calamity. Urban planning and housing design was completely negative, decades of accumulated design information and a large amounts of data suffered an unprecedented loss.

The tube-shaped apartment housing (**Figure 2.6**), also known as 'barracks-type housing' was the typical type of housing during the 1960s. The tube-shaped apartment housing, generally built with three to six floors without electrical elevators, and with a long corridor entirely of single rooms. Each single room had no more than 20m^2 and had to share a bathroom and kitchen on each floor (Liu, 2009). In effect, tube-shaped apartment housing was used to solve the problems of the serious housing shortages and insufficient

investment during the Cultural Revolution. Within this simply-constructed and unsafe housing, the residents' living quality was reducing to the lowest level. However, this situation began to be reversed in 1978 after the Cultural Revolution.

In the 1970s

By the end of the 1970s, after the Cultural Revolution which did huge economic and social damage to the country, the absence of well-established urban hosing in China was a significant issue. The PRC government was endeavouring to become a modern industrial state so it developed the industrialized construction of urban housing. Hence, during the years1968 to 1978, the Chinese construction industry established a standardized type of high-rise residential housing (**Figure 2.7**).

Figure 2.7: Beijing QianSanMen street high-rise residential housing in 1976
(Source from: Liu, 2009. The housing history in China between 1949-2009)

As a result, the standardization of housing construction, such as design standardization and mechanization of housing construction, became a dramatically significant feature of industrialized urban housing development. However, China's economic plan during that period meant that the implementation of industrialization only depended on a policy plan,

which did not subject it to the discipline of the open market. Moreover, at the same time, the government had built large quantities of public housing through industrial expansion or urban renewal programmes (Kirkby, 1990; Wang, 1995). Hence, this socialist industrialization movement had many problems in all Chinese cities, such as serious housing shortages, insufficient investment and corruption in distribution. In addition, environmental quality was also poor.

In the period since the 'Cultural Revolution', Chinese urban planning systems have learned from the 'USA Model'. This has given consideration to the 'Landscape' function and 'Ecological' effect of urban green space, improving environmental protection, and maintaining the balance of nature. In 1986, the first Chinese Garden Society Conference was held in Wenzhou. This non-profit organization was initiated in order to advance urban ecological development (Zhang, 2008). Moreover, since the 'open-door' policy, the urban green planning system has become increasingly focused on balancing natural ecosystems and improving health, well-being and the quality of life in Chinese cities. The concept of the urban green space plan seeks an approach to land conservation and natural resources protection whilst also improving the quality of life, and the environment of residential housing.

In the 1980s

In the 1980s, government policy led to a profound change in land tenure which has provided the platform on which commercial housing could develop after the economic reforms. China has embarked on an 'Open Door' policy to facilitate the transfer of the housing system from the 'national physical housing allocation system' to one of 'commercial housing within the market economy'. The housing system within socialist China over the last 30 years involved investment, construction and distribution by the nation, however, this system has had many problems, such as serious shortages of housing and insufficient investment for enough public housing through industrial expansion or urban renewal programmes. Since 1980, the role of the state in contributing to addressing how housing problems can be resolved has been the subject of economic reform in China. With the introduction of those reforms which allow market forces and encourage private and joint-venture companies to play an increasing role in the economy

as a whole, and in particular to build housing for a profit and the selling of properties on the open market at market prices, the state is no longer the sole source of investment for the construction of housing to solve the housing problems.

In 1982, the government started to sell the new and old public housing to urban residents, the housing price was paid by the government, units and individuals. After Deng Xiaoping proposed the sale of public housing and allowed the adjustment of housing rents to reform the rent system in the public sector, urban residents were encouraged to buy their houses. Deng was a reformer and served as the Paramount Leader of the People's Republic of China who led China towards a market economy and housing system reform. Under Deng's guidance and the appropriate policy by the central government, urban housing system reform began with three exploratory pilot cities (Jinan, Tianjin and Wuxi). One of the major objectives of this was to establish a commercial and socialized housing system. The commercial housing was subject to the market economy with construction and selling by the real estate development company on the open market in China. Therefore, the high demand for commercialized housing required higher design standards of housing and also improvements to the quality of the environment.

Figure 2.8: The pilot of urban residential district housing in the 1980s
(Source from: Liu, 2009. The housing history in China between 1949-2009)

The pilot of urban residential district housing (**Figure 2.8**) emphasized the principles of the construction of residential housing with overall planning, reasonable layout of buildings and planned multiuse developments. However, by the end of the 1980s, the residential district housing planning began to consider the diversification of the building types and multi-use spaces and improving the conditions and quality of the environment of residential housing, in particular, the centralization of green space in residential districts. As a result, commercialized housing development and distribution systems are emerging in China and have raised more concerns about the quality of housing construction and design, equally important, they have intervened to set standards in relation to green space.

In the 1990s

The urban housing system reforms have rapidly developed, since the central government ended the physical housing allocation system beginning with housing assignment currency in July 1998. These milestones of the housing system reform completed the transformation of the traditional Chinese housing system into a commercial housing system. Initially, the government was looking to encourage and support the creation of a well-to-do society in an all-round way by pursuing the joint development of political, material, spiritual and ecological civilization. One of the major objectives of this was to encourage and establish a housing system for well-to-do urban residents. As this type of housing has expanded and standards have been compiled, its design has been systematized to correspond with a comparatively well-to-do life style.

Figure 2.9: Shijiazhuang alliance well-off residential housing in 1992
(Source from: Liu, 2009. The housing history in China between 1949-2009)

In 1992, the Shijiazhuang alliance well-to-do residential housing (**Figure 2.9**) was the first pilot exploration of housing for the well-to-do urban residents in a residential district of Shijiazhuang city in Hebei province in China. It was a supposedly successful example of such a housing system. The principle of planning and design for well-to-do housing emphasized the slogan 'people foremost'. However, this raised concerns about the rules governing acceptable behaviour, the high demand, the quality of the housing environment and the need to set standards in relation to management and maintenance. However, these types of well-to-do housing did not become common until the next decade.

In the 2000s

In the 2000s, the government planned to use the commercial housing development sector to drive future urban economic development and reforms, as well as to push new approaches and policies to support the provision of a commercial urban housing system undertaken by private and joint-venture companies for a profit. However, more recently, the prices of commercial housing have increased rapidly and the lack of legislation and regulations to control the commercial housing market has become apparent. The role of

the state in the housing system and how to control the price of commercial housing and to resolve the housing difficulties of low-income families has been the main subject of continuous debates.

Commercial housing development in Chinese cities has increased rapidly since the 2000s, and the investment in real estate development also increased in parallel with the house prices and higher standards of commercial housing on the economic open market. The Vanke Scene Garden housing in Tianjin (**Figure 2.10**) is a successful example of the many types of commercial housing which has addressed concerns about the humanity of the design, such as the spatial relationships within neighbourhoods and communication. Equally important is the design quality of the green space that provides communication within the housing development. However, the commercial housing development in Chinese cities has provided homes for millions of urban families and has improved the urban living environment.
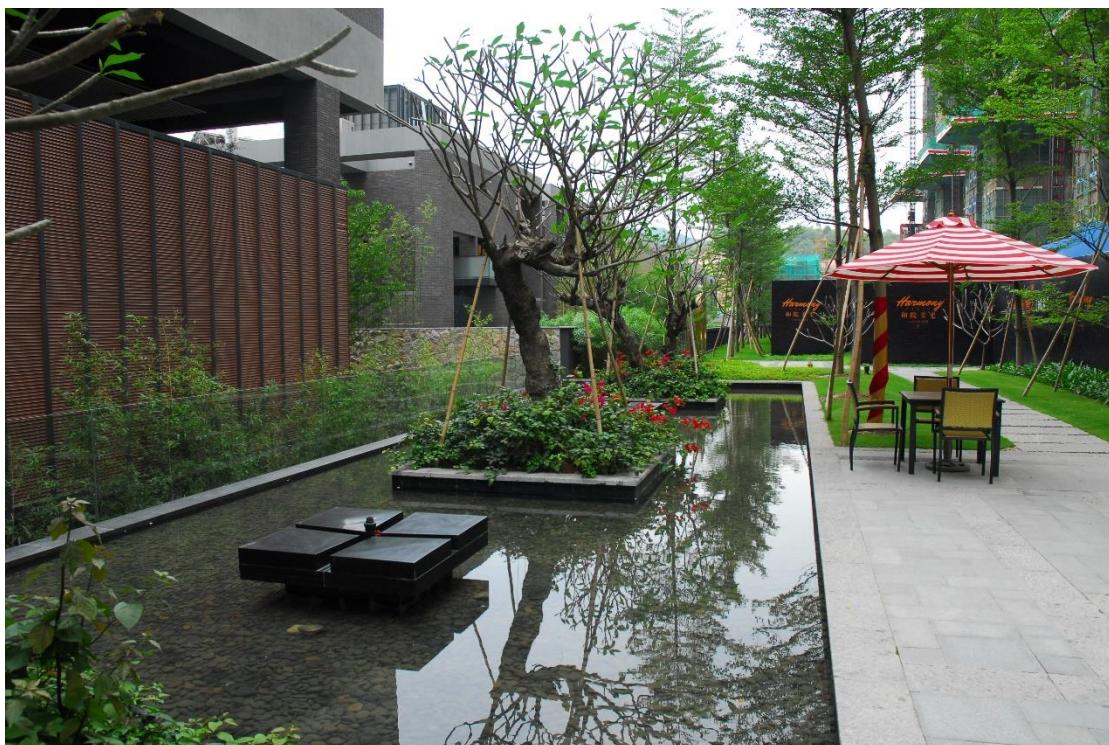
Figure 2.10: China Vanke Scene Garden housing in Shenzhen (2000s)
(Source from: Jiyu Zhang'slandscape project, 2007)

2.5   Nature and Everyday Living

2.5.1   Perspectives / understanding of a contested concept of nature

Across social science disciplines, writers have discussed how the relationship between 'nature' and the 'urban environment' itself is subject to political, economic, social and cultural definitions, understandings and influences (Benton-Short and Short, 2008). The idea of 'nature' as 'a contested concept' that is deserving of critical attention has been defined by Ginn and Demeritt (2009, p.300) as a concept with two major sets of interconnected meanings: on the one hand it refers to the things which are natural, or subject to the normal working of the 'laws of nature', or, on the other hand, to the essential things and what causes those things to be what they naturally are, or in other words the laws of nature themselves. The difficulties of disentangling different perspectives of 'nature' means people can take different views of the same thing in different places and use a series of contrasts or dichotomies all bundled up in the word 'nature' (O'Neill *et al.,* 2008).

However, 'nature' is differentially and discursively constructed, it is a subject that needs to be explored more closely. The literary critic Raymond Williams (1983, p.219) has discussed and summarized three main meanings of nature: the essential characteristics of a thing - its intrinsic nature; the external nature as in the unmediated material world, which is essentially non-human; and the 'universal nature' - the all-encompassing force controlling things in the world. The definition of nature is clearly a complex and hotly contested concept. There is little doubt that the most important concept of nature in various perceptions and thoughts is that of being something found 'out there' but also something with us 'in here'. Hence, our bodies, our sense of ourselves and our everyday lives involve using different descriptions of the thing called nature in different ways.

Moreover, the concept of nature as discussed by Karl Marx rests on the philosophical perception of man's self-creation. Crone clearly explains the role of nature in the Marxist system, "the heady theory of dialectical materialism with all its implications for men, their lives, thoughts and destinies (Burgess, 1985). If the universe can be simply explained by the phrase 'matter in motion' (*sic.*) controlled by 'natural laws', then clearly

there can be no other relation between man and his environment but one of the bleakest determinism" (Crone, 1964, p.67). This concept, together with its basic component of historical development, and whose processes were clearly discernible as the historical activities of human in all aspects of their behaviour (Burgess *et al.,* 2000).

However, understanding the complex concept of nature depends on the subject and position of the work where it appears. For example, as Kaplan & Kaplan (1989) explain, natural properties differ from what is meant by seeking to improve a psychological understanding of human-nature relations directed in gardens. Other scholarly insights have argued that 'nature' is more a construct of the human mind and that different people and cultures can mean quite different things when they speak of it. They claim that these 'contested natures' need to be understood if we are to understand what motivates people when they interact with their environment (Haines-Young, 2009). Furthermore, nature is that which we observe using the different forms of the sensory perception of nature. How to understand the meaning and significance of nature has been a consistent theme of discussion within the history of Chinese traditions, in the philosophical fields of metaphysics and epistemology, and within the cultural perspectives of nature in the changing city. Therefore, the study of nature in the social meaning and the construction of nature make major claims for their significant roles in the contemporary city, as will be discussed in the following section.

2.5.2 Rethinking of Chinese philosophies and cultural perspectives on nature in the city

Historic Chinese philosophies and cultural values highlight changing perspectives on nature in cities. It is recognized to apply to conceptions of 'nature' underpinned by a more sustained engagement with the traditional culture and essential philosophical background, which reflects the broader progression of Chinese society and city development through the history of the changes in the form and function of Chinese cities. From ancient China, the Daoist, Confucian and Buddhist ideas formed the fundamental philosophical and religious/historical context which created the palimpsest of meanings implicit in the characterization of Chinese society's values and traditions. In line with these

philosophies of Chinese traditions and cultures, the *Fengshui* (Chinese geomancy) theory and *Shanshui* cultures (Mountains-waters Painting) were the main principles and cultures to influence and blend into the long-standing planning of the Chinese city and the design of the Chinese classical garden. Therefore, a detailed study of these Chinese cultures and philosophies creates a basic understanding of the traditional perspectives on nature in cities and which, thorough knowledge of the 'good quality life' underpinned by social-cultural and philosophical distinctions, has in turn profoundly transformed everyday urban life.

Daoism and Confucianism were the two original philosophical and metaphysical doctrines which form the foundation of the social and moral ideology passed down through thousands of years. Buddhism is one of the important religions derived from India since the Han Dynasty (206BC-220AD), it became an exuberant and energetic philosophy of the ancient Chinese lifestyle when Confucianism degenerated and Daoism rose during the era of the Wei, Jin and Northern and Southern Dynasties (265-585AD). The philosophy of Confucianism was based on the Chinese tradition and socio-political system with respect to human morality, correctness of social relationships, justice and sincerity, which is a quasi-religious thought rather than an essential religion (Bo, 2009). The representation of Confucianism emphasized human relationships rather than utilitarian matters; it attempts to seek the social harmony and the relationship between man and the social hierarchy, ancestor worship, family loyalty and respect for elders. In its perspectives on nature, Confucianism espoused the recognized principle of the 'interplay between Heaven and Man' as the pioneering thought that regarded nature as the ultimate aesthetic standard (Hu, 1991), and believed that being in harmony with nature could affect an interplay between Heaven and Man. Moreover, man could be tempered by nature and thus achieve human morality. Thus, the 'nature' of Confucian philosophy reflects its perspectives that nature follows a strict social harmony and hierarchy to which the ancient Chinese referred when constructing urban plans and classical gardens in cities.

Daoism was the highest ideology and a traditional religion of Chinese origin from the Han dynasty onward, along with Buddhism. Daoism essentially concerns nature and has

ultimately influenced Chinese understanding about the relationship between humans and nature. Dao has the literal meaning of 'the way' which refers to the method of proper conduct which was considered to be the right one if the world was to run harmoniously. However, this word came to symbolize the 'laws of nature' and hence more than merely a 'way' in which we should live (Herelee G. Creel, 1970, p.2). However, the Daoist cosmological views and philosophies became the foundation theories of Chinese philosophy as represented by a statement by the well-known sage Laozi: "Man is controlled by the earth, the earth by heaven, heaven by the divine law, and the divine law follows nature" (Daszak *et al.,* 2008). Daoism also contributes the well-known Chinese theory of *Fengshui* (from 276-324 AD). This is a theoretical and quasi-science that involves a comprehensive **set** of disciplines, ranging from urban environment planning to the individual spiritual benefits of the living environment (He, 1990). This theory was also a pragmatic environmental tool used to address the relationship between the built and natural environments and a source of practical guidance in various life environments or housing-related locations, such as city and town planning, outdoor or interior design, even for the selection of cemetery sites for the emperor and nobles over thousands of years in China.

In the contemporary context, *Fengshui* can mean the "harmonious use of senses and technologies, rather than the imposition of form or moral judgment upon life's methods, in order that humanity maintains a perception of participation in the cosmos" (Jenkins, 2002). Overall, the essence of Daoism is that everything should strive for simplicity - the way of the natural world - and yield to and learn from the laws of nature. The traditional philosophies respect the world as a holistic, dynamic and co-operating system within which human beings should understand the harmony of nature. In addition, the philosophy of Buddhism is also to seek quietism and the spirit of nature, as they mentally escape from the chaos into a new interest in Daoist views of the natural world.

The expression of Confucian, Daoist and Buddhist philosophies has laid the ideological foundation of Chinese traditions and culture. The specific feature of Chinese culture is awakening to the beauty of nature, and the emergence of garden architectures, plants and general layouts that are artistic symbolic entities, which conjure up the integration of a

cultural concept into being the most exquisite artificial environment ever created by mankind (Cheng, 2012). Chinese culture refers to the ideology of Chinese philosophies in combination with Chinese arts of literature, poetry and painting - as we know the *Shanshui* culture (mountains & water culture /painting). *Shanshui* culture was developed to present a symbolic version of Daoist philosophy and *Fengshui* theory, and also developed to explore the principle of classical garden design as a representation of nature and to regard it as art (Feng, 1990). Thus, the *Shanshui* culture became one of the most important cultural thoughts which influenced all aspects of Chinese literature, art and the classic garden, as well as the unique spatial concept of the '*Shanshui* city' in the planning of ancient cities. It was also used to popularise the state's vision that promises a contemporary urban living environment.

However, Chinese culture is closely related to philosophy, always sticking to the principle of 'learning from nature' and a 'harmony between man and nature'. It is recognized that the application of cultural symbols and their semantic meanings still continues in traditional arts, the historical context and in the brilliance of the ancient Chinese people's construction activities, and represents their ideal harmonious spiritual and living environment. All together, the historical Chinese philosophies and culture provided the greatest perspective of nature in cities, which was reflected in the long-standing traditions of shaping the natural environment in cities in the past and which is still influencing current urban planning and landscape design by representing the ideal harmonious spiritual and living environment.

2.6 Conclusion

This chapter has outlined the key theoretical debates which will underpin a discussion of the historical and contemporary changes in the form and function of green space and housing in Chinese cities. The chapter began by considering the 'traditional' conceptions of 'nature' and 'everyday life' as expressed in a large body of literature and critical insights into Chinese culture and the essential philosophies involved in classical gardens. The chapter has also discussed the impact of the introduction of western style public parks from various Western sources and their hybridization and adoption within Chinese

society. The modern urban feature of the public park was employed in the creation of a semi-colonial, semi-feudal Chinese society and its cities (Wang, 1999). This chapter has focused on the events leading to the creation of open space amenities in the Shanghai foreign settlements and has examined the process by which the new type of space called a 'park' as well as the notion of 'public' space have informed the development (Sakai, 2011). Additionally, this chapter has also analysed a series of communist urban green space and housing reforms associated with 'the great leap forward', the post-Mao era, and the 'open door' policy in order to trace how changing notions of nature and everyday life can be mapped onto contemporary housing development and associated urban social and spatial inequalities within Chinese cities. Given the rapid change and the diversity of urbanisms, it is vital that an exploration of their understanding of the perspectives of nature, their re-articulation of traditional Chinese religious, philosophical and cultural perspectives with 'everyday' connections with nature that seek to ensure more equitable access to, and increased 'quality' of, green space in the cities, is undertaken.

Chapter 3   Research Design and Methodology

3.1 Introduction

The research design and methodology chosen for this research has been developed in order to generate robust and reliable data sets that provide a rich and detailed understanding of residential areas and green space in the case study area: the Huangpu District of Shanghai. They also provide the opportunity to offer insights into similarities, differences, connections and mobilites relating to other cities within China and elsewhere in the world (see Castree, 2005; George and Bennett, 2005; Creswell, 2009; Mills *et al.,* 2010). To this end and shaped by the research aims and objectives, the research utilizes qualitative research methods including in-depth interviews with key local stakeholders and households, participant observation in public spaces, and textual analysis of policy and planning documents.

This chapter begins with an introduction to the philosophy underpinning the thesis and its role in guiding the research design and choice of research methods. Following a brief reminder of the research aims and objectives, subsequent sections then outline in detail the research methodology, data collection and analysis. It then goes on to discuss the author's positionality and its impact on this study followed by a review of ethical considerations that guided the research project. The conclusion highlights how methodology and research design are vital components in generating findings to address the research aims and objectives with reference to relevant theoretical and policy debates.

3.2   Research philosophy

Social science research must be guided by fundamental beliefs and assumptions with regards to how we know and find out about the world, as well as offering a practical framework to guide the behaviour of researchers (Saunders *et al.,* 2009; Jonker and Pennink, 2010; Neuman, 2011) and indeed, in more simple terms, to 'get you thinking differently about doing research before you begin doing research' (Maykut and

Morehouse, 1994, p.1). As such, there are important choices to be made about particular philosophical assumptions that underpin each stage of the research process; from the critical review and synthesis of theoretical debates and frameworks through to the formulation and implementation of qualitative research methods, and which are also involved in the practicalities of data analysis and the presentation of differing data sets in a way that compliments the varying types of findings generated by the research methods (see Wahyuni, 2012).

To begin with, it is important to understand in the broadest sense, how particular research paradigms have sought to address the philosophical dimensions of social science research, 'as worldviews or all-encompassing ways of experiencing and thinking about the world, including beliefs about morals, values, and aesthetics' (Morgan, 2007, p.50). The term 'paradigm' generally refers to the 'dominant framework in which research takes place' (Hammond and Wellington, 2013, p.116) which determines questions and answers bound up with the 'what', 'how' 'where' and 'when' of research. As a simple definition, a research paradigm is a set of fundamental assumptions and beliefs or 'a basic set of beliefs that guides action' (Guba, 1990, p.17). For example, Thomas Kuhn (1962) first introduced the concept of paradigm through his work entitled of *The Structure of Scientific Revolutions* in order to offer a framework to guide researchers in their approaches towards creating knowledge and arguments. The two key substantial philosophical dimensions that distinguish research paradigms are *ontology* and *epistemology* (Saunders *et al.,* 2009, Wahyuni, 2012). Ontology is how we perceive a reality or how this is conceived with regards to the nature and experience of being a human being in the world. Indeed, Saunders *et al.* (2009) suggest that ontology can thus be understood as the ways in which we perceive the existence of reality as being external and independent of social actors and their interpretations of their world as being 'objective' or 'real' (Neuman, 2011). In parallel, epistemology is concerned with how we know the world and understand and use knowledge that is acceptable and valid.

In addition to ontology and epistemology, two other fundamental guiding philosophies underpin social science research - methodology and axiology. Methodology refers to models for undertaking research with a backdrop of traditions of paradigms and justifies

the best means for gaining knowledge about the world (Denzin and Lincoln, 2000, p.157). Axiology is concerned with ethics. It encompasses the roles of the values and ethics of academic disciplines and individual researchers, ensuring that, throughout a whole research project, decisions are made to ensure that fair, moral and safe approaches that are not detrimental to either the researcher or respondents are undertaken. These fundamental beliefs as they relate to research paradigms are summarized in **Table 3.1** below, which highlights the growing number of different perspectives that researchers can adopt in formulating the ontology, epistemology and axiology of their research in order to best understand the human world and constructions of political, economic, social and cultural phenomena.

Table 3.1: The fundamental beliefs of research paradigms in the social sciences

	Research Paradigms			
Fundamental beliefs	Positivism (Naïve realism)	Postpositivism (Critical Realism)	Interpretivism (Constructivism)	Pragmatism
Ontology: the position on the nature of reality.	External, objective and independent of social actors.	Objective. Exists independently of human thoughts and beliefs or knowledge of their existence, but is interpreted through social conditioning.	Socially constructed, subjective, may change, multiple.	The external, multiple, view chosen to best achieve an answer to the research question.
Epistemology: the view on what constitutes acceptable knowledge.	Only Observable phenomena can provide credible data and facts. Focus is on causality and law-like generalisations that reduce phenomena to their simplest elements.	Only observable phenomena can provide credible data and facts. Focus on explaining within a context or contexts.	Subjective meanings and social phenomena. Focus is upon the details of a situation, the reality behind these details, subjective meanings and motivating actions.	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus is on practical applied research, integrating different perspectives to help interpret the data.
Axiology: the role of values in research and the researcher's stance.	Value-free and etic research is undertaken in a value-free way; the researcher is independent of the data and maintains an objective stance.	Value-laden and etic research is value laden; the researcher is biased by world views, cultural experiences and upbringing.	Value-bond and emic research is value bonded; the researcher is part of what is being researched, cannot be separated and so will be subjective.	Value-bond and etic-emic values play a large role in interpreting the results; the researcher adopts both objective and subjective points of view.
Methodology: the model behind the research process.	Quantitative.	Quantitative or qualitative.	Qualitative.	Quantitative and qualitative (mixed or multi-method design).

Source: Research Paradigms (adapted from Saunders *et al., 2*009, p.119; Hallebone and Priest, 2009.)

In formulating the research design and methodology, a critical assessment of the strengths and weaknesses of each of the diverse and varied social science research paradigms was made. In doing so, it became clear that the theoretical and empirical focus of this project would be best served by a constructivist interpretivist approach to research. In short, the interpretivist paradigm was developed as a critique of 'scientific' positivism in the social sciences. Wilhelm Dilthey was influential in advancing the interpretivist paradigm approach by highlighting that the subject matter investigated by the natural sciences was different to that of the natural and medical sciences and that the study of human beings demanded a more specific research design and methodology (Onwuegbuzie, 2000). As Hammersley (2009) highlights, an interpretivist approach is founded on the idea that there is a fundamental difference between the nature of the phenomena investigated by the natural and medical sciences and those studied by historians, social scientists and educational researchers and so on. In these terms, interpretivists believe that 'reality' is constructed by social actors; individuals with their own varied backgrounds, assumptions and experiences contribute to the production and reproduction of social context through an interaction with social structures (Hennink *et al.*, 2011).

An interpretivist position is thus founded on theoretical beliefs that human life is socially constructed and thus, in order to understand experiences and subjective meanings, 'interpretivist researchers must engage themselves with the participants of their research to work with qualitative data which provides rich and detailed descriptions of social constructs (Wahyuni, 2012). These principles are particularly important in mixed qualitative methodologies, such as in-depth interviews, participant observation and analysis of cultural forms and practices (Somekh and Lewin, 2005). Interpretivist approaches to mixed qualitative methods also acknowledge and take account of the ways in which research is a social, collaborative process of bringing about meaning and knowledge (Elliott and Lukes, 2008). Such an understanding is important to highlight how research practice and data collection is undertaken and negotiated within cultures, social settings and relationships with other people, and that methodologies must be carefully chosen in order to ensure an adequate dialogue between the researchers and respondents.

3.2.1 Research Design

The key principles that guided the research design for this project are threefold; firstly, that the methodology and research design facilitate a clear and confident outline of the aims and objectives which drive the direction of the project; secondly, that the chosen research methods enable the production of robust and complimentary data sets that are analysed in a detailed and robust manner that does justice to the contribution made by the respondents and, finally, that the research is undertaken in line with relevant ethical guidelines that are generally agreed to be pertinent and worthwhile across social science disciplines (Ali and Kelly, 2012, p.130). In sum, the research project utilizes mixed qualitative research methods underpinned by a constructivist interpretivist approach.

At the heart of the mixed qualitative research methods are ethnographic approaches that require the researcher to be immersed in settings or locations thereby becoming part of the group being studied. Ethnographic research ontologies and epistemologies have for a long time now been well established and respected throughout the social sciences and have become one of the most productive methods used by urban researchers to generate complimentary data sets (see Wallman, 1985; Guldin and Southall, 1993; Miles *et al., 2*000; Low, 2005; Valentine, 2004; Easterby-Smith *et al.,* 2008). However, it is important to acknowledge that ethnographic approaches do not claim to offer the kind of 'representative' sampling strategy that quantitative methods allow. However, the ethnographic research methods undertaken in this research (see below) are complimentary in that they will allow a triangulation of different data sets to ensure robust findings. The decision to adopt a mixed-methods qualitative study underpinned by an ethnographic approach was formulated by weighing up both the strengths and weaknesses of both qualitative and quantitative research where:

> *"qualitative study is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants and conducted in a natural sitting. Alternatively, a quantitative study, consistent with the quantitative paradigm, is an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers and analysed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true" (Creswell, 1994, p.26).*

Hence, by drawing on mixed qualitative and ethnographic research methods that have been successfully used by urban researchers in a diverse range of disciplines, this project will excavate data that allows rich and detailed insights into the relationship between landscape design, planning and the everyday uses of green space in residential areas of Huangpu District, Shanghai.

3.2.2 Research aims and objectives

Although philosophical positioning often remains implicit in the day-to-day practices of research projects, it is nonetheless important, as Saunders *et al.* (2009: 109) argue that 'the most important determinant of the epistemology, ontology, and axiology you adopt is in research questions' (also see Neuman, 2011 and Creswell, 2009). The following **Table 3.2** is a reminder of the research aims and objectives and a summary table that explains how they relate to the chosen research methodologies:

Table 3.2: The Research Aim and Methodologies: conceptual framework

OVERALL RESEARCH AIM
To explaining the interaction/ associations between urban policy, planning and the use of green space in residential areas in Shanghai.

Stages	Objectives	Methods		Outputs
problem identifying stage	**Objective 1)** To understand historical changes in the design, form and function, and relationship between the provision of housing and green space in Huangpu District, Shanghai.	**Literature review** (Academic and Historical review).		A review of critical academic writing on historical and contemporary changes in the political, economic, social, cultural and spatial factors that have influenced housing and green space in China. To map visual images of green space and housing developments in Huangpu District.
Date collection and analysis stage	**Objective 2)** To critically consider the contemporary political, economic and policy context and everyday practices associated with green space and residential life at different spatial scales in Shanghai.	**Policy review**		- a textual analysis of policy and other documents.
		Ethnographic and Archival research		- survey of Huangpu District. - textual analysis of historical and archival material.
		Multi-Case Studies	Participant observation.	- undertaken in a diverse range of spaces and places in Huangpu District.
			Mental and visual mapping of neighbourhoods.	- innovative mental and visual mapping undertaken by residents in a diverse range of urban neighbourhoods.
			Expert Interview n=22 (planners, politicians, designers, etc.).	- through in-depth interviews with key actors and stakeholders from a range of agencies and organizations whose remit involves housing and green space.
			In-depth interviews with residents.	n=12 in 5 different neighbourhoods, total 60.
Recommendations	**Objective 3)** To offer policy suggestions regarding the planning, design and provision of green space in residential areas in China.	Analysis of empirical findings and theoretical reflections.		To analyse the findings using conventional social science techniques. To recommend potential mitigation strategies.

3.2.3   Case study research

As noted at the beginning of this chapter, this research project is based on case study research which seeks to generate robust and reliable data sets that provide a rich and detailed understanding of residential areas and green space in the case study area of Huangpu District, Shanghai. Central to this approach was the imperative that the research findings provided the opportunity to offer insights into similarities, differences, connections and mobilites relating to other cities within China and elsewhere in the world. Such a guiding rationale clearly demanded that a case study approach to research should be utilised. Case study research is widely utilised across the social sciences as 'a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real-life context using multiple sources of evidence' (Yin, 1994 quoted in Robson, 2002, p.178). Case study research offers the opportunity to focus on specific urban spaces and places in depth, and, while not allowing direct comparisons with other spaces and places to be made, nonetheless offers the opportunity for generalisations across locations and at differing spatial scales to be formulated (see Castree, 2005; George and Bennett, 2005; Creswell, 2009; Mills *et al., 2*010). To that end, in order to fully develop an understanding of the local, urban, regional, national and international context which together impact on the relationships between residential areas and green space in the case study area of Huangpu District, this case study research is formulated as follows:

Case study city - Shanghai

The location of the case study research is the City of Shanghai, chosen because of the diversity of its neighbourhoods, and mix of housing types and green spaces. Shanghai is located on the Yangtze River Delta on China's eastern coast. Through its rapid development over the last two decades it has regained its status as a leading global city and become a major financial centre that boasts the busiest container port in the world. The city is made up of neighbourhoods where a mix-and-match of traditional and contemporary Chinese culture exits alongside globalizing cosmopolitan urbanism (Wu, 2006). However, Shanghai, like most urbanized cities in China, is suffering serious problems relating to housing development due to a lack of appropriate legislation and control. The mismatch of housing supply and affordability, and the underdeveloped

nature of the urban housing market, which is arguably failing to adequately provide for a diverse range of different socioeconomic groups, has been unable to develop a relevant housing provision or access to green space.

For example, the eight districts which make up the urban core of Shanghai are, in fact, the most densely populated areas of the city, with a complex mix of housing types, styles and traditions and with differing types and amounts of green space. In China, there are broadly three types of housing: state-owned municipal public housing, work-unit housing and also private housing. The first category of housing includes a range of types and styles of building from socialist style high-rise developments from the 1960s-1980s to more recent high-rise, contemporary, affordable housing. The latter includes traditional Chinese courtyard-style homes, European townhouses and villas and high-rise and suburban-gated communities. More specifically, Kagawa and Jinfeng (2007, p.57) suggest that residential homes in Shanghai can be grouped into garden houses, apartments, dormitories, houses-in-lanes (including the old and the new buildings), and 'shanties'. The case study district of Huangpu has been purposely selected because all of the housing types described by Kagawa and Jinfeng (2007) can be found in close proximity.

In order to map the relationship between everyday life, housing and open space in Huangpu District, the research draws on the Chinese government's 'Classification Standards of Urban Green Space' CJJ/T85-2002 (See Table 1 below). However, as noted in Chapter 2, it is important to engage with the 'fuzzy' nature of boundaries between 'public' and 'private' space, and conflicting notions of 'nature' amongst different groups of residents as well as in official policy. Drawing on official government typologies to map the type and density of green space in each area, the critical focus of the research on the study of everyday life also enables the research to consider the 'actual' design and use of those spaces by a variety of residents. Moreover, a key feature of this research is to move beyond thinking of urban open spaces as 'bounded' but to discuss the relationships between various green spaces within and across each district. This approach includes consideration of the provision and use of open space in relation to planning and

policy agendas as well as the conflicts and tensions amongst different social groups which surround the design and everyday use of a diverse range of 'open spaces'.

Huangpu - residential district, quarter and housing cluster scales

More specifically, the research focuses on the quarter and housing cluster scales of Huangpu District and their relationships with public and private green spaces with a more in-depth focus on the housing cluster scale. Huangpu District is one of the most densely populated urban districts in the world with 678,670 residents living in an area of 20.43km^2, and includes the historically important areas of Nanshi (Su *et al., 2*011:44); the historical core of Shanghai and the walled city; the Yuyuan quarter famous for its historic buildings and gardens; and the Luwen area long regarded as a premier residential area of Shanghai, known for its leafy streets, cafes and restaurants, high-end retail and historical houses (Savage, 2006). While parts of the Huangpu District have undergone extensive redevelopment and been subject to gentrification, with traditional working-class houses being replaced by high-rise apartment buildings and modern constructions being hidden behind Chinese-style facades, the district nonetheless retains a diverse range of housing developments with the presence of the port also ensuring that State housing and 'shanti' dwellings are also to be found (Yang *et al., 2*010).

Huangpu District also has a number of historic and recently-developed 'public' green spaces that will be included in the research, including 'Comprehensive parks' (G1) (see Appendices 1 and 2) such as Peng Lai Park (built in 1953 and renovated in 2006, increasing its overall size from 2,700m^2 to 35,296m^2) and Fuxin Park which is even larger. Other significant public green spaces (G1) include a 'Theme Park' associated with a cultural and exhibition centre and green space surrounding various Metro stations. An initial pilot exercise, scoping the district, also identified a diverse range of 'linear parks' and 'roadside green space' and 'attached green space' (G4). The pilot scoping exercise also highlighted a diverse range of 'private' green spaces including small communal gardens, small courtyards, balcony and roof gardens, *de facto* 'allotments' and areas of planted flowers, as well as lawned and tree-lined walkways between buildings (See Appendix 2) directly associated with various housing developments, which will also be a focus of this PhD research.

For the purpose of this research, housing developments described by Kagawa and Jinfeng (2007) will be grouped together in five distinct categories, to inform the choice of specific housing clusters that will be the focus of the empirical research in a manner that acknowledges similarities in housing types, but also captures the diversity of housing development and associated green space in Huangpu District:

1) Historic Chinese - houses-in-lanes (1869-1930).
2) Colonial housing - including garden villas and town houses garden apartments (both with and without private/communal gardens) (since1930).
3) Traditional working class housing (1932-1949).
4) State-built housing - including both low- and high-rise state housing (from different decades of urban development 1970s-1990s).
5) High-rise private housing (gated communities) (Since 1990s).

3.3 Methodology

In order to ensure that the methodology which underpins the research design is reliable and robust, a multi-methods approach has been developed and adopted which combines ethnographic and qualitative research, including in-depth interviews; textual analysis of archival and contemporary documents (and other sources), complimented with participant observation and mapping techniques (see Elwood, 2010). As such, to ensure a rigorous and robust data set which accounts for the institutional context and complexity of the everyday lives of residents, the research has drawn on critical writing around the philosophies and practicalities of the triangulation of data sets in order to ensure complimentary use of ethnographic/qualitative methodologies, as well as learning from previous urban ethnographic studies, in order to adopt the following mixed-methods and sampling strategy:

Stage 1: A review of historic and contemporary changes in Chinese cities

In order to understand the changing relationship between urban planning and everyday use of open space in Chinese cities, the research undertook:

- **Textual analysis of historic and archival material (Objective 1)**

A review of historic documents and records focused on the history of Chinese cities, Shanghai and the Huangpu District was undertaken in order to understand the changing provision of green space in residential areas. This was achieved through analysis of a range of historic documents including, official plans, newspaper reports and other historical sources (see Black, 2004). This research technique enabled contrasts to be made between the different relationships between housing and green space that relate to periods of history that include for example the pre-Socialist 'traditional' period, the great leap forward, the post-Mao era and the 'open door' urban policy and so on. Importantly, such textual analysis of historic and archival material facilitated a contrast of the political, economic, policy and everyday changes relating to housing and the design and planning of green space at different spatial scales in China, Shanghai and the Huangpu District.

- **Mapping of Huangpu District - at district, quarter and housing cluster scale (Objectives 1 and 2)**

Where policy and planning documents did not offer a clear picture of the location, design and provision of public and private green space, 'maps' and photographs were utilized with reference to (and allowing a critique of) official national Chinese classifications and typologies (see Appendices 1 and 2).

- **Textual analysis of contemporary policy documents/plans (Objective 2)**

A search of contemporary policy documents and plans focused on Chinese urban policy, and on Shanghai and the Huangpu District. The use of textual analysis to interrogate the data considered the 'situatedness' of knowledge, the contextuality of discourses and the active role which spatial images play in political life (Hakli, 1998, p.333).

Stage 2: Ethnographic research in Huangpu District, Shanghai

Ethnographic research allowed a rich and detailed insight into both political/policy and popular understandings and experiences of the relationship between landscape design planning and everyday uses of green space in residential areas in Shanghai, at residential district, quarter and cluster scales through:

- **In-depth interviews with key actors - at metropolitan, district, quarter and housing cluster scales (Objectives 2 and 3)**

The interviews explored respondents' perspectives on trends in housing development, design and parallel growing concerns to 'green' Chinese cities in order to make them more sustainable. Questions attempted:

- to understand the priorities for design, type and the quantity of housing and associated green spaces;
- to consider opportunities and constraints bound up in both the financial and regulatory climates;
- to assess levels of popular and policy concern regarding the future of housing and green space provision.

Particular attention was given to the extent and causes of stability and change in the provision of housing and green space, the implications of such trends and management/responses to these issues within Huangpu District at residential quarter and housing cluster levels. In-depth interviews with planners, urbanists, politicians, landscape designers and so on were undertaken with those whose remit relates to green space and residential life in Shanghai. This included interviews with city officials in various government departments as well as property developers and landscape designers. Semi-structured interviews are a tried and tested method in social science research with widely discussed issues of meaning, identity, subjectivity, politics, knowledge, power and representation that must be acknowledged, understood and accounted for in the fieldwork (see for example, Myles and Huberman, 1994).

- **In-depth interviews with households - in the categories of housing development outlined above, undertaken at housing cluster scale (Objectives 2 and 3)**

Following Wallman's seminal approach to urban ethnography entitled *8 London Households* (1984) this research focused on a small number of residents by undertaking in-depth interviews which took place in their homes or other relevant 'public' and 'private' green spaces in Huangpu District. Initial contact with residents in each area was to be made through representatives of '*juweihui*' – local groups of usually between 100-700 families at the spatial scale of housing cluster (this will be revisited later).

However, in order to ensure that respondents were not 'self-selecting' or 'selected' because of being the most active people in the neighbourhood association, a snowball sampling process through contact with local residents beyond the '*juweihui*' was undertaken by contacting a broader range of community organizations in order to include respondents being recruited who are not involved in such formal groups (the author's engagement with '*juweihui*' will be revisited later). The respondents recruited from each area were purposively sampled to express the diversity of the socioeconomic profile of each of the neighbourhoods based on official government statistics. More specifically, the interviews focused on:

- memories of housing and green space regarding changing design, availability and social access throughout residents' life course;
- personal drivers/expectations and pressures on the relationship between housing and green space (including how everyday lives circulate around public and private green spaces);
- the broader societal context regarding attitudes to traditional and changing patterns of residential life and the design, provision and use of public and private green space;
- changing policy and private-sector-led urban development.

- **Participant observation - undertaken at quarter and housing cluster scale (Objectives 2 and 3).**

Observations were undertaken in a wide variety of settings at residential quarter and housing cluster spatial scales in Huangpu District, including public and private green spaces, in order to understand how people interact and social space is constituted, and nature is imagined and used in a way that creates inclusions and exclusions with relation to green space (see Emerson *et al.,* 1995). This investigated the different and diverse use of public and private green space by different social groups. The participant observation, which took take place at varied times on different days, and involved descriptive observations (about different green spaces, general/specific acts and who is using those spaces) as well as narrative accounts, built up an overall picture of housing and green space at each location.

3.4 Data collection

Analysis of texts and documents, in-depth interviews with the key stakeholders and householders and participant observation were undertaken as follows:

3.4.1 Textural analysis

Across the social sciences, analysis of language and/or the use language is increasingly being utilized for empirical investigation of social life (Potter and Wetherell, 1987; Rosenau, 1992; Silverman, 1997). Approaches such as 'textual' and 'discourse' analysis demonstrate the importance of language within social science and refer to the 'phrasing' and 'word choice' that is associated with 'language-in-use' (Gee, 1999, p.7). Analysis of linguistics or text, gives us purchase and understanding of the processes through which 'truths' become embodied and enacted in the conversations. As Jupp, citing Worrall, suggests:

> *"discourse embraces all aspects of a communication - not only its content, but its author (who says it?), its authority (on what grounds?), its audience (to whom?), its objective (in order to achieve what?). And the discourse involves all forms of communication, including talk and conversation. In the latter, however, it is not restricted exclusively to verbalized propositions, but can include ways of seeing, categorizing and reacting to the social world in everyday practices."*

In these terms 'discourse' comes close to standing for everything, indeed, as Gee suggests, 'all life for all of us is just a patchwork of thoughts, words, objects, events, actions, and interactions in Discourses,' (*ibid.*). However, in reviewing the strengths and weaknesses of discourse analysis, Philips and Hardy highlight the importance of analysis of texts in order to offer understanding of 'an interrelated set of texts, and the practices of their production, dissemination and reception' (2002, p.3). This perspective highlights that discourse and textual analysis is fundamentally concerned with considering and unpacking the interrelationship of language and social reality. Moreover, as Alvesson and Karreman (2000) highlight, language and associated discourses are bound up with the 'making' of social meaning, attitudes, values and beliefs (Potter and Wetherell, 1994). This thesis utilizes critical discourse analysis in order to examine the dominant narratives and meanings of policy, planning documents and other texts relevant to the research at hand. The details can be found in a summary table (Appendix E).

3.4.2   Semi-structured interviews

In-depth interviews enable researchers to elicit information, opinions and details of the beliefs of interviewees through verbal exchange (Smith, 1975). In-depth interviewing is an excellent way for researchers to gain detailed insights into, and information about, a specific topic and draw on information from fewer informants but in great depth (Denscombe, 2001; McQueen and Knussen, 2002). In-depth interviews can be structured and semi-structured in order to impose different levels of organisation on the progress of each interview. After reflection, semi-structured interviews were chosen as one of the research methodologies in order to allow and facilitate, where necessary, discussions that moved beyond the focus of the written questions in order to generate a full and frank discussion of issues that arose during the interview. Such issues may not always have been seen as relevant to the topic prior to the interviews (McQueen and Knussen, 2002).

The data collection relating to the in-depth interviews was focused on gathering information and insights relating to all the research aims and questions and was subject to thematic data analysis (see below for more details). Thematic analysis is an important process used in understanding qualitative information in a systematic manner that increases accuracy and/or sensitivity when seeking to understanding and interpret insights and observations made by respondents (Boyatzis, 1998). Semi-structured interviews with open-ended question design was thus applied due to the flexibility and in-depth nature of this technique, and offered the possibility during interviews with key stakeholders and householders to gather more sophisticated information (Gillham, 2005). In these terms, an open-ended questionnaire design helps 'learning about the respondent's level of information, his frame of reference in answering a question, or his opinion structure' (Smith, 1975, p.173). Pilot interviews were undertaken at the beginning of the fieldwork in order to test the interviewees' response to the questions and to ensure that the questions had due regard to time constraints and could enhance the researcher's knowledge of the breadth and depth of the topic at hand, while being flexible enough to allow for relevant unforeseen topics and issues to be explored by the respondent.

A total of 22 in-depth interviews were undertaken with key stakeholders involved in Government, Non-Government, local authorities and academic institutions (see **Table 3.3** for a brief summary and Appendix D which gives a full list of interviewees including the organisation, agency, sector and the date when the interview took place e.g. government officer, planner, architecture, landscape). Key stakeholder respondents were interviewed because their professional work and/or portfolio of interests and responsibilities directly included housing and/or green space.

Table 3.3: Summary of Key Stakeholders

SECTOR	NUMBER OF INTERVIWEES
Government	4
Planning	2
Planning/Architecture	3
Architecture	3
Academic	4
Landscape	6
Total	*22*

In-depth interviews were also undertaken with 60 householders - 12 in each of the case study housing types. These interviews were focused on collecting information, insights and opinions from householders with regards to green space, housing and everyday life. All the interviews were recorded with the permission of the interviewee. Where necessary, snowball sampling was employed as an efficient way of recruiting participants (Smith, 1975). Snowball sampling, is a useful type of purposive sampling and was therefore useful in response to the particular demands of an ethnographic research project (Robson, 2002; Miller and Salkind, 1991).

The in-depth interviewing of both key stakeholders and householders was undertaken using open-ended questions designed to ensure that high-quality, flexible and in-depth data were collected. An important element of face-to-face interviewing was the use of both 'pen and paper' note-taking and audio recording in order to capture both verbal and non-verbal information and ensure that interesting lines of enquiry to be followed up at different times throughout the interview were not lost. The interviews, like all of the

primary data collection methods, were underpinned by theoretical and empirical insights, debate, discussion and arguments gleaned from the review of academic literature outlined in Chapter 2.

3.4.3   Participant observation

Participant observation is the central ethnographic data collection technique in the social sciences and along with other methodologies, such as in-depth interviews and textual analysis, is well placed to help illuminate, unpack and understand the nature of daily activities including embodied and emotional findings relating to sight, hearing, feeling, smell and touch and so on (DeWalt and DeWalt, 2011; LeCompte, 1999). Indeed, participant observation requires in-depth and sustained fieldwork guided by 'principles of systematic, intensive collection and interpretation of field data to a degree of sophistication not know before' (Firth, 1985, p.30). Gaining unique insights into the observation of the behaviours and activities of those they observe and by participating in respondents' daily lives, researchers are able to gather rich information including an emphasis on everyday interactions and observations rather than on using directed inquiries into specific behaviours (Malinowski, 1961; Grills, 1998). Importantly, this method allows differing degrees of observer-researcher relationships including: the complete participant, the participant-as-observer, the complete observer and the observer-as-participant (Junker, 1952). This understanding distinguishes the extent to which the researcher is an active participant, peripheral observer or a limited observer during fieldwork (Punch, 2005, p.182).

3.5   Data analysis

All research studies are unique and thus demand specific strategies that are chosen in order to analyse data that must essentially stem from combining factors that include the research questions, the theoretical foundations of the study and the appropriateness of methodologies and techniques of analysis for making sense of the data. As Patton notes, 'analysis finally makes clear what would have been most important to study, if only we had known beforehand' (2002, p.431). Analysis of qualitative data must therefore be

systematic, disciplined and able to account for the large amount of detailed and rich data generated through ethnographic methods (Punch, 2005). As LeCompte and Schensul (1999), Wolcott (1994) and Bernard and Ryan (2009) suggest, analysis of qualitative data requires systematic reviewing, summarizing and cross-checking, looking for patterns and drawing conclusions. Indeed, as Miles and Huberman (1990, p.4) argue, analysis of qualitative data consists of 'three concurrent 'flows of activity': data reduction, data display, and drawing and verifying conclusions in a comprehensive source book', as shown in **Figure 3.1**below:
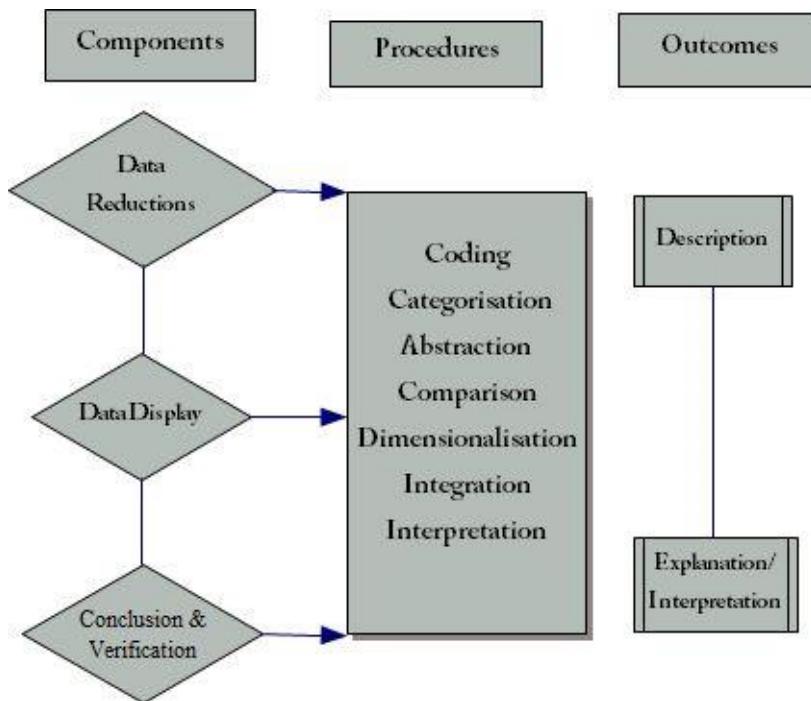
Figure 3.1: The Qualitative Analytical Process
 (Adapted from descriptions of Strauss and Corbin, 1990; Spiggle, 1994; Miles and Huberman, 1994)

In these terms, collecting, coding and analysing data is a continuous iterative process. *Data reduction,* for example, seeks to order the findings from a specific question, coding and preliminary analysis into smaller piles of 'crunched' or summarized data. *Data display* is represented in tables, charts and by selecting quotes and a fieldwork notes network to show what the data are telling and what justifiable conclusions can be drawn. Thus, interpretation and verification demand the following of 'hunches' and the inferential, triangulation of results whilst building the argument and conclusions.

Bernard (2000), for example, highlights diverse approaches to data analysis, including hermeneutics or interpretive analysis, narrative and performance analysis, discourse analysis, grounded theory analysis, content analysis, and cross-cultural analysis. In hermeneutics or interpretive analysis, for example, the researcher 'continually interpret(s) the words of those texts to understand their meaning and their directives' (p.439). The focus of narrative and performance analysis is to seek to discover repeated similarities in people's stories. Discourse analysis involves looking closely at how people interact with each other. The primary methods utilized to deal with complex qualitative data were descriptive analysis, content analysis and discourse analysis (or documentary and textual analysis). They assisted in the analysis of relevant policy documents and their triangulation with the data collected as a result of interviews transcripts, field notes and maps.

In this study, the in-depth interviews with stakeholders and householders were transcribed, translated, and subjected to a systematic multi-stage analysis. Where necessary, issues with regards to translation (Smith, 1996) were addressed through discussion with the supervisory team in order to examine the complexities of comparing the collected data. The coding stage of research included analysis at two levels: *'in vivo'* coding of terms used by the informants and 'constructed' codes developed by the researcher (Strauss, 1987). The codes of individual accounts were contrasted with each other in order to highlight dominant and counter themes. The fieldwork diaries were coded in a similar way. While the possible approaches to data analysis are both varied and diverse, Miles and Huberman provide a sequential list of what they describe as 'a fairly classic set of analytic moves' (1994, p.9). These include for example, giving codes to materials obtained from observation, interviews, documentary analysis, etc.; then adding comments, reflections, etc. (commonly referred to as 'memos'); further going through the materials to identify similar phrases, patterns, themes, relationships, sequences and differences between sub-groups, etc.; taking these patterns, themes, etc. out into the field to consider the next wave of data collection; leading to a gradual elaborating of a small set of generalizations that covers the consistencies that are discernible in the data; and, finally, linking these generalizations to theoretical bodies of knowledge. The author's own approach to data analysis broadly followed these steps and is summarized in the following **Table 3.4**.

Table 3.4: Summary of Research Methods and Analysis
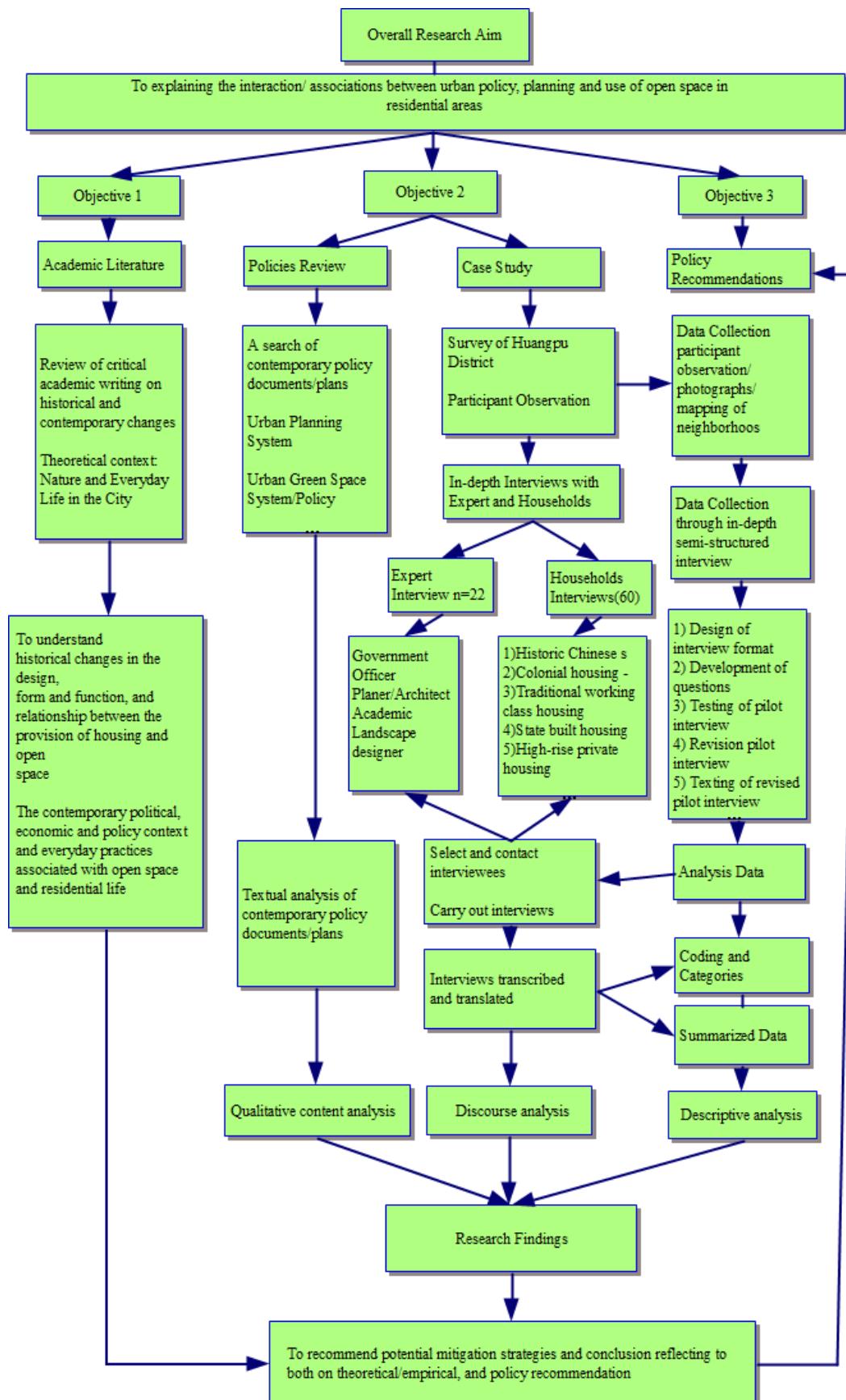
Table 3.4 summarises the key activities and locations and degrees of participation/observation involved in this research. As the table shows, the participant observation was undertaken in all of the residential housing types and a variety of green spaces. Choosing the locations of participant observation was determined through information gathered during interviews with both key stakeholders and householders in order to understand how people interact in green and residential spaces, and the extent to which differential socio-culturally-constructed values are dependent upon daily life and characteristics including age, gender, social class and disciplinary and professional background. This approach focused on gathering data regarding different types of green, public and private spaces and who/how people were using those spaces.

In summary, analysing qualitative data is underpinned by a process of reducing large data sets of collected material to make sense of the information. This can be a challenging process which typically involves the researchers immersing themselves in the data, becoming familiar with patterns and themes, searching for various relationships between data sets that help them to understand what they have found and then visually displaying the information and writing it up. Hence, the collected data sets were analysed with a focus on the correlations among housing and green space design standards, actual planning and design practices and everyday life. The analysis sought to highlight the 'why', and 'how' and 'when' of the findings through the analysis of 'unstructured' information - things like in-depth interview transcripts, on-site observations, photos, maps and documents (Maxwell, 1996).

There are now software packages that are available to help qualitative researchers with coding and analysis. This software has arguably added to the qualitative researcher's ability to distil data (Richards, 1999). For some, software provides a useful tool for organizing data and there are diverse software programs available which augment coding and analysis of data from text, audio and video sources. However, this study did not adopt the use of computer software packages due to issues of language and translation (this will be returned to later). In order to translate, summarise and analyse data from Chinese, the primary data such as the in-depth interviews, participant observation field notes and analysis of policy and planning documents had to begin with a *verbatim* translation into

English. Therefore, while software packages can be useful in enabling researchers to make appropriate choices in coding and counting the frequency of data, in particular, the current technology is not sufficiently developed for summarizing information and interpreting the full meaning and thus 'translate' in a relevant way. The imperative of jumping between Chinese definitions and understandings of words and disjuncture's and jarring with English translations ensured that the use of computer software may have led to inconsistencies and misunderstandings in data analysis, presentation and discussions (see Smith, 1996; Birbili, 2000).

At this point it is useful to elaborate on three other important issues that arose regarding data collection and analysis with regards to access, positionality and translation. The author's positionality as a young female Chinese student affiliated to a UK University offered both opportunities and problems for the research when it came to gaining access to respondents. Firstly, the author's gender and age was often an inhibiting factor in gaining access to both key stakeholders and householders. In terms of the former, it was often difficult to be 'taken seriously' by older professionals, politicians and policy makers and practitioners who generally were men. However, the author's professional background of significant work with private companies working on large-scale property development and landscape design in China helped to negotiate and navigate 'chains of command' and 'getting to speak to the right person' and in preparing for, and during, interviews to understand policy and planning frameworks and the use of technical and 'professional' language. While this mixture of academic and professional experience often paid dividends in facilitating frank and detailed responses, some interviewees 'were taken aback' by the author's approach and knowledge of the field in a manner that may have made them more circumspect in answering some questions.

Recruiting key stakeholders and residents in Shanghai's neighbourhoods is notoriously difficult and is based on developing trusting relationships with gatekeepers. It is particularly difficult to access and positionality arose when undertaking research interviews with local householder. As noted earlier, initial contact with residents in each area was be made through representatives of '*juweihui*' - local residents' committees - as the residents' autonomous organization. There is evidence that interviewers' attributes can have an impact on respondents' trust through contact with local households by the

'*juweihui*'. In order to ensure that respondents were not 'self-selecting or selected', a broader range of community organizations was contacted. Unfortunately, the local '*juweihui*' did not provide the access to respondents that had been anticipated. Because of the centralized planning system with the top-down supply-induced institutional government administration, contact with local residents through 'official' governmental routes often led to suspicion and concern about the author's motives for speaking to local people and the ways in which the interview and participant observation material might be used and negative comments attributed.

Therefore, the combined issue of positionality and access arose when undertaking research with local householders, and 'approval' by higher-level 'official' governmental or internal-relationship departments was required before contact was made with the local '*juweihui*'. However, while this recruitment strategy initially caused concern. the author's frequent reminders to respondents that any data would be anonymised, along with spending time to gain trust in the motivations and outcomes of the research usually worked to satisfy the concerns of local residents. Again, the author believes that her positionality as a young female researcher working in a UK university, and also being a non-native of Shanghai, helped in negotiating concerns over her presence and the motivations behind her research.

Finally, a key issue in the data collection and analysis was the problematic issue of transcribing and translation. Whenever feasible, in-depth interviews should be audio taped and transcribed (Robson, 2002), developing these connections and undertaking the interviews took longer than planned. The problem with transcribing interviews is that it is very time-consuming, for instance, it is best to allow around six-eight hours for the transcription of every hour of speech. A total of 22 in-depth interviews were undertaken with key stakeholders and 60 in-depth interviews with key households, resulting in more than 600 hours transcription time. Moreover, transcription yields vast amounts of paper, indeed, the eighty-two in-depth interviews generated over 1,200 pages of interview transcript material, which needed sorting through when analysing the data. It also takes time to translate interview data, policy/planning documents and other texts relevant to the research from Mandarin to English. Undertaking interpretation and explanation of words and phrases also took longer than expected.

There is also on issue of problems of translation from Mandarin to English within the research process and in writing up the thesis. The complexities of 'interpreting' and 'translating' phrases, values, concepts, and words ha*ve* been discussed in methodological debates (Smith, 1996; Birbili, 2000). Translation usually has to deal with different problematic areas which include grammar, syntax, rhetoric, alternatives and pragmatic and cultural problems. Especially, Chinese Mandarin is widely considered one of the most difficult languages to translate, presenting significant challenges even for native speakers and requiring professional experience in order to ensure the accuracy of the translation.

When translating interview and policy documents from Mandarin into English, the complexities of the Mandarin can cause misunderstandings and incorrectness if the translator is not familiar with the cultural background and has no professional experience. Here are some examples of translating the intricacies of the Chinese Mandarin. The Chinese word '公共' (Gong Gong) means 'public', but there may be up to 100 other meanings for 'Gong', dependent upon the tone and different characters which might be used. For example, 'Gong' but with a different tone and the use of different characters can have different meanings. If with a different tone and different characters it can mean 'Gong', as in '公公' (Gong Gong) first tone, the meanings can be 'Father-in-law, grandfather or eunuch'. 'Gong Yu' (公寓) means 'apartment'; 'Gong Lu' (公路) means 'highway'; 'Gong Zhu' (公主) means 'princess'; 'Gong Yuan' (公园) means 'public park'; 'Gong Dao' (公道) means 'justice or fairness', etc. The traditional Chinese system employs characters known as '汉字-*hanzi*' rather than letters or a standard alphabet. Each character represents a vocabulary or concept and typically serves various purposes, making correct translation dependent on context and connotation as well as the literal meaning of the written characters.

Furthermore, this translation process was undertaken in many different ways at varying points of the research e.g. reading, synthesising and summarizing academic writing in Mandarin; wording interview questions and in transcribing and analysing data. Where important issues arose, with regards to understanding of 'nature' and 'everyday' life for example, the discussion is continued in subsequent chapters. However, when problematic

issues of interpretation and translation arose, advice was sought from the supervisory team in order to discuss complexities of meaning and interpretation involving multi-linguistic and cross-national perspectives.

3.6 Ethical issues

The research was approved by the Department of Landscapes' Ethics Committee before fieldwork commenced. The following issues were addressed to ensure that the research design and methodology was ethically robust throughout all stages of research and analysis:

- All participants were informed about the research in an accessible format (see Appendix D).
- Informed written consent was gained from all participants.
- It was recognized that consent was not a one-off process and participants were reminded of the opportunity to withdraw at any stage of the research.
- Strict confidentiality was crucial. All interviewees have been allocated a pseudonym as a matter of course.
- The supervisory team advised on specific national, cultural/legal ethical issues; and were consulted about unanticipated ethical issues that arose during the course of the PhD research project.

All of the respondents provided a physical or virtual signature in a format of their own choosing to highlight agreement to be involved in the research project, and the philosophy of informed consent was applicable to interview and participant observation data including both audio recorded and visual material. For those respondents who provided official documents and plans/maps, consent was gained to prove agreement to reproduce material from those documents that could be used in the research outputs and agreement that these documents could be fully referenced.

3.7 Conclusion

This chapter has critically outlined the strengths of the research design and methodology employed in this study. In doing so, it has highlighted the importance of engaging with research paradigms in order to offer fundamental guidance and structure for the content and conduct of the research. The research design was then described with reference to

this conceptual framework and the ways in which the research aims, objectives and questions underpinned by both ontological and epistemological orthodoxies were explained. The detailed description the research methodology engaged with the complexity of real-world investigations involving in-depth interviews, participant observation and analysis of texts and documents. Pertinent issues concerning problems and opportunities relating to the author's positionality, access and translation from Chinese to English were then highlighted. The following chapter offers more detailed insights into the case study location and subsequent chapters present the detailed research findings which have emerged from the robust and rigorous approach to data collection and analysis.

Chapter 4   Case Study Research - Shanghai and Huangpu District

4.1 Introduction

This chapter provides a detailed introduction to the case study element of the research beginning with a detailed justification and selection of the case study areas based on a review of general profile data (location, population size and physical and socio-economic characteristics such as age, gender, household income etc.). The chapter then turns to a detailed introduction of 'housing types' - historic Chinese and colonial housing; state-built housing (1960-90s); high rise private housing (gated communities) and traditional working class housing and their role and position within the overall housing market of Shanghai and the Huangpu district. The chapter then maps through the use of photographs and official maps/statistics the changing relationship and physical re-development of housing and green space, commercial/residential land-use etc. for both Shanghai and the Huangpu district. Contextual responses presented from household interviews provide a deeper understanding of the social profile of the respondents to the research in each case study area. The rationale and aims of this chapter are to offer a detailed and critical understanding of social and physical changes taking place in Shanghai and the Huangpu district in order to provide an understanding of the relationship between housing and the everyday uses of green space and to inform the use of the empirical material presented in the subsequent chapters.

4.2 City Context of Shanghai

4.2.1 Location

Shanghai is one of the largest Chinese cities, a most important economic centre and boasts the busiest container port in the world. Shanghai, whose name means "on the sea", is located on the Yangtze River Delta on China's eastern coast and sits on the mainly flat land on the southern edge of the mouth of the Yangtze adjacent to its confluence with the

Huangpu River. The total land area of Shanghai is approximately 6,340.5km^2 and the population was more than 24 million as of 2013 (Shanghai Municipal Statistics Bureau 2015) making it the largest city proper by population in the world (Geohive, 2011).
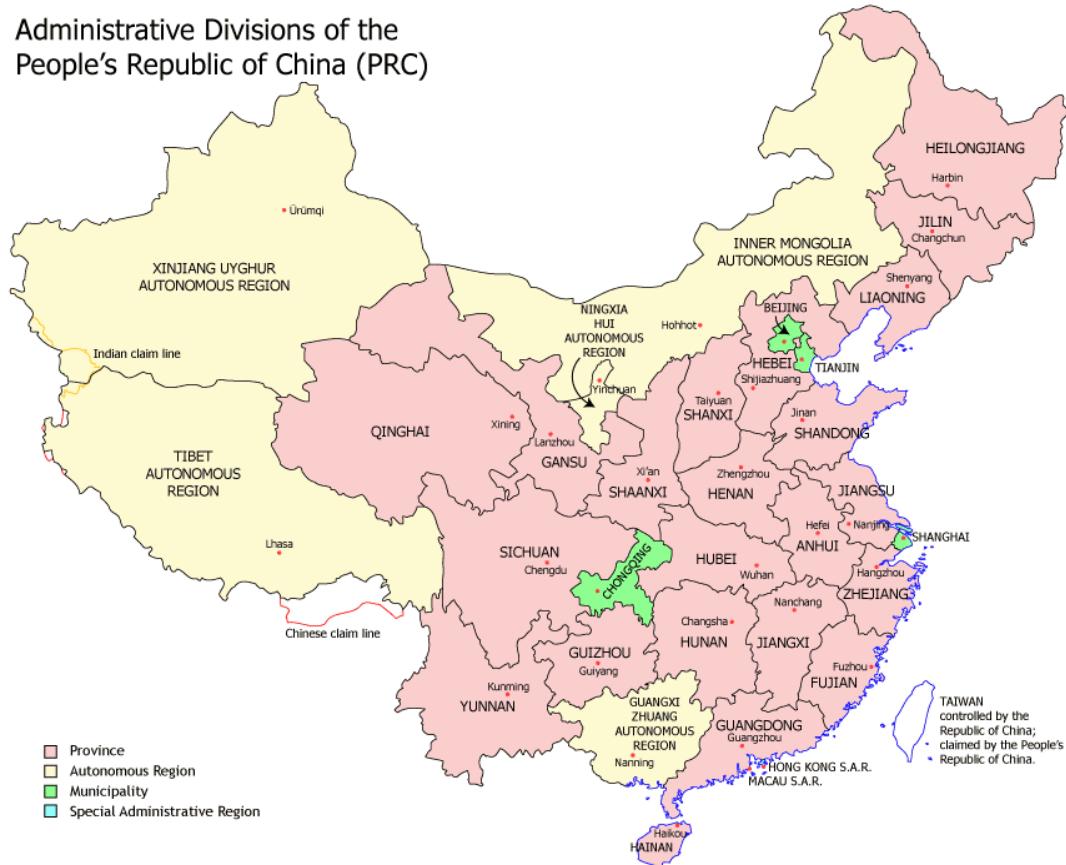
Figure 4.1: Administrative Divisions of the People's Republic of China
Source: Provincial, prefecture, and county maps , online:
https://en.wikipedia.org/wiki/Administrative_divisions_of_China (23.07.2015)

Shanghai is one of four special municipalities (Beijing, Tianjin, Shanghai and Chongqing) in China with a status equivalent to a province (as shown in **Figure 4.1**). This means that the Shanghai Municipal Government (SMG) reports direct to the central government in Beijing. Eight districts make up the urban core of Shanghai, the older part of urban Shanghai on the west bank of the Huangpu River. These eight districts are collectively referred to as Shanghai downtown namely: Hangpu, Xuhui, Changning, Jing'an, Putuo, Zhabei, Hongkou, Yangpu and one newer part of urban and suburban Shanghai on the east bank of the Huangpu River namely: Pudong New Area. Seven suburban districts further away from the urban core: Baoshan, Jiadang, Qingpu, Songjian, Minhang,

Fengzian, Jiashan and the island of Chongming (See **Figure 4.2**). The eight districts are the central core of the metropolis and represent the most densely populated areas of the city, which play an important role in Shanghai's development because the core carries the whole city and its functions particularly high-end services, living, economy, trade and finance, science and technology, information and culture (LI. *et al.,* 2014). Being the most globally focused city in the country, Shanghai is viewed by planners as a window on the outside world through which various approaches to modernisation can be introduced into China (Zhang, 1997).

Figure 4.2 : Location Map of Shanghai and its Eight Core Districts

(Source from: https://en.wikipedia.org/wiki/Shanghai)

4.2.2   Development History

Shanghai's long history spans over a thousand years and closely parallels the development of modern cities in China. The city lay undisturbed prior to the Tang Dynasty (AD 618-917), when it was just a small fishing village with wetland covering the whole site as an undisturbed biodiverse ecosystem rich in plants and animals. Farming started in the Tang Dynasty [AD 618-917] and continued for over 1,000 years and developed from a small agricultural village to one of China's principal trading ports until the later Qing dynasty (1644-1912). After the First Opium War (1839-1842), it became one of the first Chinese cities to be formally opened to international trade with Western

countries. In 1854, the Shanghai Municipal Council was created to manage the foreign settlements. The foreign countries were creating a social divide between the Westerners and Chinese citizens in the settlements and also introduced European architectural forms including the translation of the western idea of the public park to Shanghai. However, with the development of modern manufacturing in the nineteenth century, heavy industries soon began to replace the farmland, whose outputs changed from crops to industrial production. The rapid change marked the foundation of Shanghai and China's modern industry.

At the same time, Shanghai also retains many of its historic buildings and sites of importance. The site has experienced three different periods of evolution: the pre-existing natural environment, cultivation and the more recent industrial eras (Yu *et al.,* 2007). Consequently, this cultural background is displayed in three different landscape types. Additionally, Shanghai was the birthplace of the Communist Party in 1921 and was in the vanguard of the Cultural Revolution during 1966-1976. Since the implementation of the economic reforms and the Open Policy after 1978, the city has experienced rapid urbanization and burgeoned to become both politically stable and one of Asia's financial centres (Z/Yen Limited, 2005).

4.2.3 Economic, Social and Environmental contexts

4.2.3.1 Economic

Shanghai is arguably the most important commercial and financial centre and since the 1930s has developed to become the largest and most prosperous city in China, with more rapid re-development taking place since the 1990s (Tong, 2009). For example, during that time Shanghai's economy has grown at a rate above 12% annually and financial success is manifested in the physical redevelopment of the city, as exemplified by the Pudong New District development, a former swampland reclaimed to serve as a pilot area for integrated economic reforms (Z/Yen Group, 2015) which has become an iconic landscape of Shanghai. In the decade after 2000, Shanghai had 787 financial institutions with a large number of foreign ventures and has become one of the world's leading emerging global cities (Yusuf and Wu, 2002; Wu, 2003). In 2009, China's State Council formally stated that "Shanghai will be built into an international financial centre in

correspondence to the size of China's economy and RMS's international position in 2020" (Lou, 2011, p.1).

In 1992, Shanghai's population was 12.9 million, including an urban population of about 8 million. Shanghai is one of the nation's major centres for economics, trading, finance, politics, communication, science, technology and culture (Zhang, 1997). It is notably the largest industrial base in China with 145 of the total 161 industrial sectors represented (the exceptions are mining-related sectors). Although Shanghai occupies 0.06% of the national area and houses 1.31% of the national population, it produces 5.16% of national income. Its GDP *per capita* has reached US$4,510, which is 4.96 times the national average (Shanghai Statistical Yearbook, 2014; Shanghai Statistical Bureau 2014; Chain Statistics, 2014).

4.2.3.2 *Population*

Shanghai city had a total population of 24.15 million in 2013 making it one of the largest city populations in the world. The population of Shanghai grew very rapidly during the last 30 years, from 11.04 million in 1978 to 24.15 million in 2013 (Shanghai Municipal Statistics Bureau, 2014). This rapid growth in population in addition to the scarcity of land and resources is placing the country today in a very critical situation. Moreover, different sources anticipated a continuing increase in population and density over the next fifty years. It is predicted that by 2020, 50% of Chinese people will live in cities and that this will increase to 75% by 2050 (UNCHS, 2001). With 24.15 million inhabitants and a total area of 6,340.50km^2, the density of Shanghai's population was approximately 3,809 persons/km^2 in 2013 having been estimated at 1,785 persons/km^2 in 1978. However, Shanghai is divided into 17 county-level divisions with 16 districts and one Chongming county. Around 5.4 million of the resident population live in Pudong, 2.53 million in Minhang and 2 million in Baoshan districts. There are 7 districts with more than 1 million and 7 other districts with less than 1 million (See Table 4.1). The core of the districts with the higher density of population is the Huangpu district with 69.16 million inhabitants and a total area of 20.46km^2, giving an estimated density of population in Huangpu district of 33,803 persons/km^2 in 2013.

Table 4.1 : Land Area, Population and Density of Population in Districts (2013)

District	Land Area (sq.km)	Year-end Resident Population (10 000 persons)	Density of Population (person/sq.km)
Total	6 ,340.50	2 ,415.15	3, 809
Pudong	1, 210.41	540.90	4 469
Huangpu	20.46	69.16	33 803
Xuhui	54.76	112.51	20 547
Changning	38.30	70.54	18 418
Jing'an	7.62	24.99	32 795
Putuo	54.83	129.56	23 629
Zhabei	29.26	84.73	28 958
Hongkou	23.48	83.96	35 757
Yangpu	60.73	132.43	21 806
Minhang	370.75	253.22	6 830
Baoshan	270.99	200.91	7 414
Jiading	464.20	155.65	3 353
Jinshan	586.05	78.03	1 331
Songjiang	605.64	173.66	2 867
Qingpu	670.14	119.76	1 787
Fengxian	687.39	115.42	1 679
Chongming	1 ,185.49	69.72	588

(Source from: Shanghai Municipal Statistics Bureau, 2014)

4.2.3.3 Environmental

Weather

Shanghai has a typical North Asian subtropical monsoon climate, with four distinct seasons and plenty of sunshine and rain. The temperatures in Shanghai during summers are hot and humid while winters are chilly and damp; spring and autumn are relatively shorter than summer and winter. The average temperature, as Error! Not a valid bookmark self-reference. shows, is an average of 8.7 days exceeding 35°C and the highest recorded was 39.9°C in summers; the lowest recorded temperature in January is -10.1 °C and the average low during a year was 14.14 °C. The city also has an extreme temperature range with a high temperature of 40.8°C on 7th August 2013 down to -12.1°C on 19th January 1893 recorded by the municipality (Jiang Yanbin, 2013). The most pleasant seasons are spring and autumn, although during the spring the weather is often rainy and changeable; the autumn is generally sunny and dry. The monthly sunshine hours range from 114.3 in January to 190.8 in July. The weather of Shanghai includes hot and humid summers and chilly damp winters. Urban green spaces experience the most significant decreases and are subject to the microclimate and natural features of urban

life (Hayward and Weitzer, 1984). The metropolis relies on its city and regional parks to provide vital ecological benefits, including clean air and water systems, in addition to cooling the urban heat island and providing wildlife habitat (Spirn, 1984; Hough, 1994).

Table 4.2: Climate data for Shanghai (normals 1991–2010, extremes 1951–present)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °C	22.1	27.0	29.6	34.3	35.5	37.5	39.0	39.9	38.2	34.0	28.7	23.4	39.9
Average high °C	8.1	10.1	13.8	19.5	24.8	27.8	32.2	31.5	27.9	22.9	17.3	11.1	20.58
Daily mean °C	4.8	6.6	10.0	15.3	20.7	24.4	28.6	28.3	24.9	19.7	13.7	7.6	17.05
Average low °C	2.1	3.7	6.9	11.9	17.3	21.7	25.8	25.8	22.4	16.8	10.6	4.7	14.14
Record low °C	−10.1	−7.9	−5.4	−0.5	6.9	12.3	16.3	18.8	10.8	1.7	−4.2	−8.5	−10.1
Aveg. precipitation mm	74.4	59.1	93.8	74.2	84.5	181.8	145.7	213.7	87.1	55.6	52.3	43.9	1,166.1
Avg. precipitation days	9.9	9.2	12.4	11.2	10.4	12.7	11.4	12.3	9.1	6.9	7.6	7.7	120.8
Avg. relative humidity (%)	74	73	73	72	72	79	77	78	75	72	72	71	74
Monthly sunshine hours	114.3	119.9	128.5	148.5	169.8	130.9	190.8	185.7	167.5	161.4	131.1	127.4	1,775.8

(Source from: China Meteorological Administration, 2014)

Air pollution

China is arguably the worst industrial polluter in the world; the economy has grown very rapidly and left air quality in many cities notoriously poor, with the tons of toxins derived from man-made production polluting the air, soil and water at a steady rate (Natural News, 2015). Particularly in the last couple of years, the smog has worsened in major cities and the level of pollutants is starting to catch up with China's residents who have to breathe them. **Figure 4.3**Figure 4.3: Eastern China Smog in the Huangpu District, Shanghai Dec. 2013 shows photos of a man flying a kite at the Bund in Shanghai, with the skyline obscured in heavy smog severely limiting visibility. In this toxic fog of air pollution are coal dust and car fumes, two of the main sources of pollution with the heavy use of coal for heating, increasing car ownership and the often still air during the winter time.

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Figure 4.3: Eastern China Smog in the Huangpu District, Shanghai Dec. 2013
Don't breathe in: china retirees practice tai chi during a smog morning in eastern China, 2013
Source from: *ChinaFotoPress/Getty Images*

* A man flies a kite at The Bund on December 5, 2013 in Shanghai, China. Heavy smog continued to hit northern and eastern parts of China on Thursday, disturbing the traffic, worsening air pollution and forcing the closure of schools.

The World Health Organization (WHO) considers fine particles (PM2.5) safe below 25 micrograms, in Beijing, the capital city, levels between 350-500 micrograms were recorded recently, PM2.5 levels soared to 671 micrograms. In Shanghai, the air pollution is low compared to other cities, as the ten worst polluting cities in the third quarter were in northern China, but Shanghai still experiences substantial levels of the worst pollutants surging to more than 15 times the WHO Guidelines Standards (China Daily, 2013). As the policy officer from Beijing-based Greenpeace noticed, pollutants are likely to move from the north to the Yangtze Delta regions because of atmospheric circulation. The Yangtze Delta region has heavy industry and coal consumption, according to the cited Greenpeace data, the top ten coal consuming provinces **are in** Jiangsu and Zhejiang.

However, air quality in cities is of increasing concern to China's stability-obsessed leaders, anxious to cover potential unrest as more affluent citizens turn against a growth-at-all-costs economic model that has polluted much of the country's air, water and soil. This has been expressed by China's President joining world leaders at a landmark climate conference outside Paris in 2015 and the Ministry of Environmental Protection declarations of extremely dangerous levels of pollutants and thick smog in Beijing with particulate matter reaching more than two dozen times the level considered safe for airborne toxins (Time, 2015). Beijing on Sunday, Nov, 29 2015 issued its highest smog alert of the year following air pollution in the capital city reaching hazardous levels as smog engulfed large parts of the country despite efforts to clean up the air (see**Figure 4.4**).
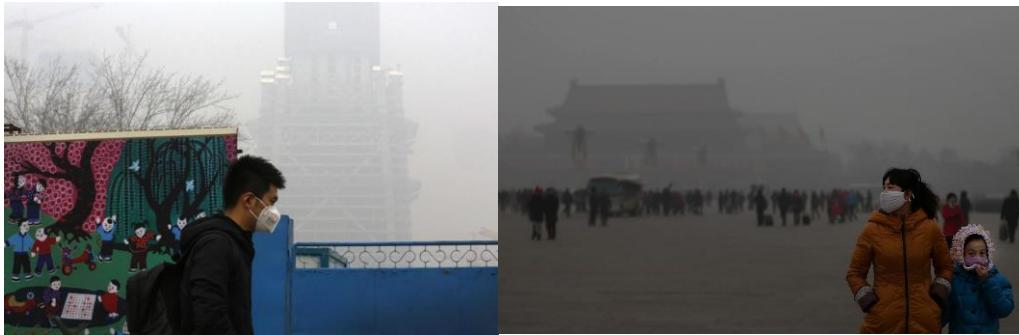
Figure 4.4: A heavily polluted day in Beijing

   * A man wearing a mask to protect himself from pollutants walks past a mural and a construction building on a heavily polluted day in Beijing, 30 Nov, 2015. (AP Photo/Andy Wong)

(Source from: http://africagreenmedia.co.za/beijing-air-pollution-reaches-crisis-levels-can-china-survive-its-toxic-environment/)

4.2.4   Land planning and land use

4.2.4.1   Land planning and existing use

The amount of land under construction in Shanghai was 2,830km^2 in 2009; the proportion of urban land area is 42.1% and will reach 48% in 2020 with the total construction land of 3,226km^2. By contrast, as **Figure 4.5** shows, the proportion of urban land under construction in other metropolitan cities is generally held at about 20% to 30%. So for London, Tokyo, Paris and Hong Kong, it was respectively 23.7%, 29.4%, 22.7% and 23.7% in 2005 and in the cities of developing countries, e.g. Bombay, only at 31% in 2011

(Scientific Development, 2012). The overall urban planning of Shanghai uses statutory documents to guide the city development and construction land and also is the basic foundation of urban construction and urban management. Moreover, all construction activities in the city must abide by this plan, which formulates the national economic and social development for the future, including partition planning, district planning and special planning, etc. The period of this planning is from 1999 to 2020.
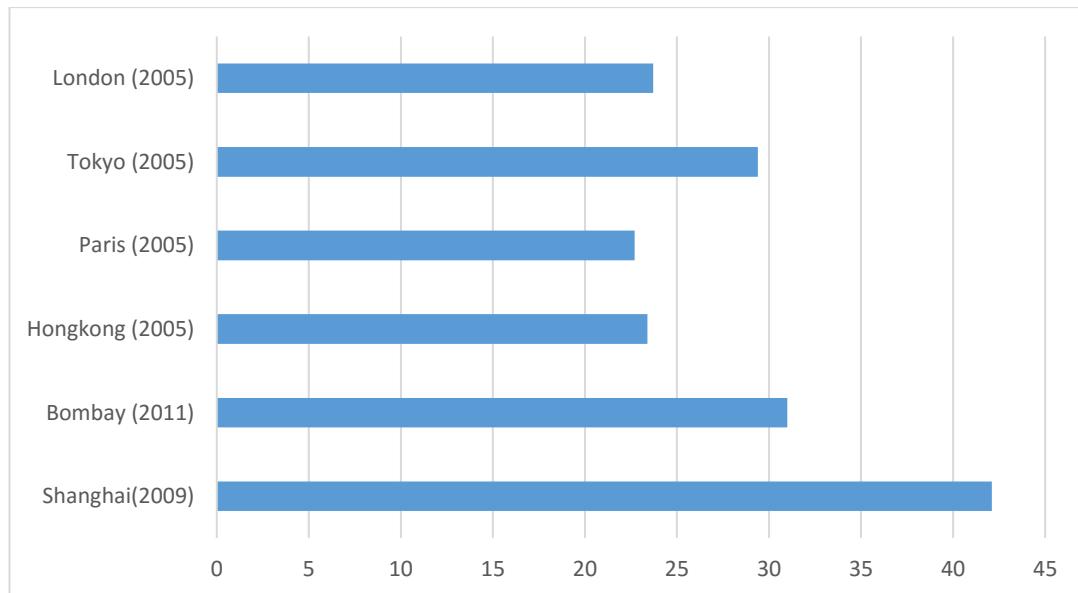
Figure 4.5: Construction land cover comparison of international metropolises
Source from: (Scientific development, 2012)

The urban expansion pattern of Shanghai follows a spatially concentric sprawl; it leads to the spatially different socioeconomic activities in terms of land use distribution. The Master Plan of Shanghai City (Figure 4.6) shows that from the centre to the outer edge of the inner city the social-economic activities are different. Here, three ring-shaped highways, the inner, middle and outer ring highways are used to divide the inner city into three separate zones. The oldest urban zone is located within the inner ring highway, which was developed in the early 1990s. Whereas both the middle and outer ring highways were developed after 2000, urban development in the two belt zones between the inner-middle ring and middle-outer ring roads is relatively new. However, the spatial pattern of Shanghai varied with different land use types at three spatial scales, the city level and inner/outer ring levels.

Land cover generally characterizes the bio-physical features of the land surface, such as vegetation and impervious land cover, whereas land use defines how land is used to carry out different socioeconomic activities, such as residential, industrial and institutional land use (Cadenasso *et al.,* 2007; Comber *et al.,* 2008). Therefore, in the city of Shanghai, *land-cover classifications* were used to identify different layers and *land use classifications* were used to identify different socioeconomic activities. Land use and land cover classifications were derived including five major land use categories in Shanghai, including residential land use, industrial land use, institutional land use, green space and other land uses.

Table 4.3: Land cover of residential, green space, and transportation in different international metropolises.

City	Land cover of residential (%)	Green space (%)	Land for transportation (%)	Aggregate for three land cover (%)	Year
London	32.56	38.23	14.12	84.9	2006
New York	42.15	25.37	18.08	85.6	2006
Tokyo	58.2	6.3	21.8	86.3	2006
Paris	30	12	27	69	1996
Shanghai (Existing)	20.5	6.7	18.6	45.8	2011
Shanghai (planning)	35.6	17.2	18.3	71.1	2020

(Source from: Scientific development, 2012)

Notably, the difference between land cover and land use and their implications is the level of liveability and quality of city life, such as the land surface cover of residential, transportation and green space. As The urban expansion pattern of Shanghai follows a spatially concentric sprawl; it leads to the spatially different socioeconomic activities in terms of land use distribution. The Master Plan of Shanghai City (Figure 4.6) shows that from the centre to the outer edge of the inner city the social-economic activities are different. Here, three ring-shaped highways, the inner, middle and outer ring highways are used to divide the inner city into three separate zones. The oldest urban zone is located within the inner ring highway, which was developed in the early 1990s. Whereas both the middle and outer ring highways were developed after 2000, urban development in the two belt zones between the inner-middle ring and middle-outer ring roads is relatively new. However, the spatial pattern of Shanghai varied with different land use types at three spatial scales, the city level and inner/outer ring levels.

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Table 4.3 shows, the existing land cover of residential land in Shanghai was 20.5%, green space was only 6.7 % and transportation was 18.6%. The aggregate land cover for all three was 45.8% in 2011. By contrast, the international metropolitan aggregate for residential, transportation and green space land cover was much higher in London (84.9), New York (85.6), Tokyo (86.3) and Paris (69%). Particularly, the highest green space land cover was in London at about 38.23%, New York at about 25.37% and Paris at about 7% in 2006. However, in accordance with the planning in downtown Shanghai, green space will reach 17.2%, residential land use will reach 35.65% and the aggregate for all land cover will reach 71.5% in 2020, which will help Shanghai reach the international metropolitan level.

Figure 4.6 : Shanghai City Land Planning Use Master Plan-(1999)
(Source from: Shanghai Municipal Commission of Urban Planning, 1999)

4.2.5   Parks and Green Space System in the City

In China, city development policy requires that people are made aware of quality urban green spaces. Specifically, in recent years, the concept of the Garden City has become popular. Local governments have to improve the quality of their urban environment. According to the notions about the balance between city and nature during the process of urban development to create a harmonious and efficient dynamic balance, an urban green space system layout structure and better promotion of the overall efficiency of the urban greening and the improvement of urban ecological environmental quality require development. In 2020, the public green space index should be more than $10m^2$ *per capita*, the personal green space index will be more than $20m^2$ and the green coverage rate of more than 35% will be reached**.** In the city centre there was at least four hectares of green space and every street has at least one piece of more than one hectare of public green space. However, in the suburbs a public green space must include at least one place of more than three hectares.

The green space system master plan of Shanghai mainly classifies four types: public (parks and forests), green corridor, circle and wedge green spaces. But the master plan cannot be mapped counting the green space in residential blocks in the urban area because of data limitations. The master plan's focus on the development of green corridors as a green network is mainly based on the existing main road network and river corridors, moreover, the river corridors and transport networks combine together to link the countryside and urban area. On the other hand, as **Figure 4.7** shows, there is a requirement to protect natural areas in the countryside which include agricultural land, wetland, mountains and forest parks. Therefore, the river canal as one type of urban park has been redeveloped at a high quality for public use across the city.

Figure 4.7: Master Plan of Shanghai City- Green Space System (1999)
(Source from: Shanghai Municipal Commission of Urban Planning, 1999)

Shanghai is a city where traditional and contemporary Chinese culture exits alongside globalizing cosmopolitan urbanism (Wu, 2006). The city also has an extensive public park system from the urban forest and recently developed public green spaces in the core of city. By the year 2013, there was a total of 124,295.03 hectares of urban green space in the city (see **Table 4.4**), 17,142.39 hectares of which were public green areas and 158 parks with an area of 2,222.07 hectares, only 19 of which charge an entrance fee.

Table 4.4 Urban Green Space in Different Districts, Shanghai (2013)

DISTRICT	URBAN GREEN SPACE (HECTARE)	PUBLIC GREEN AREAS	QUANTITY OF PARKS	PARK AREA	VISITORS TO PARKS (10 000 person-times)
TOTAL	124 295.03	17 142.39	158	2 222.07	20 574.22
PUDONG	26 519.38	6 152.25	25	547.60	1 953.81
HUANGPU	266.44	162.02	12	65.69	2 287.69
XUHUI	1 271.17	509.02	11	136.88	2 937.43
CHANGNING	1 055.09	455.65	13	135.38	1 694.13
JING'AN	107.84	47.66	3	9.52	357.01
PUTUO	1 204.01	540.30	17	79.29	2 851.85
ZHABEI	627.04	234.58	7	86.88	926.61
HONGKOU	405.03	153.99	9	62.24	2 002.55
YANGPU	1 381.71	465.54	14	211.45	1 865.65
MINHANG	8 387.04	2 290.44	10	119.42	640.55
BAOSHAN	6 562.45	2 087.76	14	308.37	1 959.51
JIADING	7 643.52	1 220.71	5	29.26	291.86
JINSHAN	8 810.08	622.55	7	13.89	133.97
SONGJIANG	12 570.91	728.50	5	239.09	323.41
QINGPU	10 205.92	761.24	3	143.09	110.98
FENGXIAN	9 816.91	423.72	1	12.19	203.99
CHONGMING	27 460.49	286.46	2	21.83	33.23

Source: Shanghai Municipal Statistics Bureau, 2014.

Since 2005, most parks have become free of charge whilst offering a green public space to local residents for exercise, sport and to enjoy nature. Some of the parks have also become popular with tourists who are attracted by their unique location, history or architecture e.g. the former racetrack turned central park - People's Square Park - located in the heart of the city centre; the Fuxing Park with French-style garden features located in the former French Concession of Shanghai. The Jessfield Park built in 1914 once contained the first international college called St. John's University, which is known today for its extensive rose and peony gardens and a large play area for children. The Shanghai Botanical Garden was established in 1978 and is located 12km southwest of

the city centre. Recent well-known parks in Shanghai include: Xujiahui Park, Yangzhong Green Space, Riverside Forest Park and the Baoshan Wetland Park. By the end of 2013, the city coverage rate of green space had reached 38.4% and the forest coverage 13.1%. Moreover, the Shanghai Disney Resort Project was approved by the government on 4 November 2009. It is currently under construction and is planned to be operational by 2016. The 4.4 billion Yuan theme park and resort in Pudong will have a castle that will be the biggest among Disney's resorts.

4.2.5.1　Mixed housing types

Shanghai has a rich collection of buildings and a complex mix of housing types. There are broadly two historic types of building styles; firstly, there is the European-style collection of early 20th-century architecture which is mainly located by the banks of the Huangpu River in the Bund. The styles of architecture range from neoclassical buildings to the art deco Sassoon House and the most notable ones being in the former French Concession. The European style construction boom started in the 1920s to 1930s, as the city of Shanghai became a city with one of the world's largest number of Art Deco buildings.

Secondly, see **Figure 4.8,** the traditional Chinese style building and also a uniquely Shanghainese cultural element is the *shikumen* (石库门 or Stone Warehouse) residences housing started in the mid-19th century, which are two- or three-story townhouses with the front yard protected by a high brick wall, combining a Chinese traditional component and influenced by the western idea of "rows of houses" (Goldberger, 2005). Meanwhile, the *Shikumen* is classified as one type of *lilong* residences, known as a *lilong* (里弄 houses-in-lanes) or *longtang* (弄堂), each residence is connected and arranged in straight alleys. The meaning of *Long* is a narrow road and the areas where the narrow roads connect such houses are referred to as a *lilong.* Over time, the notion that "five households make a neighbourhood (*long*) and five *lins* make a community (*li*)", has led to the term *lilong* being used to refer to clusters of houses or neighbourhoods in Shanghai (Zhu and Qian, 2003, p.4).

The entrance to each alley is usually surmounted by a formal stone arch. The whole resembles a terrace of houses or townhouses commonly seen in Anglo-American countries, but distinguished by the tall, heavy brick wall in front of each house. The Name: *shikumen* means "stone storage door", referring to the strong gateway to each house. Moreover, the *shikumen* is a cultural blend of elements found in Western architecture with traditional Lower Yangtze (Jiangnan) Chinese architecture and social behaviour. All traditional Chinese dwellings had a courtyard and the *shikumen* was no exception. Yet, to compromise with its urban nature, it was much smaller and provided an "interior haven" to the commotions in the streets, allowing for raindrops to fall and vegetation to grow freely within a residence. The courtyard also allowed sunlight and adequate ventilation into the rooms. During the early New China era, there were 9000 shikumen-style *lilong* to be found in Shanghai, accounting for 65% of the total residential housing stock. In the same period, 70% of Shanghai's population lived in *lilong* (Zhang, 2007).

Figure 4.8 The historic Shikumen and Longdang in Shanghai
(Source from: https://en.wikipedia.org/wiki/Shanghai)

The general context of the central planning area of the city of Shanghai identified four types of housing layout for the reconstruction of residential land within new residential, existing residential and old land areas. Eight districts make up the urban core of Shanghai and represent the most densely populated areas of the city, with a complex mix of housing types, styles and traditions and with differing types and amounts of green space. However, the city also includes a range of types and styles of building with some examples of Soviet neoclassical architecture or Stalinist architecture from the founding of the People's Republic in 1949 until the Sino-Soviet Split in the later 1960s; State owned municipal public housing of socialist style from the 1960s to 1980s and more recent high-rise

contemporary affordable housing. The latter includes traditional Chinese courtyard style homes, European townhouses and villas and high-rise and suburban gated communities. More specifically, Kagawa and Jinfeng (2007:57) suggest that residential homes in Shanghai can be grouped into garden houses, apartments, dormitories, houses-in-lanes (including the old and the new building) and 'shanties'.

4.3   Case study district - Huangpu

The case study area was chosen from within the inner city of Shanghai within the Huangpu District, it is an area designated as the central city core by the City Master Plan of the State Council (Figure 4.9). Huangpu District is one of the most densely populated urban districts in the world with 678,670 residents living in an area of 20.43km^2, within which the city hall and major administration units are located which also serve as a commercial area, including the historically important (Su *et al.,* 2011:44) areas of Nanshi, the historical core of Shanghai and the walled city; the Yuyuan quarter famous for its historic buildings and gardens and the Luwen area long regarded as a premier residential area of Shanghai, known for its leafy streets, cafes and restaurants, high-end retail and historical houses (Savage, 2006).

The case study district of Huangpu has been purposely selected because all of the housing types described by Kagawa and Jinfeng (2007) can be found in close proximity.Parts of the Huangpu District have undergone extensive redevelopment and have been subject to gentrification, with traditional working-class houses being replaced by high-rise apartment buildings and modern constructions being hidden behind Chinese-style facades, the district nonetheless retains a diverse range of housing developments with the presence of the port also ensuring that state housing and 'shanty' dwellings can be found in this district (Yang, Lau and Qian, 2010).
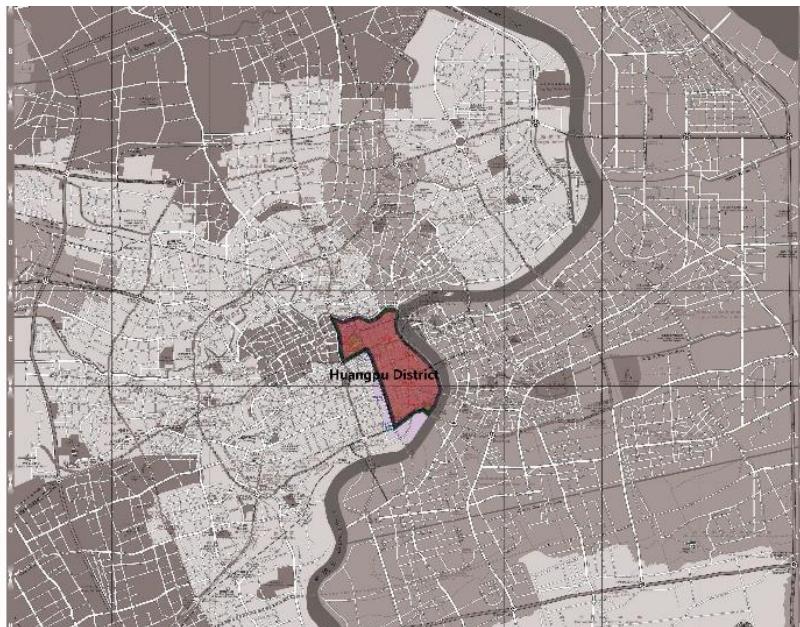
Figure 4.9: Location of Huangpu District, Shanghai
(Source from: https://en.wikipedia.org/wiki/Shanghai)

Selecting the study sites-the rationale for location and case study research

1) The case study district of Huangpu has been chosen as a focus of the research because in close proximity there are the five different case study housing types that are characteristic of Shanghai as well as green spaces that constitute official Chinese government typologies.

2) The mix of historic Chinese and colonial housing, state-built housing from the 1960-90s, high-rise (gated) private housing and traditional working class housing (see photos) and a mix of green spaces including public parks, roadside green spaces, linear parks and domestic gardens, allotments and so on (see photos) represent a 'snapshot' of residential life and green space within Huangpu as a whole.

3) Focusing on these five different case study housing types in close proximity, this research, which includes social groups from diverse socio-economic backgrounds, will allow an integrated analysis of housing types and close and detailed comparisons that can be discussed with the residents and policy makers.

4) The rationale for the location and case study research is underpinned by the research questions. These case studies offers a rigorous and rich location to fully examine and seek to understand the similarities, differences and connectivity's between housing styles and the planning, use and experience of different green spaces in Huangpu District.

土地使用规划图
Land Use Planning
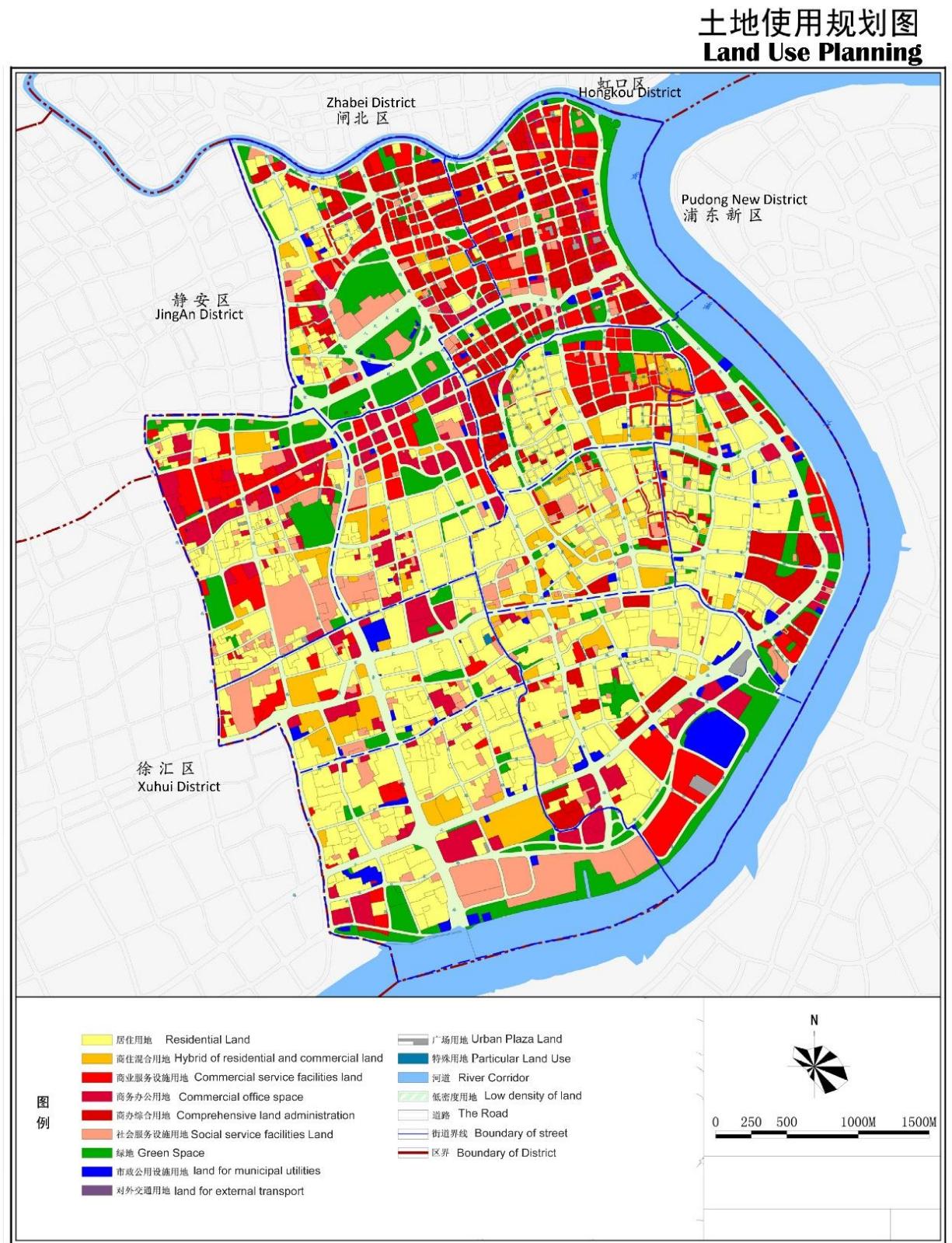
Figure 4.10 : Land Use Planning in Huangpu District 1999
(Source from: Shanghai Municipal Commission of Urban Planning, 1999)

Table 4.5: Typology of Urban Green Space in China

Main typology	Definition of green space	Main types of Green Space	
G1 Parks Green Spaces.	To create green spaces for the recreation of the public urban population, including the function of ecological beautification, to take precautions against natural calamities etc.	Comprehensive parks	City's parks, community park, etc.
		Theme parks	Zoo, botanica1 garden, historical garden and park, etc.
		Linear parks	River and Canal Banks, Transport Corridors (road, rail, cycleways and walking routes).
		Roadside green spaces.	Street plaza green space, green land on a small street.
G2 Productive plantation areas.	To provide green space for urban nursery-grown planting, flowers and grasses and woodland for greening etc.	Nursery stock, flowers, seed nursery, tree nursery and grass garden.	
G3 Green area for environmental protection	Green space used for urban environment protection, sanitation, safety and calamity prevention, including:	health segregation, road protective greenbelt, urban high-pressure corridor green belt, medium-thick shelterbelt and city group segregation, etc.	
G4 Attached green space	The various types of land affiliated green space without the urban construction land.	Residential land, public facilities lands, industrial land, storage land, land for traffic, square of roadside green space, municipal facilities lands and land for special use, etc.	
G5 Other Green Space	Green space for quality of life for the city resident's health and well-being, ecological environment and biological diversity protection, including:	landscape and famous scenery, water reserves, country parks, forest parks and nature reserves, woodland, natural preservation areas, wetland, wild zoo and botanical garden, landfill recovery green space, etc.	

(Source: Classification Standards of Urban Green Space' CJJ/T85-2002)

Huangpu District also has a number of historic and recently developed 'public' green spaces that will be included in the research, including 'Comprehensive parks' (G1) (see **Table 4.5**) such as Peng Lai Park (built in 1953 and renovated in 2006, increasing its overall size from 2,700m^2 to 35,296m^2) and Fuxin Park which is even larger. Other

significant public green spaces (G1) including a 'Theme park' associated with a cultural and exhibition centre and green space surrounding various Metro stations. An initial pilot exercise, scoping the district also identified a diverse range of 'linear parks' and 'roadside green' space' and 'attached green space' (G4). The pilot scoping exercise also highlighted a diverse range of 'private' green spaces including small communal gardens; small courtyard, balcony and roof gardens; *de facto* 'allotments' and areas of planted flowers, as well as lawned and tree-lined walkways between buildings directly associated with various housing developments. This will also be a focus of the research.

Huangpu - residential district, quarter and housing cluster scales

Urban areas are divided into sub-districts and a sub-district is further divided into several residential communities or neighbourhoods with the sub-district's administrative organization called the sub-district office (街道办: *jiedao ban*). The research includes an emphasis on the quarter and housing cluster scales within the Huangpu District where there are 10 administrative sub-districts (街道: *jiedao*) that are constituted by residential communities or neighbourhoods (**see Table 4.6** and **Figure 4.11**).

Table 4.6: General characteristics of the 10 administrative sub -districts in the Huangpu District

Context	**Nanjing Donglu**	**Waitan**	**Ruijin Erlu**	**Huaihai Zhonglu**	**Yuyuan**	**Dopu Qiao**	**Laoxi Men**	**Xiaodong Men**	**Wuli Qiao**	**Bansong Yuan**
Population	120,000	114,300	89,000	98,000	101,937	63,800	87,500	107,000	70,000	10,200
Population Density	49,793 per/km²	52,431 per/km²	44,949 per/km²	69,504 per/km²	86,387 per/km²	40,126 per/km²	70,565 per/km²	41,313 per/km²	23,102 per/km²	35,600 per/km²
Area (km²)	2.4	2.18	1.98	1.41	1.18	1.59	1.24	2.59	3.03	2.87

(Sources form: Huangpu Local Government, 2014)
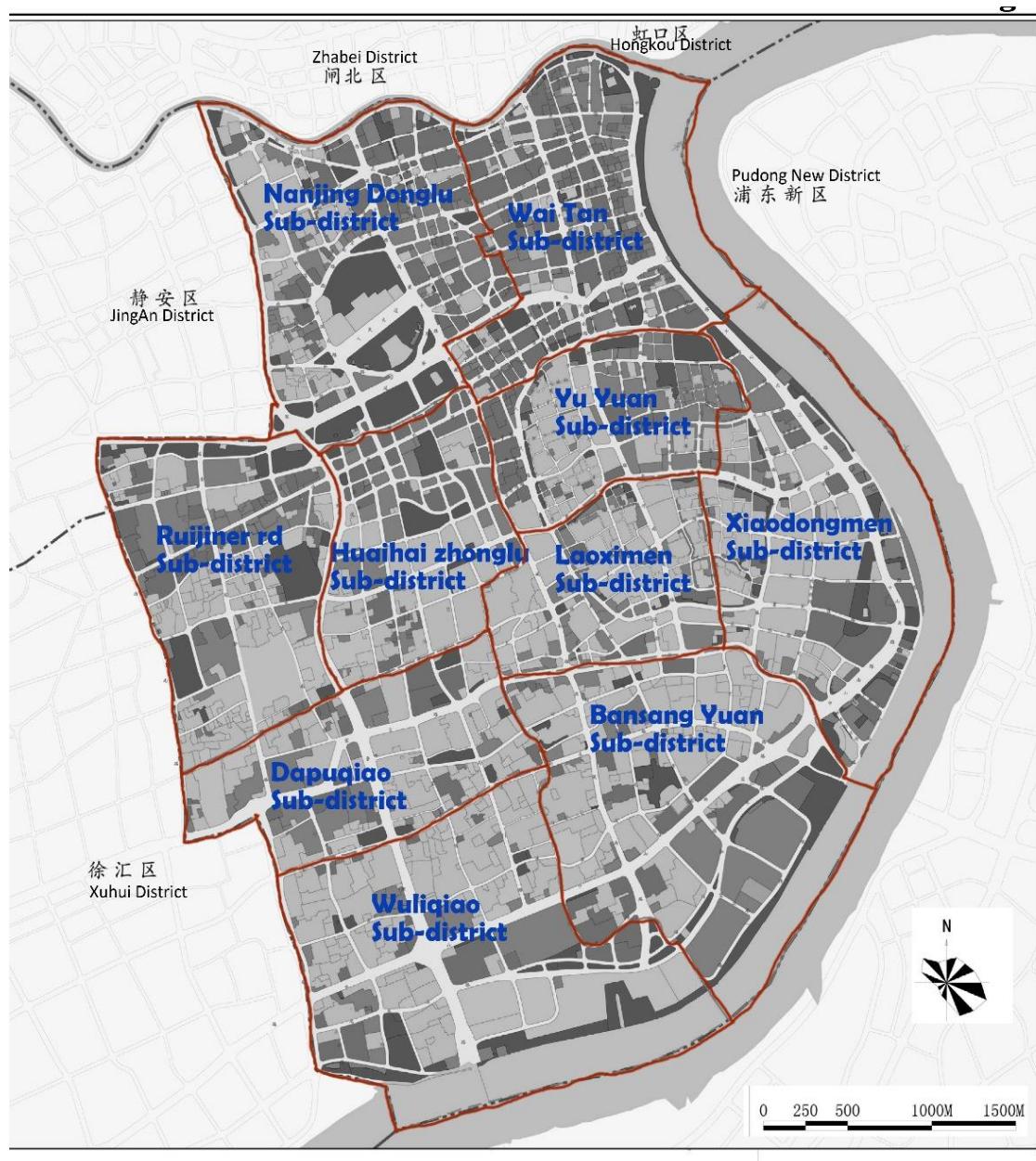
Figure 4.11: Administrative sub-district within The Huangpu District
(Source from: Shanghai Municipal Commission of Urban Planning, 1999)

In order to map the relationship between everyday life, housing and open space in Huangpu District the research will draw on the Chinese government's 'Classification Standards of Urban Green Space' CJJ/T85- 2002. However, as already noted, it is important to engage with the *fuzzy* nature of boundaries between *public* and *private* space and conflicting notions of *nature* amongst different groups of residents as well as in official policy. Drawing on official government typologies to map the type and density of green space in each area, the critical focus of the research on the study of everyday life will also allow the consideration of the actual design and use of those spaces by a variety of residents. Moreover, a key feature of this research will be to move beyond thinking of urban open spaces as 'bounded' but to discuss the relationship between various green spaces within and across each district. This approach will include consideration of the provision and use of open space in relation to planning and policy agendas as well as the conflicts and tensions which surround the design and everyday use of a diverse range of 'open spaces' amongst different social groups.

For the purpose of this research, the housing developments described by Kagawa and Jinfeng (2007) will be grouped together in five distinct categories to inform the choice of specific housing clusters that will be the focus of the empirical research in a manner that acknowledges similarities in housing types, but also captures the diversity of housing development and associated green space in Huangpu District:

1) Historic Chinese - houses-in-lanes (Huaihai Zhonglu Sub-district).
2) Colonial housing – including garden villas and town houses garden apartments (Ruijin lu Sub-district).
3) Traditional working-class housing (Yuyuan Sub-district).
4) State-built housing – including both low- and high-rise state housing (from different decades of urban development 1970s-1990s) (Bansong Yuan Sub-district).
5) High-rise private housing (gated communities) (Nanjing Donglu Sub-district).

The mix of historic Chinese and colonial housing, state-built housing from the 1960-90s, high-rise (gated) private housing and traditional working class housing (see photos) and a mix of green spaces including Puglai Park, People's Park, roadside green spaces, linear parks and domestic gardens, allotments and so on (see photos) is a representative 'snapshot' of residential life and green space in Huangpu as a whole. Focusing on these

five different case study housing types, each in close physical proximity with residents from other types from diverse socio-economic backgrounds, will allow an integrated analysis of housing types and close and detailed comparisons to be discussed with the residents and policy makers who are respondents in the research in order to understand the similarities, differences and connectivities between housing styles and the planning, use and experience of different green spaces. However, the spatial analysis is carried out at the city, district, sub-district, neighbourhood and street levels. Most of the comparative analysis to decide the performance of various types of urban system is at the neighbourhood and street levels. Hence, the case study site was selected with public and private green spaces and with a more in-depth focus on the housing cluster scale in the neighbourhood/street with less than five sub-districts: HuaihaiZhonglu Sub-district (Historic Chinese housing), Ruijinlu Sub-district (Colonial housing), Yuyuan Sub-district (Traditional working class housing), BansongYuan Sub-district (State built housing), NanjingDonglu Sub-district (High-rise private housing).

4.4   Conclusion

This chapter provides a detailed introduction to the case study with the basic profiles and background context of the research objects. This will be through their explanations of the justification and selection of the city and case study areas based on a review of the general background of Shanghai and the Huangpu District including details of location context, history of this city, population size, environment and socio-economic characteristics - such as age, gender, household income etc. - and also introduced for setting out the selected database for mapping the context of land use/ green space systems in Shanghai. Besides, this chapter also outlines a detailed introduction to 'housing types' and the urban green space typologies and classifications that have been chosen for mapping. The rationale and aims of this chapter offer a detailed and critical understanding of the evolving social and physical changes taking place in Shanghai and the Huangpu District in order to contextualize the material presented in the subsequent chapters.

Chapter 5   Overview of Policy and Practice

5.1 Introduction

This substantive chapter is the first of the thesis to integrate the theoretical arguments and debates outlined earlier in the thesis, with the empirical evidence generated through the robust research methodology and design. More specifically this chapter draws on a specific mix of data sets from the empirical research (textural analysis of historical and archival material; and textural analysis of contemporary policy and plans) in order to highlight key themes that have emerged from the research findings. In doing so the chapter considers how planning and policy changes highlight changing histories and cultures bound up with relationships between 'nature' and private and public space; how such discourses are included in technical specifications of housing and green space planning; as well as constitutive of policy transfer relating to policy and planning system and decision making in the case study locations and from national, urban and local levels which highlight the extent to which there is 'joined-up' policy and practice. The rationale and aims of this chapter is to offer comprehensive understanding of policy frameworks and context relating to landscape design, housing and green space in order to allow critical reflections on the strengths and weaknesses of policy and resultant practice at national levels, within the context of Shanghai and at the local level of Huangpu district.

5.2 The Governance, Administrative and Planning System in China

As noted earlier, The People's Republic of China is characterised by a centralised planning system with top-down supply-induced institutional government administration. Such structures are clearly articulated in the national Urban and Rural Planning Act (2007) as well as previous incarnations of that policy trajectory (such as the 'Urban Planning Act' 1989), which outlines the government's administrative processes and which define in detail responsibilities related to local administration at various spatial scales. For example, the People's Congress is at the top level of state power while the central government administrative system is further constituted by both national levels of central administrative, and the State Council, which both sit below the National People's Congress and are responsible for leadership for urban and local administration levels

(Chen, 2009). Government further below the State Council includes three further levels of administration: *Autonomous Prefectures, Counties and Cities, and Townships, Towns and Districts* (see **Figure 5.1**). These levels of government are organised in the same way as the national structures; with government (*shi zheng fu*) and the party (*shi wei*) working in parallel with one another. The People's Congress (*ren da*) is also constituted by local authority representatives and able to elect and recall members of the People's Government to that forum.
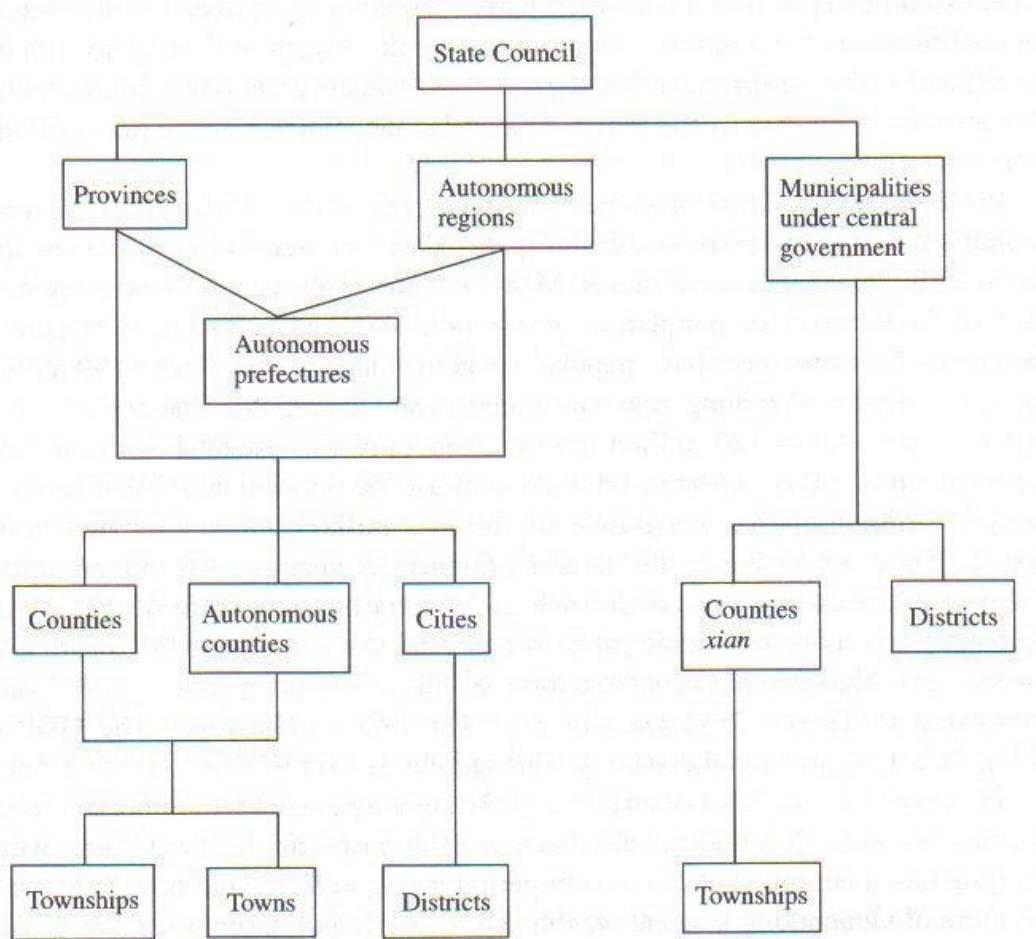
Figure 5.1 Levels of Government under the State Council
(Source: Saich, 2001.p 17)

> * Note: In addition, two Special Administrative Regions of Hong Kong and Macao exist that that will retain their existing political and economic system for up to 50 years.

In simple terms, The People's Government is the administrative authority for the People's Congress. It is thus responsible for both the People's Congress and its distinctive Standing Committee, to ensure the success of all state administration levels. Indeed, at the local level People's Congresses have the power to develop specific regulations, and to monitor and evaluate the performance of local government. In this hierarchy, the State Council directly oversees national urban and rural planning. Individual master plans relating to specific urban and rural areas must therefore follow the State Council's planning guidance. However, it is also the responsibility of local authorities to draw up and execute their own strategies with reference to national policy. Moreover, the local People's Congresses are responsible for adapting national regulation for the specific context of their administrative area. Table 5.1, below outlines the complex administrative framework of Chinese governmental and planning structures and hierarchies.

Table 5.1 Urban Planning In China

Administrative levels		Departments for Urban Planning Administration				
		Compilation	Deliberation	Approval	Execution	Monitoring and Evaluation
Municipality	Municipalities under the Central Government	Municipal Government	People's Congress at the local level	State Council	Local Government and planning authority	People's Congress at the local level; Government and planning authority above county level
	Provincial Capitals and Autonomous Prefectures		Provincial/Autonomous regions; People's Congress at the local level	State Council		
	Other cities		People's Congress at the corresponding level	Provincial / Autonomous regional Government		
City and Town	Towns where the County Government located	County Government	People's Congress at the corresponding level	Superior Government		
	Other towns	Town Government		Superior Government		

5.2.1 Urban planning and green space system in China

The national Chinese Urban and Rural Planning Act (in effect since 1st January 2008) guides planning at urban and rural scales. Planning regimes in cities, towns and villages has become increasingly more sophisticated in recent years, and has led to new definitions and toolkits which focus on best practice examples of how to incorporate specific urban and rural areas into the formal planning system. Despite improvements on the previous 'City Planning Act' under its new title 'City and Country Planning Act' (2007), the new Act is still nonetheless underpinned by rigid national/local administrative mechanisms. Hence, the Chinese Planning System is still constituted by city planning based on a two tiers approach: the master plan (*zong ti gui hua*) and the detailed plan (*xiang xi gui hua*). As **Figure 5.2** shows the top level of urban planning is ensured by the master plan that outlines the general land use patterns of cities.
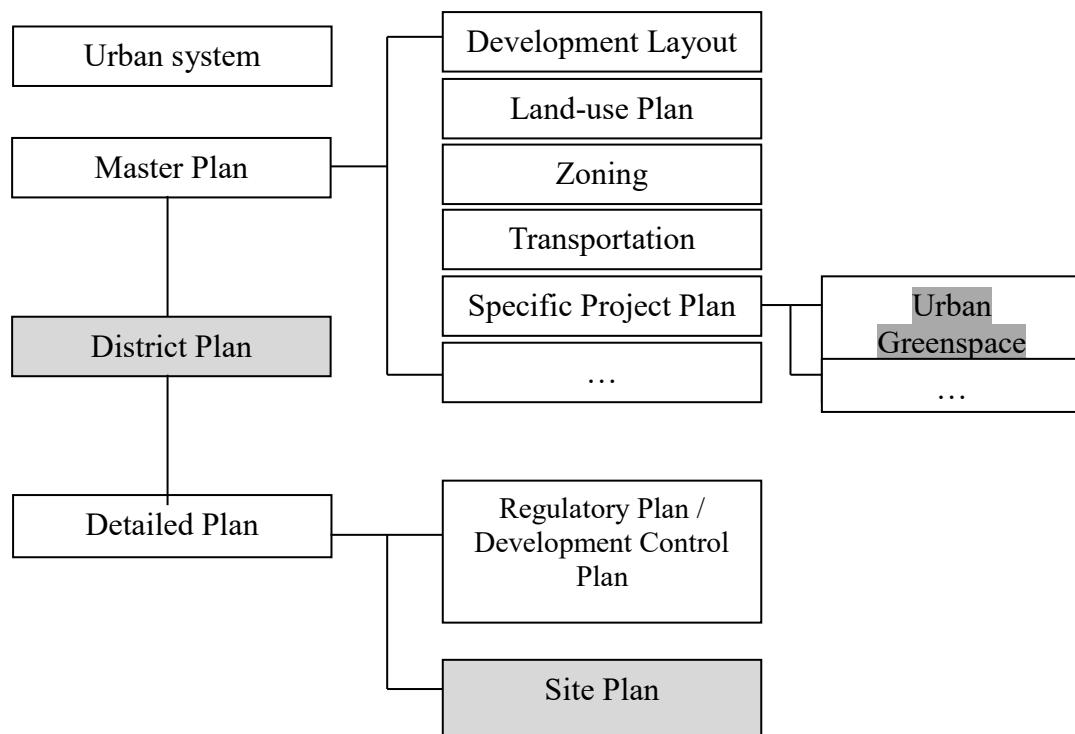
Figure 5.2 : Urban Planning system in China

(Source from: Shaded areas are optional according to Urban and Rural Planning Act 2008)

Below the master plan level is the detailed plan. This focusses on areas that are earmarked for immediate development as specified in the master plan. Moreover, the detailed plan is composed of development control planning (*kong zhi xing xiang xi gui hua*) as well as urban design and detailed construction plan (*xiu jian xing xiang xi gui hua*). Master plans generally have a planning horizon of 20 years. The main tenant of master plans includes urban development strategies, and focuses on district land use, comprehensive transport planning, construction in restricted areas, construction in constrained areas, as well as an urban green plan, tourism planning and so on.

The Urban Green System Plan is one of the key administrative tools that relate to the topic at hand with regards to this thesis which sits within the City's Master Plan and concentrates on specialised green planning including urban gardens and parks. However, in 2002, the Ministry of Housing and Urban-Rural Development (MOHURD) also released planning interim policy guidance entitled 'Urban Green Spaces System Planning' (2002-204). This initiative was the first time in planning policy in China where an administrative region of a city level of scale was deemed appropriate to ensure the planning of more 'green' urban spaces and places, based on support for and expansion of the green space based on a newly developed index, and typology.

Indeed, in order to understand the relationship between housing and green space, the 'Urban Green Spaces System Planning' (2002-204) policy was the first time that such context and content was related to the places, and ways in which peoples' ways of life and living were changing in urban China. It is within this complex administrative context that the relationship between urban green planning and housing development unfolds for the first time in policy and planning. Indeed, such interim policies and proposed regulations highlight concerns over responsibility and accountability for 'Environmental Protection' and 'Ecological Considerations' at the national and local levels of government, and with regards to peoples everyday life in Chinese cities. For example, the standard of the city green space index not only considers the quantity but

the quality of green space and thus begins to offer ways of measuring and apportioning responsibility in government structures for the ways in which green spaces are planned and located to ensure equal access and quality for residents. As such, there is clearly some momentum and structure for drawing a more focused relationship between urban green space and provision of housing which has established a foothold within broader planning and policy contexts. This chapter will now elaborate further on this burgeoning relationship.

5.3 Green space and housing policy in China

Policies and regulations specifically related to green space and housing can be seen to be unfolding at two important spatial scales; firstly, with regards to national policies, laws and regulation relating to urban planning; urban land-use related policies, design codes and standards and so on; and secondly through urban policy and practice as follows:

5.3.1 National Policy Context

As highlighted in the introductory chapter a nation's urban planning system tends to reflect the socio-economic development trajectories and strategies as well as highlighting social and cultural traditions and values (Yeh and Wu, 1996). After economic reforms in 1978, the national Chinese government recognized the need to improve administrative legal structures with regards to urban planning, in a way that ultimately challenged the socialist ideology of planned growth (Yeh and Wu, 1999). To understand changes in urban planning in China, it is imperative to study the formulation and transfer across spatial scales of urban policies, based on the implementation of the Urban Planning Regulation initiated by the State Council in 1984 and enactment of the Urban Planning Law which was a major milestone that was enacted by the National People's Congress on 26 December 1989 and has been effective since 1990. In order to involve rural areas in the whole planning system, the former Urban Planning Law was

upgraded to the Urban and Rural Planning Law of the People's Republic of China in 2008.

The Urban Planning Law was enacted to ensure a lasting legacy of national central urban planning in order to establish a comprehensive urban planning system in China. The Law consisted of six chapters and forty-six articles, including general provisions, establishment of urban planning and development of new areas and renovation of old areas, legal liability and supplementary provisions (Ministry of Construction, 1990). However, in order to interpret the Law correctly, the Ministry of Construction had to interpret and publish the Explanatory Notes of the City Planning Act with reference to municipal planning bureaus that provided guidance to local authorities in the preparation of urban planning documents. This system is, to a large degree, similar to the Planning Policy Guidance (PPG) in the UK, intended to assist practitioners with interpretation of legislation at the municipal level, but which is done ultimately without legal status of an explanatory right of the Law in strict terms.

As such, the Urban Planning Law, and the resultant urban planning mechanisms sought to define development of the size and structure of cities; to realise economic and social development goals, and to plan and construct cities within a context of socialist modernisation (Article 1, Building in China, 1990, p.2). The law aimed to shape the development of national urban systems and hierarchies based on the rational distribution of population and economic activities. This reflected a long held view against the sporadic nature of market-oriented development and a need to track ordered and coordinated developments by "keeping strict control over the size of large cities and developing rationally medium-sized cities and small cities, so as to promote a rational structure of productivity and population" (Article 4, Building in China, 1990, p.2). However, control over the size and physical, economic and social development of large cities was not successful as **Table 5.2** shows.

Table 5.2 Number of Chinese cities by size of population

Year	Small cities < 0.2 million	Medium cities 0.2-0.5 million	Large cities 0.5-1.0 million	Very large 1-2 million	Super large >2 million	Metropolises >4 million
2013	2	52	103	86	33	14
2006	4	59	106	80	24	13
2000	3	66	103	70	12	8
1995	-	192	43	22	10	-
1978	-	60	27	13	-	-
1949	-	18	7	5	-	-

(Source: The National Bureau of Statistics of China, 1996, 2001, 2007.and 2014)

By 2008, and as a result of previous planning and policy failings, the Urban and Rural Planning Law replaced the former Urban Planning Law. While the upgraded Law ultimately played the same role in the planning system and was not significantly changed with regards to halting the dramatic growth of urban China, what was important was the desire to strengthen "urban and rural planning administration, harmonising urban and rural spatial layout, improving people's living environment and promoting the integrated, harmonious and sustainable development of urban and rural society and economy" (Article 1, Section1, NPC, 2007). As this important wording stresses a key tenant of social, economic and spatial development for urban and urban planning, now included a place for increased attention to the relationship between housing provision and everyday use of green space. With this trajectory in mind, relevant policy and practice impacting on land-use, housing and green space will be examined in more detail at the level of urban administration.

5.3.2 Urban Policy Context

Two key national level policies which have been influential in advancing strategies relating to green space and housing in cities have been the *Land Administration Law of the People's Republic of China* and the *Code for Classification of Urban Land Use and Planning Standards of Development Land* [GB 50137-2011]. The *Land Administration Law* adopted at the 16th Meeting of the Standing Committee of the Sixth National People's Congress in 1986 and slightly revised in 1988 and 2004 enabled "the

Constitution for the purpose of strengthening land administration, maintaining the socialist public ownership of land, protecting and developing land resources, making rational use of land, effectively protecting cultivated land and promoting the sustainable development of society and economy" (NPCSC, 2004: 1.1). Additionally, the *Code for Classification of Urban Land Use and Planning Standards of Development* enabled urban and rural development initiatives underpinned by 'conservation' and rational land-use based on scientific review of environmental factors. The enforcement of this code was also facilitated through the "*Urban and Rural Planning Law of People's Republic of China*", the implementation and monitoring of which through urban planning, sought to promote health, well-being and sustainable development in urban and rural areas (MOHURD, 2010: 1.1).

With projections that more than half of the Chinese population will be urbanites by 2050, pressure to value land highly and use land rationally but with a focus on environmental concern, has led to an increased interest in both conservation and comprehensive utilisation of natural resources in order to improve the lives of local people. Growing social and economic pressures from increasing environment pollution combined with a re-articulation of traditional Chinese values relating to stresses equity in the use of the land resources, and harmony with nature has been articulated in the *Land Administration Law* suggesting that "the people's government at various levels should adopt measures of integrative planning and strict administration to protect and develop land resources, and prevent unlawful occupation and use of land" in Chapter1, Article3. Therefore, policy now existed for the first time at all levels of government to ensure responsibility for planning and policy in cities which was founded on concerns to ensure national social and economic development planning, government of land management, natural resources and environmental protection.

For example, the *Urban and Rural Planning Law* stated that city level master planning with reference to Article 19 in *Land Administration Law* must include:

- Strict protection of farmland and keeping land for agriculture under control lest

it should be occupied and used for non-agricultural construction;

- Increasing the land utilisation ratio by;
- Making overall plans for the use of land for different purposes and in different areas;
- Protecting and improving ecological environment and guaranteeing the sustainable use of land; and
- Maintaining a balance between the area of cultivated land used for other purposes and the area of land developed and reclaimed.

These principles were initiated in order to prevent cities extensive urban sprawl and to protect natural environments. While it is possible to argue that with continued urban development that to a large degree such values have failed to be widely established and monitored, the Chinese state has nonetheless clearly classified land utilisation as part of an overall plan that includes agriculture, land use for construction, unused land and green spaces in urban-rural contexts (NPCSC, 2004: 4.1).

Moreover, a typology regarding the type and quantity of different categories of land-use at national level has been enshrined in urban policy through the *Code for Classification of Urban Land Use and Planning Standards of Development Land* [GB 50137-2011] which was established in 1990 by the Ministry of Construction, was amended in 2010, and implemented in policy in 2012. The classification of urban land use now depends on a relationship with different socioeconomic activities; Residential (R), Administration and public services (A), Commercial and business facilities (B), Industrial and manufacture (M), Logistics and warehouse (W), Street and transportation (S), Municipal utilities (U), Green space (G) and some Special uses (MOHURD, 2010:). As **Table 5.3** provides the area requirements for per capita land-use for construction by different grades of development intensity, and these required standards direct the central government's expectations on controlling the consumption of construction land.

Table 5.3 Standard of per capita land-use for building in China

Land-use for construction (m2/person)	Planned per capita Land-use for construction (m2/person)		
	Intensity grade	i.e.	Per capita Land-use (m2/person)
≤ 60.0	I	Old and dense central areas	60.1~75.0
60.1~75.0	I	Old and dense central areas	60.1~75.0
	II	Restricted new development	75.1~90.0
75.1~90.0	II	Restricted new development	75.1~90.0
	III	New development areas	90.1~105.0
90.1~105.0	II	Restricted new development	75.1~90.0
	III	New development areas	90.1~105.0
	IV	Special economic zones	105.1~120.0
105.1~120.0	III	New development areas	90.1~105.0
	IV	Special economic zones	105.1~120.0
>120.0	III	New development areas	90.1~105.0
	IV	Special economic zones	105.1~120.0

(Source: adapted from MOHURD, 1990b, Tables 4.2.1 & 4.1.3.)

Importantly for the topic of this thesis, the *Code* [GB 50137-2011] was further revised in relation to changing residential developments in the city, in order to establish environmental quality of housing. In policy, residential land-use is subdivided into three classifications; *First class residential land* which is the low-density residential land with high quality environmental features; integrated transport infrastructure and public service facilities, including villas, detached-house and town-house etc. *Second class of residential land* which is regarded as middle-high density residential land with fair environmental conditions and transport infrastructure and public service facilities; and finally *Third class of residential land* defined as high-density residential land with uncompleted infrastructure and poor condition of environmental and public service facilities.

Table 5.4 Permitted ranges of per capita area and the percentages of urban land allocated for different uses

Category of urban land-use	m2/person	Proportion in 1990 (%)	Proportion in 2010 (%)
Residential use	18.0~28.0	20~32	25~40
Industrial use	10.0~25.0	15~25	15~30
Streets and transportation	7.0~15.0	8~15	10~25
Green space	≥9.0	8~15	10~15
Administration and services	≥5.5	___	5.0~15

(Source: adapted from MOHURD, 1990b and 2010. Tables 4.2.1 & 4.4.1.)

Despite intentions to classify the quality of the relationship between green space and housing developments, Table 5.4 shows the *per capita* area and percentages of urban land for green space has only been marginally revised from 1990 (8~15) to (10~15) 2010. Despite other national standards such as the *Criteria of National Garden City* (MOHURD, 2010), applying policy and planning to the actual development of cities in China through central and local government to ensure the sustainable development and harmonisation of urban land use and housing planning is of course a difficult prospect to achieve (Zhang et al 2010). Despite the best intentions to better integrate housing and green space planning, the following sections show how the above initiatives are indeed part of a growing convergence of these previously disconnected agendas.

5.3.3 Housing policy and practice

Housing policies in China have developed rapidly since 1993, in line with broader economic reforms. The rapid growth of urban populations in Chinese cities, the emergence of consumer culture and associated increase in industrialisation and manufacturing has ensured that China has experienced remarkable cycles of economic and social development including rapid changes to the housing market. Such trends are particularly important in cities in the Yangtze River Delta Region, such as Shanghai and Hangzhou, which have been the fastest economic development area of China (Ye and Wu, 2008).

Within the national context there are a number of important policies that have also impacted upon urban housing and residential areas. Policies have focused, for example, on legal standards for the quality of living environment, effective use of land and space, housing and build quality and so on – such as the *Code for Urban Residential Area Planning and Design* (GB 50180-1993,2002) and the *Standards for Housing Design* (GB 50096-1999, 2011). The primary *Code for Urban Residential Area Planning and Desig*n was enacted by the Ministry of Construction of the People's Republic of China (MOC) on 16 July 1993 and modified in 2002. The code seeks to control the quality of planning and design of residential areas; explicitly indicating compulsory regulation of residential basic living conditions, local facilities and services, housing, green space ratio, land-use, pathway and the hierarchical scale of residential areas and so on (MOC, 1993/2002). The hierarchical levels of residential area were to be policed at different spatial scales including residential district, quarter and housing cluster, based on the number of these households and population (see **table 5.5**). The use of these three hierarchical systems in urban residential areas planning and design strongly emphasises the need to meet the requirement of residents' basic facilities and services, and the ratio of green space. This mandatory standard is in directive to strengthen the supervision and management of construction activities, and cultivating healthier living conditions.

Table 5.5 The hierarchical scale of residential areas in China

	Residential district	*Residential quarter*	*Housing Cluster*
Households	10,000-16,000	3,000-5,000	300-1,000
Population	30,000-50,000	10,000-15,000	1,000-3,000

(Source from: Code for Urban Residential Area Planning and Design, GB50180-93/02, Ministry of Construction of the People's Republic of China)

Moreover, the *Code for Urban Residential Area Planning and Desig*n places a great emphasis on the provisions of the mandatory standard to adapt for residential area planning and design, with Clauses 1.0.5, highlighting sustainable principles in order to balance increasing housing demand and limited natural resources, and also a desire to improve the quality of build environment; as follows (MOC, 2002, In Clause 1.0.5):

- Meet the requirements of the overall urban planning;
- In line with unified planning, rational distribution, local conditions, comprehensive development, and the principle of supporting the building;
- Comprehensive consideration of the nature of the city, climate, ethnicity, customs and traditional style characteristics and environmental conditions and other local land use planning, make full use of the planned land use, to retain the value of the waters of rivers and lakes, terrain, vegetation, roads, buildings and structures, etc., and their integration into planning;
- Adaptation activities of residents, considering the sunshine, lighting, ventilation, disaster prevention, with the construction of facilities and management requirements, creating convenient, comfortable, safe, and graceful living environment;
- Provide facilities for elderly people with disabilities living and social activities;
- Create conditions for industrial production, mechanisation of construction and construction groups, and diversification of the space environment;
- Create conditions for the commercialisation management, social management and phased implementation;
- Fully consider the overall efficiency of the social, economic and environment.

This code also offers guidance on ratios of green space in residential areas. Indeed, Clause 7.0.2 indicates greening spaces should not be less than 30 percent of new construction projects and, in reconstruction and regeneration of old residential areas should not be less than 25 percent. Other initiatives include increased levels of public green space, housing being better integrated with green space, green 'pathways', vertical greening, green roofs and so on (MOC, 2002, 7.2.1-2).

Importantly The *Standards for Housing Design* (GB 50096-2011) also highlights the need for more sophisticated consideration of urban residents' housing conditions; housing that is designed not only to meet applicable safety levels, but to also improve the quality and function for urban living (MOHURD, 2011,1.0.1). In these terms, design principles have been enshrined in policy in order to consider people-centred strategies, which actively adopt new technology and materials to promote the development of sustainable housing; and the requirements of elderly and disabled people (Clause 1.0.6-1.0.8).

5.3.3.1 *Green Space regulation and standards*

Of course, alongside such initiatives have been national laws, regulations and policies that directly focus on urban green space planning and design. These regulations and policies have covered various phases of development since 1963 (see Table 5.9). Initially these policies were initiated through the *Forest Protection Regulation* by the State Council of PRC in 1963, and later upgraded to the *Forest Law of PRC* in 1984 and 1998. The law sought to protect, nurture and ensure more sustainable forest resources, as well as accelerating afforestation, soil and water conservation, improvements in the environment and ethical supply of forest products in order to meet the needs of socialist construction and the people's lives (TSC 1984&1998).

More recently a raft of policy initiatives have emerged through my review of relevant documents and strategies relating to urban greenery (comprehensive management), ancient trees, green lines, public park, management of specific public lands and open green spaces, and scenic and natural conservation (Lin & Yang, 2010). A review of these documents is, however, best summarised with reference to the following:

Urban Green Regulations (TSC,1992)

Urban Green Regulations place emphasis on the importance of the technical regulations and standards for urban green space planning and management. This regulation seeks to ensure better planning, management, conservation and measure of green spaces, improve the ecological environment and physical and mental health of the living environment in the city (TSC, 1992, Article 1). The regulation focuses on increasing the greening of the city's public green space through planning, construction, conservation and management and should be dependent on specific site conditions; including local landform, water bodies, vegetation, and historical and cultural sites (The State Council China, 1992, Article 9 &10). In addition, the Ministry of Construction of the PRC according to Article 9 ensured that authorisation of *Urban Green Regulation* is enacted through the application of the *Notice on Indicators of Urban Greening and*

Planning 9 (see **Table 5.6**) which seeks to strengthen the management of urban greening and planning and improved the quality of urban greening (MOC, 1993).

Table 5.6 Regulations for indicators of urban green space construction (1993)

Indicators of urban green space construction		By2000	By2010
Average public green space per capita (m^2/person)	For cities with average built area per capita under 75m^2	≥ 5	≥ 6
	For cities with average built area per capita between 75 – 105m^2	≥ 6	≥ 7
	For cities with average built area per capita more than 105	≥ 7	≥ 8
Percentage of greenery coverage (%)		≥ 30	≥ 35
Percentage of green land coverage (%)	Of a whole city	≥ 25	≥ 30
	Of new residential	≥ 30	
	Of old residential area	≥ 25	
Percentage of roads greening coverage (%)	For major roads	≥ 20	
	For secondary roads	≥ 15	
Width of protection forest belt along river, sea, lake, and railway (m)		≥ 30	
Percentage of attached green space coverage (%) Note: for old built-up area can be 5% lower than the norms	Average	≥ 30	
	Industry, warehouse and business centre	≥ 20	
	Industry with pollution (in addition, protection forest belt)	≥ 30 ≥ 50m	
	School, hospital, governmental institution, public recreational facility, military base	≥ 35	
Area of land use for nursery in total city area (%)		≥ 2	

(Source: Ministry of Housing and Urban-Rural Development of China, 2002, adapted from Liu, 2008)

In 2002, the Ministry of Housing and Urban-Rural Development (MOHURD) also released planning policy guidance entitled 'Urban Green Spaces System Planning Drawing Up Outline (Trial) (2002-204). The plan sough to ensure that the quality of ecological benefits of urban green space by focusing on community economic development and cultural well-being. The purpose of promoting sustainable urban development and optimising the urban living environment, was thus to be achieved by protection of urban ecologies. However, for the first time in policy, such strategies were to be administered at the city level in order to ensure appropriate planning of city green spaces. Additionally, in order to ensure establishment and strict implementation of

urban greening index, The *Evaluation Standard for Urban Landscaping and Greening* [GB/T50563] provided detailed standards to evaluate and measure urban landscaping and greening (MOHURD,2010).

Standard for Classification of Urban Green Space (CJJ/T85-2002)

In Chinese cities, the classification of urban green space has been hampered by a lack of standardisation of classification with regards to development and management strategies to improve the urban ecological environment and promote sustainable development of cities. Thus, to give the definition of different categories of green space for urban planning the *Standard for Classification of Urban Green Space*[CJJ/T85-2002]*,* a national development standard was established in 2002 by the Ministry of Construction. This classification of urban green space is represented by a hierarchy, including five main categories at the highest level, with 13 sub-categories at middle levels, and 11 detailed sub-categories at lower levels. As the **Table 5.7** shows, the first four main categories are based in built-up urban areas as *G1: public park; G2: Productive plantation area; G3: Green buffer; G4: Attached green space*, and, finally, *G5: other green space* is based outside urban built-up areas, but this category also counted as being in the city's green space (MOC, 2002).

Table 5.7 Standard for classification of urban green space in China(CJJ/T85-2002)

1. Main Categories	2 Middle Categories	3 Small Categories/ Sub-Categories	
G1 *: Public park: to create green spaces for the recreation of the public urban population	G11*: Comprehensive park	G111 *	Urban park
		G112	Regional park
	G12: Community park	G121	Residential park
		G122	Petty street garden
	G13 Specialised theme park: green areas serve specific purposes (percentage of green coverage no less than 65%)	G131	Children's park
		G132	Zoo
		G133	Botanical garden
		G134	Historical garden and Park
		G135	Famous scenic park
		G136	Amusement park
		G137	Other theme park
	G14　　　Linear park: belt-shaped long green area with a number of recreation facilities, along road and river		
	G15 Street greens: pieces of small green space along the street (percentage of green coverage no less than 65%		
G2: Productive plantation area	To provide green space for urban nursery-grown planting, flowers and grasses, and woodland for greening etc.		
G3: Green buffer	Green space used for urban environment protection, sanitation, safety and calamity prevention, including: health segregation, road protective greenbelt, urban high-pressure corridor green belt, medium-thick shelterbelt and city group segregation, etc.		
G4: Attached green space	The various types of land affiliated green space without the urban construction land, including green space of: G41: Green space attached to housing estate; G42: public facilities green space; G43: Industry green space G44　　　: Warehouse area's green space; G45: Transport greens; G46: Green space attached to urban road and square; G47: Civic green space; G48: Green space in special field		
G5: Other green space	Green space for quality of the city's, health and well-being of resident's life, ecological environment and biological diversity protection, including: landscape and famous scenery, water reserves, country parks, forest parks and nature reserves, woodland, natural preservation areas, wetland, wild zoo and botanical garden, landfill recovery green space, etc.		

Source from: Ministry of Housing and Urban-Rural Development of the People's Republic of China (MOHURD,2002)

　　　*G1, G11, G111 are the codes for the first, second and third levels of the urban green space classification hierarchy.

Criteria of National Garden City (MOHURD, 2010)

Finally, the international *Garden City* concept which has been considered to be a cornerstone of modern urban planning, and which has also been particular influential in the green space system planning in the twentieth century has been implemented in China (Alexander, 1992; Taylor, 1998). The initial ideas of Howard and Olmsted sought to achieve a utopian settlement through comprehensive urban planning in 1898, and the first attempt to link the ecological capacity and social opportunity though planning (Mell, 2008), and has been carried forward to the present day in variously modified variations. The application of the garden city principle has now been officially introduced in China, through combining cultural heritage protection with green space system construction in order to realise the development goal of "building a civilised garden city" by the state government. The national garden city model was introduced in relation to the other policies and initiatives identified in this chapter as indicating a strong desire form government to improve the quantity and quality of urban environments in Chinese cities.

For example, The *Criteria of National Garden City* and *Application and Criteria Method for National Garden City* are two important initiatives relating to the development of national garden cities that promote the ideals and standards of garden cities nationwide (MOHURD, 2010). The *Method* standard represents the five main conditions for applications for national garden city status and is broadly focused on planning and management, construction of green spaces, and monitoring.

Table 5.8 Main indicators for "National Garden City" in China

Basic indicators				
City indicators	Large city	Medium city	Small city	Location of the city
Average public green space for capita (m2/person)	6.5	7	8	South of Qinling Mountains and Huai River
	6	6.5	7.5	North of Qinling Mountains and Huai River
Percentage of green land coverage (%)	30	32	34	South of Qinling Mountains and Huai River
	28	30	32	North of Qinling Mountains and Huai River
Percentage of greenery coverage (%)	35	37	39	South of Qinling Mountains and Huai River
	33	35	37	North of Qinling Mountains and Huai River
Other indicators				
			Basic achieve	Potential achieve
Percentage of green land coverage of residential area (%)	New residential area		≥ 31	≥35
	Old residential area		≥ 25	-
Percentage in the length of a road (%)	With road planting		≥95	100
	Reach greening standard		≥80	-
Percentage of green land coverage (%)	City main road		≥25	-
	Parks		≥70	≥80
Percentage of green space in the city (%)			≥36	≥40
Percentage of self-produced plants in total plants used for greening (%)			≥80	≥90

(Source: Ministry of Housing and Urban-Rural Development of China, 1992, adapted from Liu, 2008)

Throughout these two documents, basic indicators include the average public green space per capita, percentage of green land coverage and percentage of greenery coverage, and the indicators are different to account for the environmental and climatic differences between south and north China. Key goals for the national garden city scheme was to ensure that the percentage of green spaces in urban areas should be higher than 36% and have potential opportunities to achieve more than 40% in the future. This national standard guide also established a value assessment which gives the indicator to measure the quality of green space, as well as the indicator to measure functional assessment, cultural value assessment, wildlife assessment and conservation of diversity in city (MOHURD, 2010).

Table 5.9 Relevant national regulation and documents for urban green space in China

Main Policy	Overviews
Forest protection regulations (TSC, 1963)	To protect forests and prevent fires, denudation woodland, prevention, control of vegetation diseases and insect pests, to promote the forestry production
The Forest Law of PRC (TSC,1984/1998)	To protect, nurture and rational use of forest resources, improving the environment and supplying forest products, to meet the needs of socialist construction and the people's lives.
Notice on strengthening the protection and management of ancient trees (MOC,1991)	To strengthen the protection and management of valuable and old trees, protection of biological resources and the country's important historical and cultural heritage
Urban Green Regulations (TSC,1992)	To guide planning, management, and conservation of green spaces, to improve the ecological environment and physical and mental health living environment in the city
Standard for Park Design (CJJ48—92) (MOC,1992)	Improve the role of the park environment, ensure design quality to develop this specification.
Notice on Indicators of Urban Greening and Planning (MOC,1993)	According to *Article 9 of the Urban Greening Regulations*, to strengthen the management of urban greening and planning and improved the quality of urban greening.
The provisions of the planning and construction of urban greening Index (MOC,1994)	Enactment of this provision is to strengthen the urban greening planning and management and the level of urban greening.
Nature reserve regulation of PRC (TSC,1994)	To strengthen the construction and management of nature reserves, protection of the natural environment and resources.
Code for construction and acceptance of plant engineering in city and town (CJJ/T82-99)	In order to improve urban greening tree planting survival rate, improve the urban green landscape, green building to save money and create a good urban environment.
Urban Green Line Management Method *(*MOHURD,2002)	To strengthen urban ecological environment, and create a good living environment and promote sustainable urban development
Standard for classification of urban green space(CJJ/T85-2002)	To classification of the urban green space, development and management of green space, improve the urban ecological environment and promote sustainable development of cities.
Outline of Urban Green Space System Planning (Trial) (TSC,2002)	To strengthen the standardization of urban green space planning system, to ensure that the quality of planning to protect the urban ecological environment.
Advice about Strengthening Park Management Work (MOC,2005)	Take effective measures to strengthen park management, protection classical gardens, improve level of park management.
Design Guidance of City Wetland Park (Trial) (MOC,2005)	Protection of urban wetland functions and biodiversity, sustainable use of nature resources and development ecological, economic and social benefits in urban construction.

National Key Park Management Measures(MOC,2006)	Protection and manage the park with significant impacts and the higher value, and promote the healthy development of urban landscaping work.
Code for the design of urban green space GB 50420-2007	Insist the basic principles of improving the efficiency of land using and other measures to increase the unit green biomass
Advice about Development of a Conservation Oriented Urban Landscape and Greening (MOC,2007)	Through scientific planning, reasonable design, actively involved, careful management and other measures to reduce construction costs and maintenance costs.
Standard for Scenic and Historic Areas Classification (MOHURD,2008)	To clarify the type of Scenic Areas, apply science, and effective utilization to different categories of protected scenic area of the development of this standard.
Code for scenic area planning (MOHURD,2010)	To strengthen the management of scenic spots, provide better protection, use and development of scenic resources, formulated regulations.
Criteria of National Garden City (MOHURD,2010)	To guide cities, get the level of garden city and win the name and funding
Application and Criteria Method for National Garden City (MOHURD,2010)	It is an explanation of how to apply and evaluate a national garden city award. The application scope is all cities with a municipal government (city level).
Evaluation Standard for Urban Landscaping and Greening GB/T50563 (MOHURD,2010)	To regulate the urban landscape evaluation, enhance the level of urban landscaping construction, build a harmonious, safe, healthy and comfortable urban living environment
Standard for green land classification of town and village (CJJ/T 168-2011) (MOHURD,2012)	Implementation of the rural town green system planning, specification of green space planning, construction, protection and management, optimizing the sustainable development of rural towns.

(Source: summarised by the author, 2015)

* **MOHURD**: Ministry of Housing and Urban-Rural Development of PRC
MOC: Ministry of Construction of the PRC
TQSIQ: The quality supervision, inspection and quarantine of PRC
TSC: The State Council of the People's Republic of China
NPC: The Standing Committee of National People's Congress (NPC)
PRC: People's Republic of China

5.3.4   Housing and green space policy in Shanghai

The final sections of this chapter focus on the trajectories of local policy relating to housing and green space in Shanghai. Within the local context there are a range of policies and documents that have impacted upon urban planning, green space and housing, which include basic planning and building regulations, codes and standards.

While, historically, local policy relating to urban planning and green space has been sadly lacking, during the second half of the twentieth century and indeed increasingly over the 10 years this situation has changed dramatically as highlighted in Table 5.10 and explained further here:

5.3.4.1   Regulation of Shanghai urban planning

As outlined in the national *Urban and Rural Planning Law of PRC*, cities and towns were made responsible for implementing urban and town planning. Article 3 stipulates the local People's Government are responsible for urban or town planning, local economic and social development including planning for housing provision and sustainable planning (CNP, 2008, Article 3 & 4). Thus, in accordance with the national Law that the Standing Committee of the People's Congress of Shanghai Committee which set out *Regulations of Shanghai Municipality on Urban and Rural Planning* local strategies have sought to strengthen urban and rural planning strategies, arranging urban and rural spatial distribution and to coordinate sustainable development of urban and rural economy and society (Shanghai Municipality People's Congress, 2010, Article 1).

Moreover, the formulation and implementation of urban and rural planning strongly emphasised the integration of economy, society, population, resources and environment. Furthermore, the upgrade regulation (2010) revised in order to allow public participation in planning policy and decision making has included input from 'experts' and popular participation to allow discussion and consideration of the everyday uses of urban spaces and places (Shanghai Municipality People's Congress, 2010).

5.3.4.2 *Housing Policy in Shanghai*

Shanghai has experienced rapid urban growth and major restructuring of its housing market which has in turn led to shortage of living spaces, and a housing shortage that is more serious than in other large cities across China (Shanghai Municipal Government, 2013). In 1985, Shanghai's population was 7.21 million, and the average population density in downtown area was 40,000 persons/km^2, but in the more densely populated downtown area it increased to 160,000 persons/km^2, and almost half of urban households reported being short of adequate living space. Until 2000, the city created 1.8 million square meters of housing for overcrowded households, and resettled over 47,000 households living under 2.5 square meters and 74,000 households living in homes less than 4 square meters (Shanghai Housing Settlement Project Office, 2003). The Shanghai Municipality also launched the development of housing projects that sought to solve the problems of housing shortage and accommodation size/quality. The *Housing Settlement Project* in 1987, and a research report entitled *Implementing Outline for New Housing resettlement* by the Shanghai Municipal Housing Relief Office in 1995 was a response to national government's attempts to develop a better housing policy from 1993, by focusing on providing support for housing ownership for the middle and high income families through sanctioning the activities of commercial housing developers which emerged as the main housing providers in cities after the economic and housing reform.

In order to account for changing economic conditions in the city, national and local policy both improve the construction of real estate, satisfy residents' demands on housing quality and so on (SMCTC, 2007). For example, The Shanghai Municipal government launched its *Design Standard for Residential Buildings* [DGJ08-20-2001] in 2001, in accordance with the national *Standards for Housing Design* [GB 50096-1999], which was revised twice times in 2007 and 2013. The design of residential housing following these reviews must strictly conform to relevant principles, policies and laws in the country and city, adopting a people-oriented approach and sustainable development.

5.3.4.3   *Planning for Shanghai's Green Spaces*

At the beginning of 2007 the local government established *Urban Green Regulations in Shanghai*, adopted at the 33rd session of the Standing Committee of the 12th Shanghai Municipal People's Congress. The *Regulations* were launched in accordance with the State Council's *Regulations on the Urban Greening* and other relevant laws, adapted to account for the specificity of Shanghai's urban conditions, and in order to promote "the development of this Shanghai's greening undertaking, to improving and protecting the ecological environment" (Shanghai Municipality People's Congress 2007, Article1). These regulations provided the framework to ensure planning, construction, protection and administration of green work - such as planting, growing and maintaining trees, grassland and vegetation. The municipal, district and sub-district greening committees were tasked with the work of organising and promoting voluntary tree-planting activity and the mass greening activities, encouraging them to take part in the greening construction and maintenance in the form of investment, donation or adoption by every unit and every individual person (Shanghai Municipality People's Congress 2010, Article 2 and 5).

The regulation clearly required planning and development proposals to undertake greening, and deliver approval procedures. The Greening Administrative Department under the Municipal People's Government (MGAD) takes responsibility for greening Municipal administrative areas while the District/ Sub-district Greening Administrative departments (DGAD/SDGAD) also take charge of the greening work in their respective jurisdiction and that the MGAD should fully integrate the Green Space System Plan brought into play by the Master Plan of the Shanghai (Shanghai Municipality People's Congress 2007). Before formulating and approval, the green space system plan also should also solicit the opinions of the interest-related public participation and ensure that construction of green space should comply with different departments and units. Importantly, this responsibility also includes a focus on greening in residential quarters – including design, choice of species of plants in relation to lighting, ventilation safety and so on, and as stated in Article 15.1 to ensure "the population of the green space in a newly built residential quarter to the total area of the residential quarter shall not be

less than 35 per cent, with the area of concentrated green lungs accounting for not less than 10 per cent of the total area of the residential quarter; the green area of a residential quarter renovated or expanded by blocks according to the planning shall not be less than 25 per cent of the total area of the residential quarter" (Shanghai Municipality People's Congress 2010). This indicates a higher greening rate than the national regulation which is set at no less than 30 percent in new construction in residential areas, and in the reconstruction of old residential areas should not less than 25 percent green rate (MOC, 2002). However, the higher expectations indicate how the economic and socio-cultural development of Shanghai along with its location in the Yangtze River Delta Region and associated environmental and climatic differences, may allow for more ambitious targets than in other Chinese cities

Moreover, in Shanghai, in order to promote sustainable green development in the newly constructed residential communities, on the basis of the already issued *Guide on Greening Construction of Newly Constructed Houses* in 2001 the Shanghai Municipal Greening Administration and Shanghai House Land Resource Administration combined order to ensure high levels of greening strategies in the construction of new houses. – including outdoor private and public green spaces, aesthetical beauty, comfort, the use of types of plants and trees which suggests the native trees which are suitable for Shanghai should be chosen, and emphasis on the regional plants and diversity of vegetation (Shanghai Greening Administration, 2005). Furthermore, there is also a series of other policies and documents that have been initiated which relate to planting technical specification, renovation historic buildings, ancient trees protection, park management, green roof and vertical greening (see Table 5.10).

Table 5.10: Policies relating to green space and housing in Shanghai (1990-2014)

	Relevant Local polices	Policy overview
Urban planning	Regulation of Shanghai Municipality on Urban and Rural Planning (SPC, 2010)	To strengthening the administration of urban and rural planning; arranging the urban and rural spatial distribution in an overall manner, improving the living environment, and promoting an overall, coordinated and sustainable development of urban and rural economy and society
	Standards of Regulatory Plan in Shanghai (SMPRA, 2011)	To standardize the contents, depth and expression form of the detailed control planning, the policy is thus drafted. Detailed control planning includes legal document and technical document.
	Specification for Traffic Organizing Planning and Design of Urban Residential District [DG/TJ08-2027-2007] (SMCTC, 2007)	To reasonably plan and design the roads in the residential zone and transportation, satisfy residents' requirements on transportation, guarantee the security and convenience of associated urban roads and internal passage in the residential zone, conform to the overall planning in Shanghai and requirements on transportation planning, fully consider the holistic interests in terms of society, economy and environment. Provide living and social activity conditions for the elderly, disabled and children.
Housing	Design Standard for Residential Buildings [DGJ08-20-2013] (SMCTC, 2007)	To adapt to the economic development in the city, improve the construction of real estate, satisfy massive residents' demands on living quality, residential functions, residential environment and anti-fire security, the standard is thus drafted according to the actual situation in the city.
	Shanghai New Housing Environment Greening Construction Guidance (SGA, SHLRA , 2005)	To promote the sustainable development of greening construction in the newly constructed residential community, on the basis of the already issued "Guide on greening construction of newly constructed houses in Shanghai". The green space design is for the purpose of creating outdoor space for getting closer to environment. Besides, it shall meet the requirements on aesthetical beauty, warmth, comfortableness, health and energy conservation.
	Standards for Residential Building Energy Efficiency Design [DGJ 08-205-2011] (SCMC, 2011)	In order to implement the laws and polices about energy conservation and environmental protection in China, improve the thermal environment of residential buildings, enhance the efficiency of utilization of warming and air-conditioner energy, the standard is thus formulated. It is suitable for the energy-saving design of newly constructed, renovated and expanded residential buildings.
	Renovation technology criterion of the remarkable historic architecture [DGJ08-108-2004] (SMCTC, 2004)	In order to strengthen the protection of historical and cultural spot and heritage buildings in the city, promote the coordinated development of urban construction and social culture, the protection shall conform to the principle of unified planning, classified management, effective protection, reasonable utilization and utilization's conformity to protection.

Green Space	Urban Green Regulations in Shanghai (SGA, 2007/2010)	In order to formulate urban planning rationally, strengthen urban planning management, ensure the implementation of urban planning, promote the coordination between economy, society and environment, realize urban modernization
	Code for the design of green space [DG/TJ08-15-2009] (SCMC, 2009）	To promote the green space and forecast construction in Shanghai, improve the ecological situation in urban and rural areas, beautiful rural and urban environment, facilitate the urban and rural integration construction
	Greening Urban Road Planning and Design Specification [CJJ75-97]	Road greenland rate shall conform to the following these regulations.
	Shanghai Park Regulations NPC Standing Committee (1994)	In order to enhance the park construction and management in the city, protect and improve ecological environment, beautify the city, and boost people's physical and mental health, according to relevant laws and regulations in the nation, the regulation is thus drafted according to the actual situation in the city.
	Technical Specification of Landscape Gardening [DG/TJ08-19-2011] SGSUA (2011)	To promote the sustainable development of greening construction, strengthen management in the greening industry, and improve the quality of greening maintenance.
	Code for acceptance of Construction quality of gardening and Landscape engineering [DG/TJ08-701-2008] (SGSUA 2008）	In order to strengthen quality management of garden greening project as well as unify the standard on construction quality examination, the regulation is hereby formulated. The regulation unifies the method of examining the construction quality of garden greening projects, , clarifies the sub-companies that check construction quality of garden greening projects and classification of sub-projects, stipulates the samples related to plants' survival, safety and main functions as well as sampling test.
	Planting technical specification for garden plants [DG/TJ008-18-2011] (MGA, 2011)	The technical convention is hereby drafted to improve the quality of greening planting in Shanghai and fully give greening functions into play.
	Shanghai Garden Plant Conservation Technical Specification[DBJ08-19-9l] (SMCC,1994)	The regulation is thus drafted to protect ecological environment, strengthen plant protection the garden, improve the management of garden plants and give the plants' greening effect and appreciation values into play.
	Lawn Technical Regulations Planting and Maintenance Management (SMS, 1998)	Level-1 greenland: main entry and exit of the city, street near the main road of the city and main centers of the city. Level-2 greenland: streets near the main district and county roads as well as main district and county centers.
	Shanghai Ancient and Famous Trees Protection Regulations (SMPG,1983)	The following trees in the city are ancient and precious trees that should be further protected: With historical values and memorial significance; 2. The trees are more than one hundred

		years old;3. Precious and rarely seen both at home and abroad; 4. Strange in shape and rarely seen both at home and abroad.
	Technical specification of Non-commercial forest construction [DG/TJ08-2058-2009] (SGSUA,2008）	To maintain and improve ecological environment, keep ecological balance, protect bio-diversity, satisfy human society's ecological and social demands as well as sustainable development, and provide forests, trees, land and other public and social products or services.
	Standard for Shanghai Green Roof Technical (SGSUA ,2008）	As one supplementary method of ground greening, roof greening is widely applied and promoted in China and foreign countries.
	Vertical Green Technical Specification [DBJ08-75-98] (SQTS, 1998)	In order to improve the quality and level of vertical greening in the city as well as fully give the efficacy of vertical greening into play, the regulation is hereby regulated. The regulation is applicable to the vertical greening of public greenland under the management of municipal, district and county department, affiliated greenland of enterprises and state-owned companies as well as greenland in residential zones.

∗ **SPLRD:** Shanghai municipal planning and land resources administration 上海市规划和国土资源管理局

   SGSUA: Shanghai Green Space and Urban Appearance administration 上海市绿化和市容管理局

   SQTS: Shanghai quality and technical supervision 上海市质量技术监督局

   SMPG: Shanghai Municipal Peoples Government 上海市人民政府

   SPC: The standing committee of the Shanghai municipal people's congress 上海市人民代表大会常务委员会

   SHLU: Shanghai Housing and Land Use administration 上海市房屋土地资源管理局

   SCMC: Shanghai construction and management committee 上海市建设和管理委员会

5.4   A critical review of planning policy

Urban policy and planning now exists for the first time at all levels of government, ensuring responsibility for planning and policy in cities, which was founded on concerns to ensure national social and economic development, across areas such as government of land management, natural resources and environmental protection. Despite the existence of relevant policies there was widespread support by professionals for the clear delivery of positive sustainability and ecologic considerations in urban housing and green space policy. This supposes that the requirements of 'ecological environment', 'sustainability', 'greening city', 'liveability' and 'reflecting local characteristics or identity' can be met more effectively with the central role to be played by local government through stronger planning policies. Nevertheless, the policies exist but are not clear enough to be enforced well under governance and delivery, as political and institutional issues, there are no set planning policies or standardised urban green space systems, just widespread concern over the conceptions of 'ecological considerations' and 'environmental protection and sustainability'. It is also unclear as to who should be responsible for urban green space systems and, further, the lack of stronger theoretical underpinning or guidance of urban planning systems and these are all discussed in this section.

All of the urban planning and design professionals interviewed agreed that the urban planning policy and practice should be 'joined-up'. However, they recognised that good design is necessary, to approach planning, architecture and landscape design from the beginning. There was some recognition of the variety of urban planning professionals emerging among government officers, academics and consultancies - and their willingness to listen to local communities, and there were debates as to whether the nature of a 'joined-up' approach would result in policies and practice that should complement each other. Nowadays, urban planning systems should be multifunctional whilst respecting the local identity, history, traditional, culture, social cohesion and quality public green space. The implementation approach for 'joined-up' policy and practice have received considerable attention, and need to be better integrated. This has

been sadly lacking during the second half of the twentieth century and increasingly recognised as a problem during the last 10 years. Therefore, the policies and planning are not being effectively implemented, since they have encountered barriers such as those characterised by a centralised planning system with top-down supply-induced institutional government administration, lack of understanding moreover from bottom-up expertise in brokering better relationships between policy makers/planners and a diverse range of urban residents in enabling future policy and practice. Some individual aspects of the planning system will now be examined.

The policy for Housing Design aims to deliver the requirement for more sophisticated consideration of residents' housing conditions, improve the quality and function for urban living, to consider 'people-centred' strategies, which actively adopt new technology and materials to promote the development of sustainable housing, and meet the requirements of elderly and disabled people. Critics saw the policy as a potential for gentrifies in charter - improving the middle class people's living environment while simultaneously inflating house quality and reviving a neighbourhood's sociability and cohesion. Moreover, some emphasised the weakness in applying policy and standards to the actual house development of cities through central and local governments to ensure sustainable development and improve the conditions of housing and high quality of living environment, which is, undoubtedly, a difficult prospect to achieve. Urban planning, housing design excellence, the creation of a national planning framework, new style sustainability development plans, as well as policy transfer relating to the policy and planning system and decision making in the actual locations, as well as from national, urban and local levels all highlight the extent to which there is a need for 'joined-up' policy and practice.

The foundation for urban green space design as public policy was a new development plan system with the national Chinese Urban and Rural Planning Act (2008) as a framework for a more simplified, flexible and strategic approach to local policy and standards. The national and local green space planning and policy sought to raise the general quality of urban environments in order to promote the city liveability, health

and sustainability. It was also attentive, as stated, to some of the key issues through its focus on "improving the living environment…coordinated and sustainable development of urban and rural economy and society… to improve the ecological environment and physical and mental health living environment in the city" (SPC, 2010). Their policy expressed particular concern with the quality and connectedness of the urban green space and its capacity to encourage sustainable development. However, the regulatory and legislative aspects only emphasise the importance of technical regulation and creating a role for strategic urban green space system planning. It has a clarity indicated, for example, the quantity of green space index, which indicates that greening spaces should not be less than 35 percent of a new residential area, and in reconstruction and regeneration of old residential areas should not be less than 25 percent (MOC, 2002). But, the national and local policy and regulations both lack specification on quality and quantity of green space and to be standardised and indicated, and has provided no valuable guide or criteria on best practice design for green spaces, while lacking any reference to green space management, maintenance standards and skills. The national government is now committed to close specialist care of ecological considerations and sustainable development. It seems that improving the general quality of urban green space design was at the heart of the urban living environment, and concerns are linked through the drive to improve the urban living environment, promoting the liveability, upgrading public and open space design, conducive to a harmonious and sustainable development of urban society. Hence, the urban planning and policy should have focused on better 'joined-up' planning policy and practice, steady improvement in the quality of urban life, and in future seek to strengthen and standardise an indicated quality of urban green space. Overall there have certainly been improvements to be better integrated with planning, design, long-term management and maintenance of urban green space and housing as a whole and the improvement of quality of urban life.

5.5 Conclusions

This chapter has traced the ups and downs of changing policy and practice relating to housing and green space at a national level in China and with reference to the local urban context in Shanghai. Despite many weaknesses and problems I have shown that there is an overall trajectory of convergence which highlights how policy makers, planners and practitioners have acknowledged and pursued an increasing appreciation and understanding of the close connections and mutual interdependence of the relationship between green space and quality and quantity of housing provision. This evidence fits closely with theoretical arguments made at the beginning of the thesis with regards to recent economic, social and cultural changes within Chinese society, enabling concern to rearticulate long-standing and traditional motivations to harmonise relationships between human activity and nature. While of course, such broader trends are not always easily attributable in political and policy decision making, let alone the often contradictory realities of urban development and rapid economic growth of China, the evidence from my research highlights a coming together of political and institutional concern (if not always the practicalities) of ensuring closer integration of green space provision and housing in order to achieve progressive economic, social and urban change.

Chapter 6 Understanding the Diverse People and Places of Huangpu District, Shanghai

6.1 Introduction

This chapter delivers an overview of the development of the urban planning and green space system in China and a detailed introduction to each period of the Shanghai urban plan from 1931 to 2015. This evidence through the textual analysis of historical and archival material compares the urban master plans from different periods with contemporary policy implementation. This chapter also describes the five housing types that are the focus of the research. This will, through the explanations of the justification and selection of the city and case study areas based on a review of the general background of Shanghai and Huangpu District, include details of the location, context, and history of this city; its population size; environment and socio-economic characteristics such as age, gender, household income etc. It will also introduce the database selected for mapping the context of land use/green space systems in Shanghai.

In doing so, the chapter combines findings from the in-depth interviews with local households in the five case-study sites and uses maps and photographs as evidence from residents to better understand the features of the built environment and open/green space for each case study site and housing type (historic Chinese housing; colonial housing; state-built housing (1960-90s); high-rise private housing (gated communities) and traditional working class housing). The policy/planning challenges and views of local residents from each housing type and in terms of socio-economic profile are examined. Finally, this chapter aims to offer insights into the similarities and differences between professional planning/policy priorities and agendas in terms of the evolution of the city, a detailed and critical understanding of social needs and the everyday use of urban green space and housing in Shanghai and the case study sites in Huangpu district.

6.2 Urban development for urban planning/green space systems in China

6.2.1 An overview of the evolution of urban planning in China

This chapter begins with a brief overview of the evolution of urban planning in China. Urban planning in China has a very long history that can be traced back to the imperial era, when majestic capital cities were constructed through the feudal ideology of **social** needs and hierarchy (Yeh and Wu, 1999). In the last century, the underlying influences of urban planning practice in China from 1949 to the present can be generally divided into four phases: the physical planning developed from industrial site planning with the establishment of the socialist system in China in the 1950s; unstable urban planning during the unstable political and economic period (1960-1978); recovery and establishment of the urban planning system between 1978 and 1989 and the modern urban planning system after the 1989 Urban Planning Law in a transitional economy from 1989 to the present (Yeh and Wu, 1996b).

6.2.1.1 *The first phase of urban planning in the 1950s*

In the first phase, urban planning practice was learned from the Soviet urban planning model in the early 1950s. The Communist Party of China faced the job of recovering from the backward-looking national economy and changing the traditional city from *consumer cities* to *productive cities* (Ma, 1979). Cities mostly lacked manufacturing industries and it was thought that urban development would create a plan for a city within the planned economy and concentrate on the production and construction of new industries to meet the government agenda (Mao, 1964). This urban planning model of industrial-oriented economic development was prepared to implement the national economic plan to regulate production and life-styles. Thus, the task of transforming cities was to be achieved through a massive industrialization process, especially in terms of economic production (Lo *et al.*, 1977). However, this urban planning stage only focused on the coordination of key industrial projects in factories without consideration of other service facilities in cities. The problem of this plan was the single-function development control in the urban planning system and the lack of coordination of green space and other functions.

Moreover, the principles and model of urban planning was borrowed from the Soviet Union with the urban planners being trained and supported by the Soviet experts. However, the Soviet land use and housing construction standards were not appropriate to the local conditions in urban China (French and Hamilton, 1979).

6.2.1.2 *The second phase of urban planning (1960-1978)*

In the second phase, China entered the unstable political and economic period of the Great Leap Forward (1958-1959) and Cultural Revolution (1966-1976). Urban planning was stopped and the department of urban planning was disbanded during this turbulent time. It was considered that urban planning was responsible for the promotion of an impractical vision of future urbanism and withdrawal of Soviet support altered the highlighting from the development of large cities with heavy industry to the growth of small- and medium-sized cities along with agricultural development (Yeh and Wu, 1999).

6.2.1.3 *The third phase of urban planning (1978-1989)*

After the turbulent phase, urban planning in China started to recover and was again promoted, especially when China initiated economic reforms and an 'Open Door' policy in 1978. The Chinese government adhered to the important role of urban planning in the administration and regulation of urban construction, and in urban economic growth and social development. At the beginning of the 1980s, China prepared legislation for urban planning in a series of policies and regulations; the Provisional Regulation of Preparing an Urban Plan in 1980; the Regulation of Urban Planning in 1984; the Land Administration Law in 1986; and the Urban Planning Law (1989). This was a major milestone in the history of urban planning in China. However, at the beginning of this stage, urban planning in China was not as respected by both central government and the public as today. Moreover, the planning system in China was not yet accomplished. During this stage, ideas for a master plan were primarily drawn up and implemented by local authorities and authorized planning institutions, with supervision by some expert planners and scholars.

6.2.1.4 *The fourth phase of urban planning (1989-present)*

In the 19th and early 20th centuries, urban planning became increasingly imperative for the central government to consider, and focused on socio-economic development and environmental issues. According to the principles of sustainable development, the process of deepening the economic reforms and urbanization in China was advanced (GU, Yuan and Guo, 2010). Since 2000, urban planning has modified its functions from supporting general projects to regulating disagreeable land development. It has also played an increasingly important role in considering climate change and environmental problems. There has been a move from a more centrally-planned to a more market-oriented economy (Yeh and Wu, 1999) to improve the global vision of urban development which emphasized the development of global cities and supported the infrastructure for nourishing a green and low-carbon ecological environment.

6.2.2 Shanghai Urban planning development (1931 to 2015)

Shanghai was one of the earliest cities in China that attempted to establish large-scale and comprehensive plans for urban development. Urban planning in Shanghai has a long history which can be dated back to the semi-colonial period in the early 20th century (MacPherson, 1990). This section focuses on how urban planning in Shanghai has been conceived and developed over the years in terms of the evolution of the city, and the functions and values attached to it. By analysing the discourses and arguments of urban planning in Shanghai, it can be divided into six stages as the master plan evolved from 1931 to the present. The earliest master plan of Shanghai was prepared in 1931 which was the first thorough and large-scale plan called *The Greater Shanghai Plan*; the basic comprehensive plan of Shanghai was compiled by the Shanghai Urban Planning Committee after the founding of a socialist system in China in 1949; the master plan of Shanghai had planning developed in 1959; the comprehensive plan was approved by the State Council in 1986; Shanghai Municipal Commission of Urban Planning in 1994. Finally, the recently promulgated outline of the Shanghai Master Plan (2015-2040) was developed to provide a new strategy for the 21st century.

Table 6.1 summarises the evolution of Shanghai urban planning and the system for urban green space development. This table integrates some significant political-economic-socio-cultural events, and the spatial structure and priority functions of planning, more detail of each period will be discussed in the following sections.

Table 6.1: Summary of the evolution of Shanghai Urban Planning and Urban Green Space System Development

	Planning 1931	Planning 1949	Planning 1959	Planning 1986	Planning 1999	Planning 2015-2040
Politically	Semi-colony, Nationalism	Communist and Socialism		Socialism with Chinese characteristics.		
Economically		Planned-Economy		Market-Economy with Chinese characteristics.		
Roles/Vison of Shanghai	Economic and cultural centre.	Industrial and commercial centre.	Industrial base and financial centre.	Restructuring and revitalization of economy.	International metropolitan & financial centre.	To strive for excellence in global cities.
Spatial Structure of Shanghai	Organic decentralization, satellite town.	Polycentrism.	Monocentrism, satellite town.	Polycentrism.	Multi-centred.	Open and compact spatial system.
Priority functions of planning	Organic decentralization, expressways, functional zoning and regional planning into the urban planning practices in Shanghai.	Through building new districts and gradual restructuring of the city centre.	Gradually transform old districts, strictly manage the suburban industrial area.	Transform and establish a central city and to develop Pudong new district.	Establish a one-main-and-four-auxiliary public activity centre layout; central city-new city-central town-ordinary town.	Transformation of urban development mode to emphasize the land-use optimization, mixed spatial use.
UGS planning approaches.	Greenbelt around the city, quantitative standards.	Plan to decorate gardens, green space, sports venues and other recreational areas.	Greenbelt, green wedge model, garden of satellite city.	Multi-cores with green wedges, vegetable fields for protection.	Green network, green wedges, garden city.	Nourishing a green and low-carbon ecological environment.
External Influences.	European and American modernism planning.	Soviet urban planning model.		Western and International modernism planning.		

6.2.2.1 The Earliest Shanghai Urban Plan 1931

Since the opening of Shanghai port in 1843, Shanghai developed from an ordinary coastal city to an economic and cultural centre of China. Particularly in the years between 1899 and 1900, the international settlement expansion caused the appearance of the city to change fundamentally. In 1931, *The Greater Shanghai Plan* (**Figure 6.1**Error! Reference source not found.) was the first thorough, large-scale and comprehensive plan of overall urban development to be compiled by the members of the City Centre Construction Committee. Urban development was not confined to the traditional Shanghai Chinese Districts, such as Nanshi District and Zhabei District, and construction projects were spread to more areas. Moreover, in contrast with the international foreign settlement areas, the urban development was rapid and comprehensive.

The Greater Shanghai Plan in 1931 was first plan in China's modern urban planning, and the theories and methodologies of urban planning were modelled on the systematic combination of European and American modernism planning, including organic decentralization, expressways, functional zoning and regional planning. The Plan identified specific layouts for water infrastructure, urban transportation and public cultural and sports facilities (Shanghai City Centre Construction Committee, 1931). Overall, through constructing new districts and gradually reconstructing the city centre, the Plan effectively encouraged the population to settle down in new districts, with planned urban-suburban connections. The Plan came up with the concepts of organic decentralization and community structures, and determined the construction of *Satellite Towns* and a *Greenbelt* around the city. The rational ideas and concepts of Modernism are immersed in the compilation of the Plan in 1931, which had a profound influence on the overall planning of Shanghai after the founding of the PRC. However, the *Greater Shanghai Plan* was terminated in 1937 when the Sino-Japanese War started.
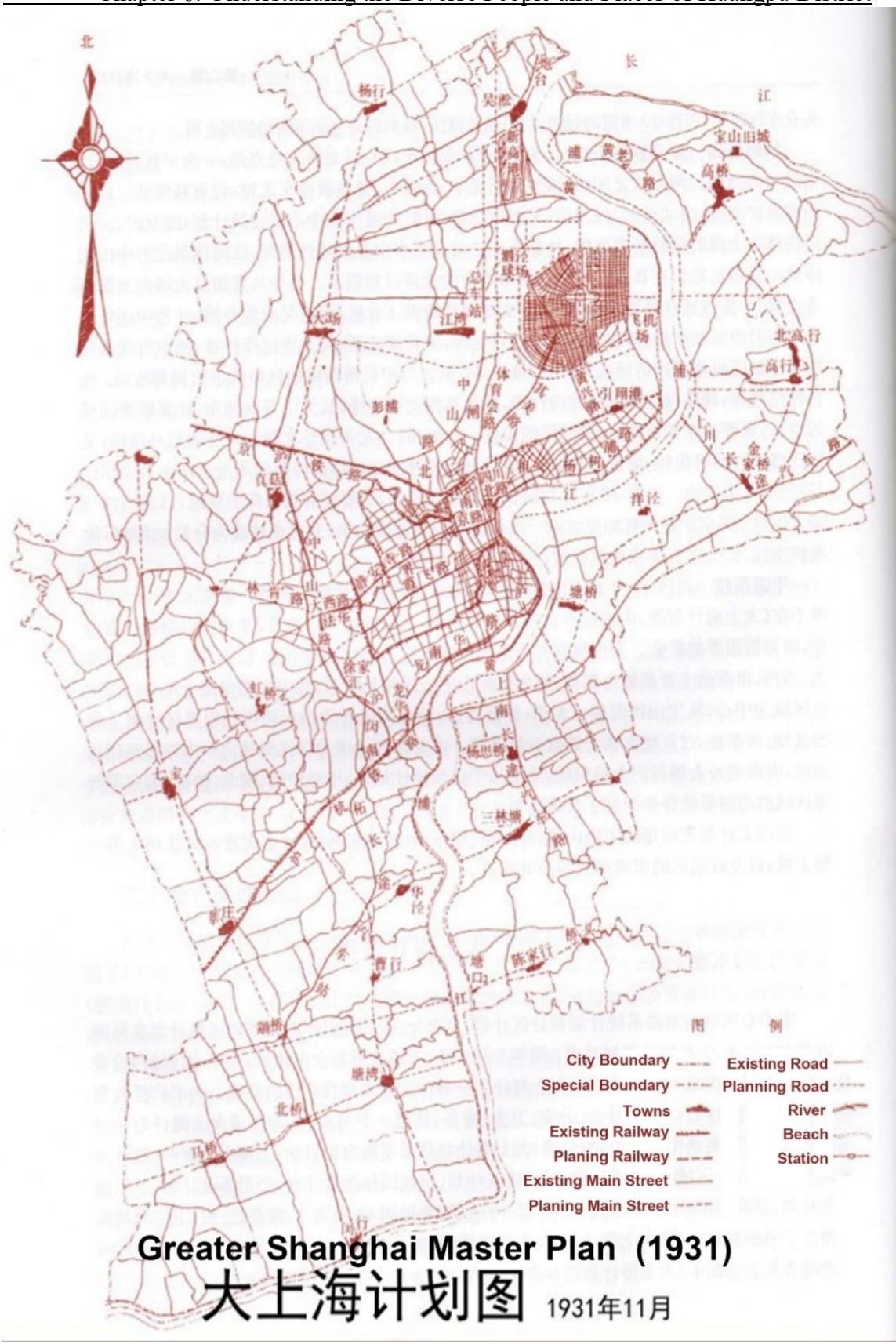
Figure 6.1: The Greater Shanghai Master Plan in 1931
(Source from: Shanghai City Centre Construction Committee, 1931)

6.2.2.2 Greater Shanghai Urban Plan of 1949

After victory in the Anti-Japanese War in 1945, to adapt to the post-war reconstruction and recovery, and to promote and consolidate the important role of Shanghai in China, the Shanghai municipal government (replacing the Shanghai Municipal Commission of Urban Planning 上海市规划委员会) aimed to establish a comprehensive plan of Shanghai. The first draft of this comprehensive plan was established in 1946 (

Figure 6.2).

The roles of Shanghai were explicitly defined as "planned to be a harbour city as well as one of the biggest industrial and commercial centres in China", (Tan, 2005, p. 84). The overall principles of the Plan were aimed at organic decentralization; residential areas should be organically connected with work, entertainment and other functions in life; through building new districts and gradually restructuring the city centre, some people would be dispersed to new districts (Shanghai Urban Planning Commission, 1946). The Plan was the first modern comprehensive plan in China, and was compiled before and after the three draft plans in 1946, 1947 and 1949. The first draft plan in1946 identified a set of scales for a projected population of about 15 million people in 1996; among this was an urban population of 7 million. The second draft was compiled in February 1948. Within the city, this offer involved 14 administrative districts, covering an area of 893km^2 with a predicted population of 9.5 to 10 million. Shanghai was defined as "a port city, one of the biggest industrial and commercial centres in China as well as the financial centre of the country and the world" (Shanghai Urban Planning Commission, 1947). *The Third Draft of the Greater Shanghai Plan* (

Figure 6.2) and the comprehensive plan were compiled in 1949, which referred to zoning and transportation for a predicted population of 7.5 million to 9 million in 1970. A particularly vital component of this draft was the establishment of 11 new administrative districts and a transportation system. The development policies were formulated to conform to the political urgency of changing the semi-feudal status into a modern socialist enterprise and industrialization (The Shanghai Urban Planning Committee, 1949).
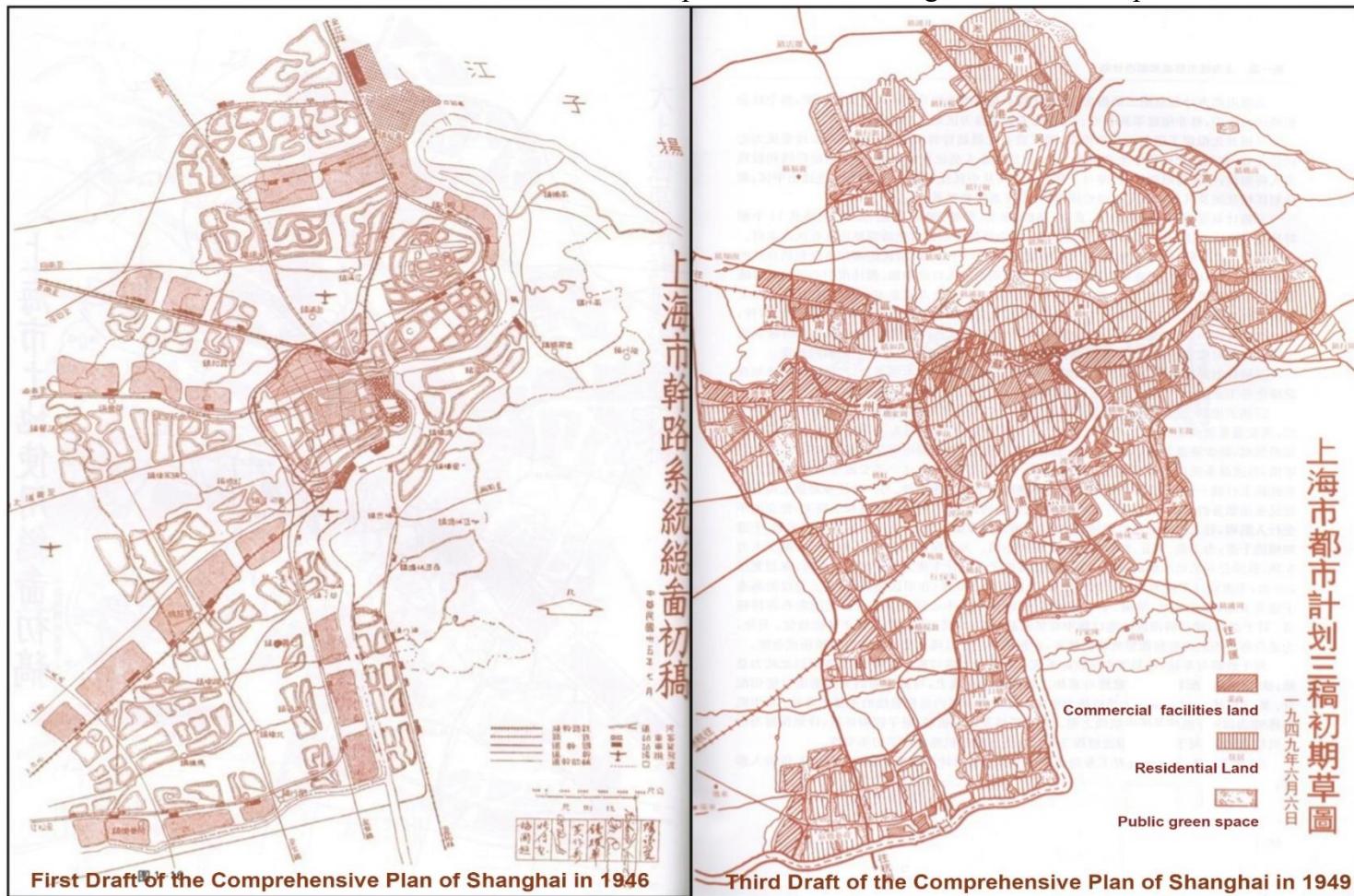
Figure 6.2: The draft of the Greater Shanghai Plans 1946 and 1949 (Source from: Shanghai Municipal Commission of Urban Planning, 1949).

6.2.2.3 *Shanghai Urban Plan of 1959*

Since the foundation of the socialist system in China, a planned economy has occupied a dominant position. The principle of Shanghai urban planning was explicitly defined 'to serve production first, then to serve the living basically' (Shanghai City Planning Commission, 1959). Shanghai developed its industry according to the unified arrangement of the central government, which was modelled on the former Soviet Union's socialist urban planning theories and methods. Against this background, Shanghai developed from a poly-functional, export-oriented city to a mono-functional, import-oriented city, becoming an essential industrial base and financial support of China (The Shanghai Urban Planning Design and Research Institute, 2007). The Soviet expert, Mukhin, provided advice on Shanghai urban planning, and compiled a draft of *The Shanghai Urban Comprehensive Plan* in *1953*, which planned to disperse 100,000 people each year, to decrease the urban population to 3 million people, the suburban population to 1 million people and to create *satellite towns* with a population from 1.8 million to 2 million people within 15 years. There would be a huge adjustment to the urban industry - concentrating three industrial areas, with more than 200 industrial districts and over 100 industrial communities.

In 1959, the CPC central committee put forward the policy to promote the establishment of industry simultaneously with the state and local government. The Plan came up with a guideline for city construction, 'to gradually transform old districts, strictly manage suburban industrial areas and systematically develop *Satellite Cities*' (Shanghai City Planning Commission, 1959). The Plan laid emphasis on ecological control, with more emphasis on suburban areas and suggested afforest *Satellite Cities*. The Plan also suggested that ports, railways and highways, the gates of the city, should be greened and connected to urban areas, which could benefit by ventilating and cooling the urban areas in summer. A greenbelt should be set up around urban areas; and satellite towns should be more greened. The Plan (**Figure 6.3**) had the planning area expanded to the whole city for the very first time. It raised the suggestion of constricting old districts, managing suburban areas and building satellite towns. *Satellite Cities*, which were the bases which accepted industry and population dispersed from urban areas, would be independent economic entities.

However, the Plan in 1959 was not able to be carried out because China entered the political and economic period of the Great Leap Forward (1958-1959) and Cultural Revolution (1966-1976). Thus, the urban planning of Shanghai was abandoned as China's urban planning was stopped (Yeh and Wu, 1999). But its guideline for Shanghai urban construction - "gradually transforming old districts, strictly managing suburban industrial areas and systematically developing satellite towns" - was implemented (Shanghai City Planning Commission, 1959). Through the planning and construction of over 30 years after the foundation of New China, great achievements in the transformation of old districts were made.
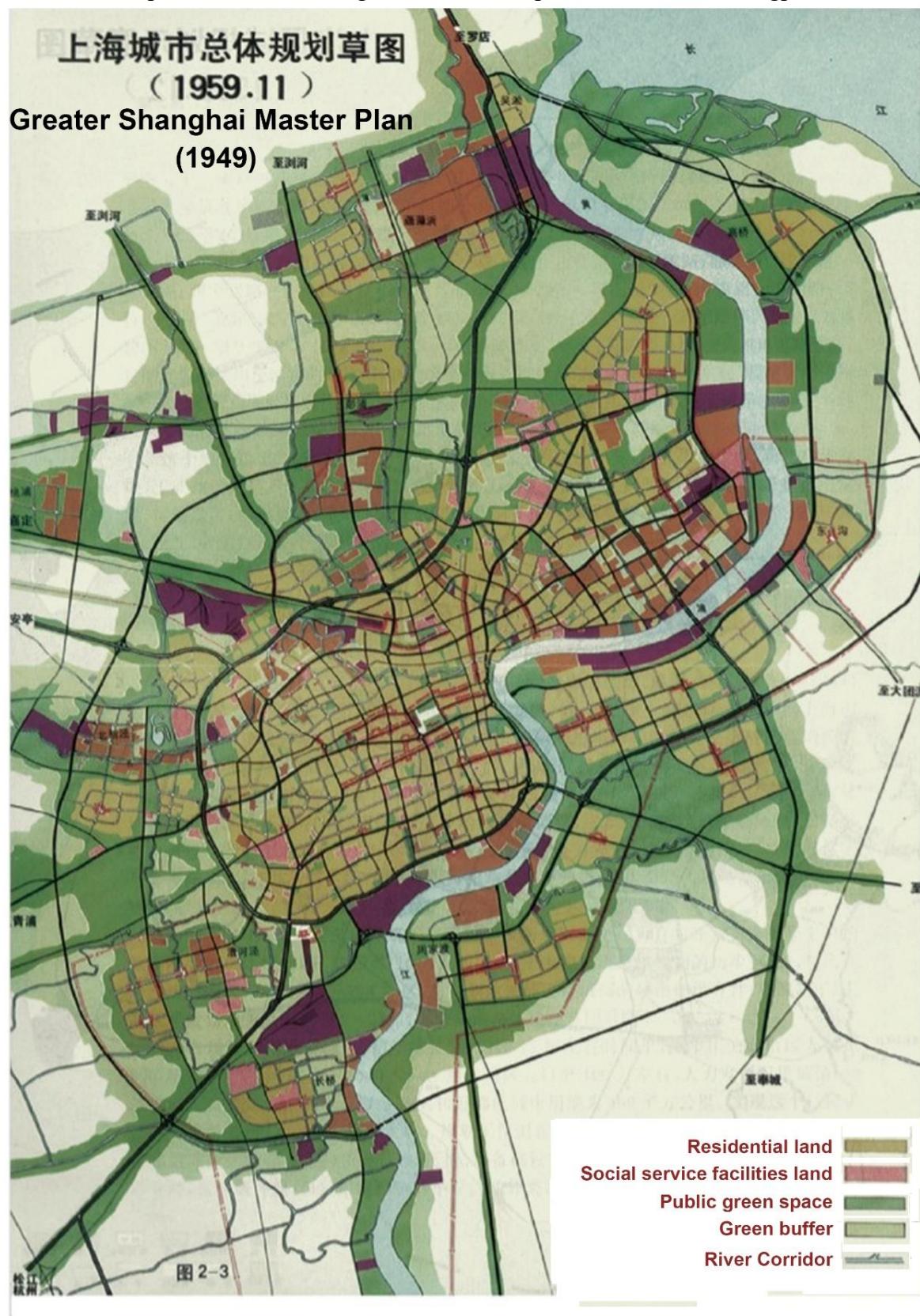
Figure 6.3: The Greater Shanghai Master Plan of 1959
(Source from: Shanghai Municipal Commission of Urban Planning, 1959)

6.2.2.4   Shanghai Urban Plan of 1986

In the early 1980s, Shanghai entered a new phase of social and economic development. The role of Shanghai was changed to 'economic restructuring and revitalization of the economy in Shanghai', thereby moving from an internally-focused city centre to an export-oriented economic city (The Shanghai Urban Planning Design and Research Institute, 2007). During the period 1979 to 1982, the government organized the compilation of the schema for *Shanghai Urban Comprehensive Planning* and started to compile *Shanghai Urban Comprehensive Planning*. The Plan was officially reported to the Party Central Committee and the State Council in 1984. The secretariat of the Central Committee organized a discussion on *Shanghai Urban Comprehensive Planning* and the State Council officially approved it in October 1986.

The Plan (**Figure 6.4**) in 1986 was the first comprehensive urban plan which was approved by the government and had legal properties in the history of Shanghai urban development. It laid an important foundation for the urban construction and development of Shanghai. The Plan in 1986 identified an assumption on city layout to transform and establish a central city and to develop PuDong new district (**Figure 6.5**). The construction of the central city would adopt a multi-cored layout with green wedges, gradually establishing comprehensive subareas which were suitable for various activities, including housing, work and entertainment (Shanghai City Planning Commission, 1959). These subareas would have green plants and open spaces. The satellite towns should be completed and developed, systematically stretching to the north bank of Hangzhou Bay and the south bank of the Yangtze Delta and establishing small towns of the neighbouring cities. Through these efforts, Shanghai would become a Socialist modernized city whose central city was dominant; whose suburban towns were relatively independent; whose central city and suburban towns were organically connected and combined. The implementation of the Plan brought great development to the society, economy and urban construction of Shanghai as well as profound changes in its urban appearance, which laid the material foundation and basic framework for its march into the 21st century.

上海市城市总体规划图
Shanghai Master Plan in 1986

Public green space
Residential Land
Public service facilities
River Corridor

0 1 2 4   6   8   10 12 14 16 18 20 (KM)
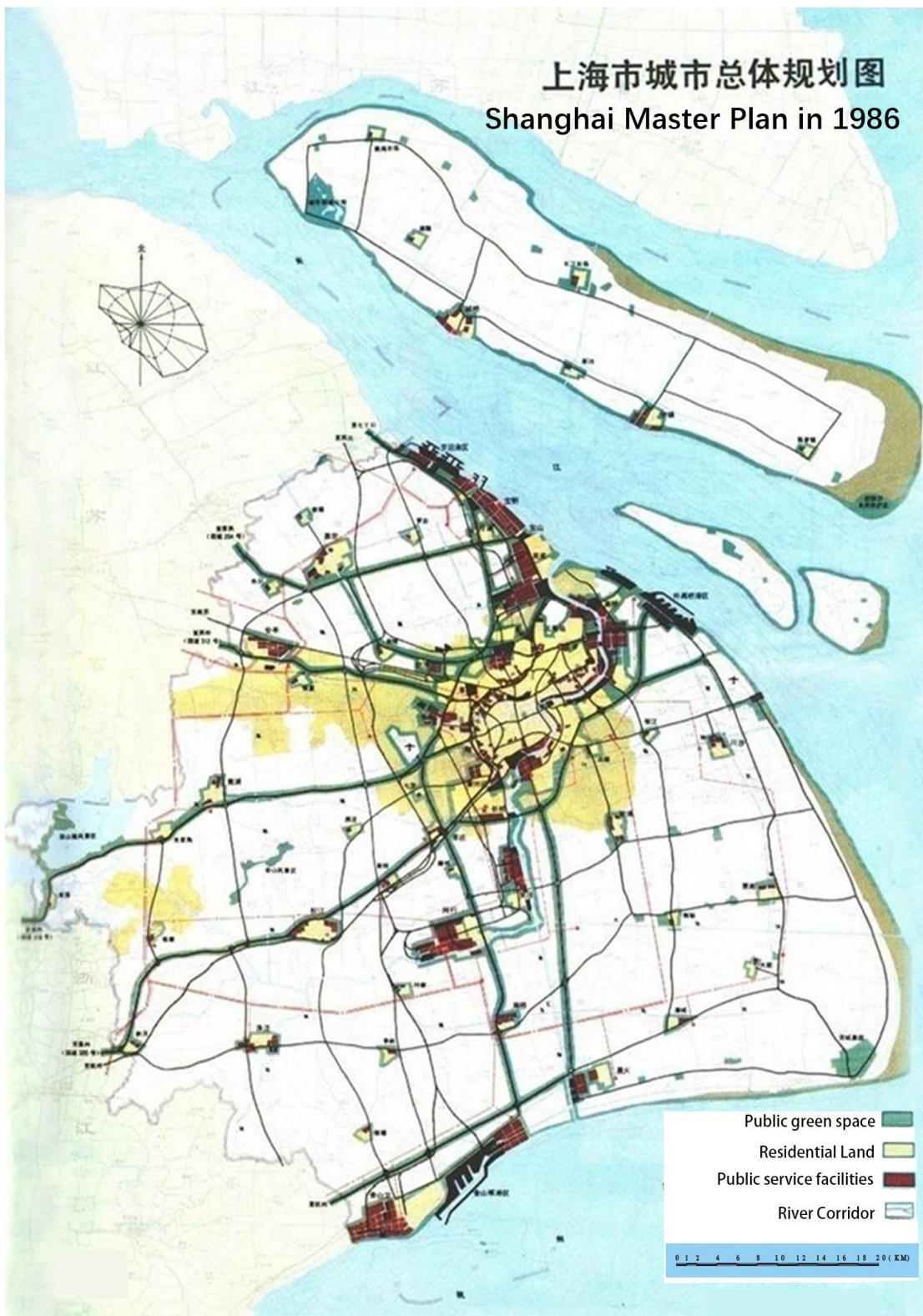
Figure 6.4: The Master Plan of Shanghai of 1986
(Source from: Shanghai Municipal Commission of Urban Planning, 1986
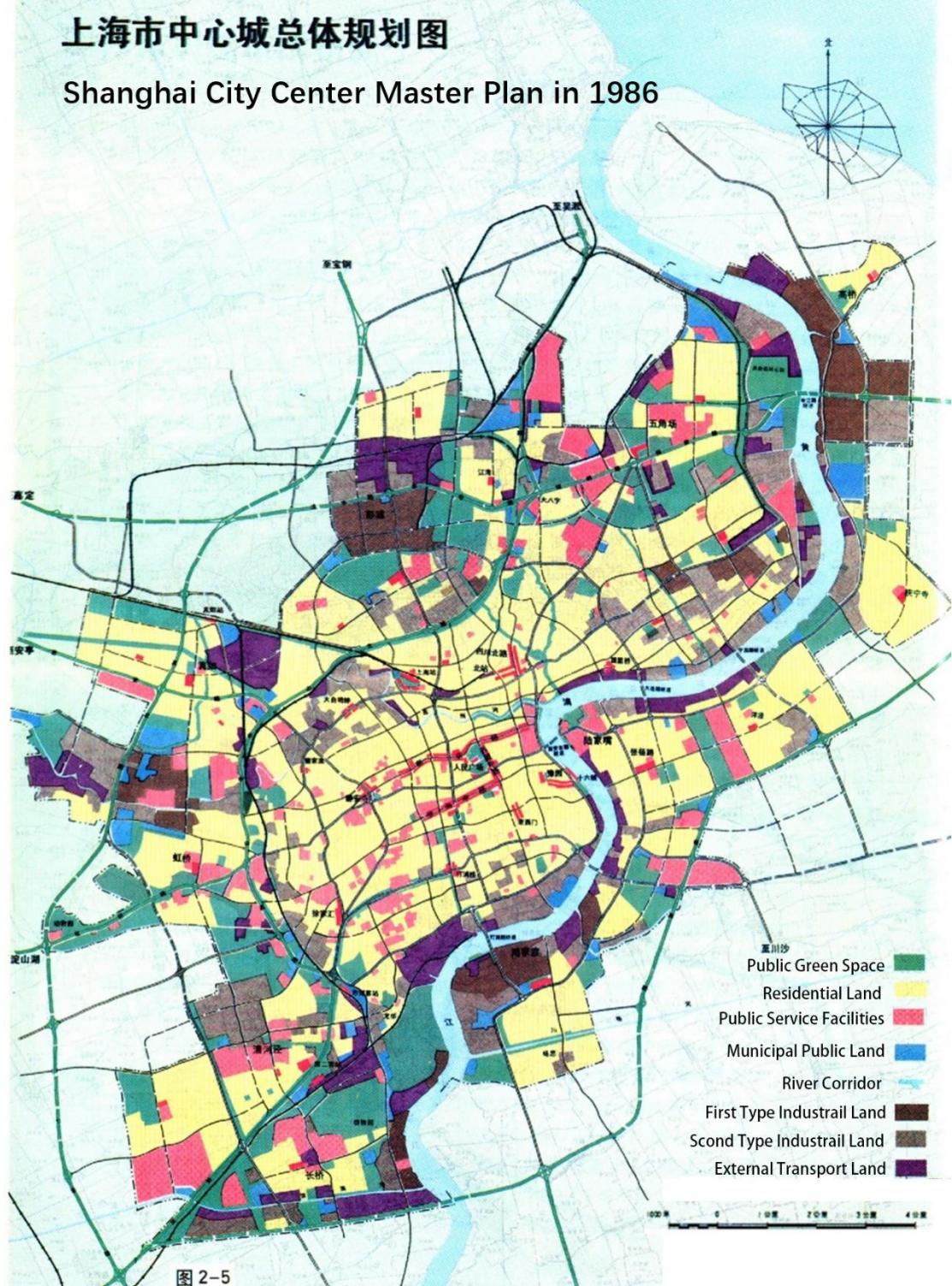
Figure 6.5: Shanghai City Centre Master Plan of 1986
(Source from: Shanghai Municipal Commission of Urban Planning, 1986)

6.2.2.5 *Shanghai Urban Comprehensive Planning (1999-2020)*

In Oct 1994, the 4th Urban Planning Work Conference suggested modifying and completing the *Shanghai Urban Comprehensive Planning* and to construct a new blueprint for the 21st century. Meanwhile, The Consultation and Exhibition of Shanghai Urban Comprehensive Planning in the 21st Century was held. The compilation of *Shanghai Urban Comprehensive Planning (1999-2000)* (**Figure 6.6**) was finished and reported to the State Council in 1999 and approved in May 2001. The Party Central Committee further determined the strategic goals for Shanghai's urban development and proposed to develop and open PuDong district as a leading example for the development of future cities along the Yangtze River. To establish Shanghai as an international economic, financial and trade centre; and to promote the economic development of the Yangtze River Delta and the regions through which the Yangtze River flows, the Plan suggested that the urban development of Shanghai should be developed from the "Pujiang Era" to the "Yangtze Era". The Plan also suggested the development of the riverside and coastal development axis based on the traditional Shanghai-Ningbo and Shanghai-Hangzhou development axis. In addition, the Plan also emphasised the further enhancement of the functional development and image of PuDong new districts (**Figure 6.7**), which concentrated construction of new cities and central towns, and on developing Chongming as the strategic space for sustainable development in Shanghai in the 21st century.

The Comprehensive Plan in 2001 had five characteristics. The first was to coordinate productivity, layout and major infrastructure construction in accordance with the three-level developmental requirements of central cities and Yangtze River Delta cities whose centre is Shanghai. The second characteristic was to determine a city layout system of multi-levels, multi-cores with multi-axes and the four-level town system of the central city; new city; central town; ordinary town. The main function of the central city was to complete functions, reflect prosperity, keep to the multi-core structure with green wedges, establish a one-main-and-four-auxiliary public activity centre layout and construct a green network whose basic framework was rings, wedges, galleries and gardens. Suburbs could enhance development and reflect comprehensive economic powers. The third characteristic was to organically combine city space planning with economic, social and

environmental development planning, to further improve the comprehensive functions of an economic central city. The fourth characteristic was to establish a new urban image for Shanghai and enhance its sustainable development mainly through environmental construction. The fifth characteristic was to protect traditional buildings and communities which could reflect the cultures and histories of Shanghai and showcase profound traditional cultures of modern architecture in Shanghai. These characteristics corresponded to the overall development trend of Shanghai and could be compatible with Shanghai's modernized metropolitan development. Thus, the Plan was a crucial legal document regarding Shanghai urban construction in the 21st century.

Shanghai is a famous historical and cultural city. Through strengthening the design, beautifying the layout of the city and appropriately dealing with the relationship between protection and development, Shanghai could be built as an international, modernized, metropolitan city with rich local and distinctive characteristics. With the core purposes of developing a residential environment with life-enhancing service facilities, housing development focuses on a relatively compact construction of residences in both new and old districts whilst protecting architectural features which were worth protecting, such as garden houses, apartments, new lanes, old lanes and other historic buildings of the old district in the central city, which in total covered an area of about 80km^2.

With the development trend of residence commercialization, the structure of residential construction was adjusted, displaying diversification and selectivity. Thus, requirements for a variety of residences were all satisfied. The construction of high buildings was strictly controlled and residences were generally equipped with basic rooms, including kitchens, sitting rooms, bedrooms and so on. The average residential space in the central city was 15m^2 and residential areas were increased by about 85km^2. The construction standard and environmental qualities of residences in suburban towns, compared with those in the central city, should accessed. In accordance with the principles of the trend towards urban development, high-capacity railway transportation and infrastructure construction, the layout of residential construction should focus on constructing about 20 large-scale residential communities in the inner and outer rings. In addition, afforested

landscape planning should stress afforestation, which can significantly improve the urban environmental qualities. The Plan also strengthened the design of the city, protected urban traditional cultures and improved urban landscapes, so as to generally form a harmonious ecological environment for both human beings and nature. The Plan aimed to achieve an afforestation rate of above 35% and public green space of 10m² *per capita*.

Figure 6.6: The Master plan of Shanghai of 1999
(Source from: Shanghai Municipal Commission of Urban Planning, 1999)

上海市中心城总体规划图
Shanghai City Centre Master Plan in 1999

Commercial service land		Particular land	
Public facilities land		Public green space	
Residential land		Ecological sensitive area	
Industrial land		Warehouse land	
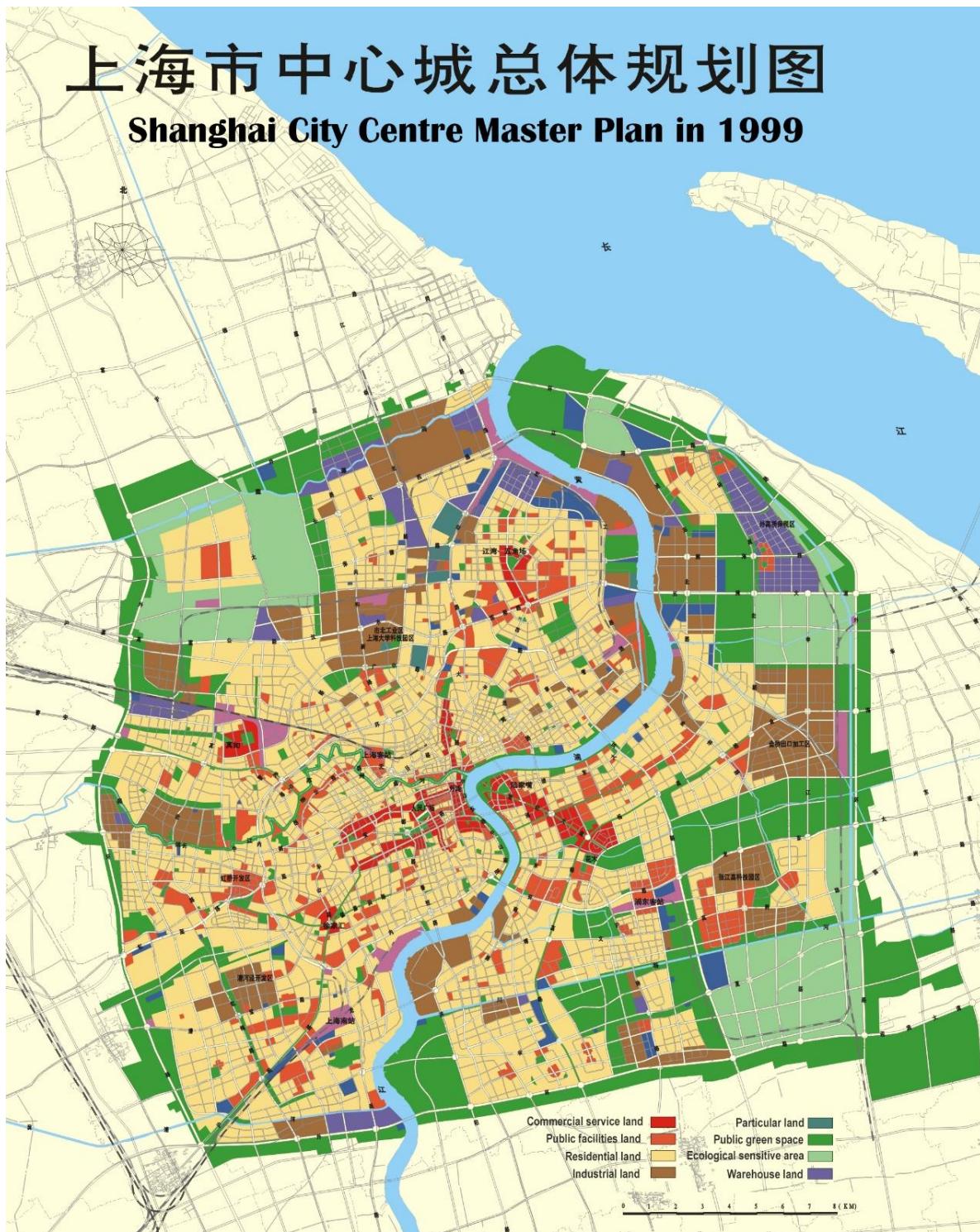
Figure 6.7: Shanghai City Centre Master Plan of 1999
(Source from: Shanghai Municipal Commission of Urban Planning, 1999)

6.2.2.6   *Outline of Shanghai Master Plan (2015-2040)*

At the beginning of 2016, the new *Outline of Shanghai Master Plan 2015-2040* was proposed by the Shanghai Municipal Planning and Land Resources Bureau. The vision of Shanghai city is 'to strive for excellence among global cities, and strive to build a more competitive prosperous city of innovation, health and well-being with a more sustainable green development capacity; and strive to become a culturally attractive city of happiness and humanity' (Leading Group Office of Shanghai Master Plan, 2015). This was based on the foundation of the former *Shanghai Urban Comprehensive Plan in 1999* and *the Future Urban Development Strategy Research* and on the realistic development of Shanghai. Meanwhile, the theories and methodologies for the plan are learnt from and influenced by the international experience of the city. Overall, its key focus characteristic can be summarised as a transformation of urban development to emphasize land-use optimization, mixed spatial use and nourishing a green and low-carbon ecological environment in order to improve the quality of the city and shape the city's spirit (Outline of Shanghai Master Plan, 2015).

Shanghai reached a permanent population of 24.25 million people and more than 3,100km^2 of land for construction purposes in 2014 - more than three times the plan of 1949. Thus, as the population continues to grow and the resource environment is limited, the challenges to the ecological and environment resource and quality in the city grow. Consequently, Outline 2015 is an important part of the process of creating a new round of overall urban planning achievement.

6.2.3   Policy development for a landscape design/green space system in China

An urban green space system is a crucial component of an urban system. A green space system planned in an overall manner is an interpretation of a natural system, represented by the greenbelt surrounding urban areas (Li, 2002). By applying ecological principles, the greenbelt optimizes the spatial layout and structure of a city, thus being conducive to the construction of an eco-environment. It represents the coordination of artificial, manmade structures and nature and supports the reduction of damage imposed by urbanization on the environment for the sake of city beautification （Li, 2001 and Che, 2003）. Despite the rapid development and construction enjoyed by Chinese cities, traditional domestic greenbelt research generally focuses only on acreage targets and service radius, which renders green space construction insignificant to urban development.

 The history of the development of the green space system in modern cities can be divided into three stages: the first stage is to build the greenbelt through the renewal of traditional cities; during the second stage, new cities, with an awareness of the importance of green fields, led to plans for a green space system prior to their construction or during the process of their growth (Xu, 2002 and Cheng, 1993). Such a pattern, which was often seen in the newly-built cities in the U.S., requires that green space should be developed at the same pace as urban construction (Li, 2002). The second half of the 20th century saw the third stage during which the development of ecology, geography and information science afforded new theories and methodologies for surveying and planning the greenbelt.

6.2.3.1   The first stage of urban green space development in China (1868-1979)

In 1868, the first city park of modern China, which was not open to Chinese until 1928, emerged in the Bund of Shanghai. Given a backward economy and years of war, there were only a few city parks in some big or coastal cities in China during the eighty-one years from 1868 to 1949, exemplified by the Central Park of Beijing, the Qinhuai Park of Nanjing, the Huangpu Park of Shanghai, and the Zhongshan Park of Xiamen. When

the People's Republic of China was founded in 1949, with its national economy still in recovery, there was a high density of urban population and poor infrastructure, and insufficient urban greenbelt. During the first five-year plan (1953-1957), the planning of new cities explicitly provided a complete concept of a green space system, followed by the initiation of large-scale urban greenbelt construction in many cities. Back then, the primary principle and task of the urban landscape was to popularize tree planting, increase urban green space and improve urban microclimates. In 1958, the central government put forward the policy of gardenizing urban areas to 'combine greening with production' (Liu, 1999). Meanwhile, drawing on the pattern of the former Soviet Union, China emphasized the recreational function of the urban greenbelt with regard to the planning and layout of the green space system. However, the construction of such a system suffered serious setbacks during the ten years of the Cultural Revolution.

6.2.3.2 *The second stage of urban green space development (1980-1999)*

In the late 1980s, China began to learn from the U.S. in planning for green space systems and thus gave greater priority to the landscape function and ecological efficiency of the greenbelt. In 1986, the Conference on Urban Green Space System, Plant Landscaping and Urban Ecology was held by the Chinese Society of Landscape Architecture in Wenzhou and came up with the concept of an ecological garden. During that symposium, it was also noted that research on a green space system should be carried out to explore ecological gardens with a view to environmental protection and the maintenance of an eco-balance (Li, 2002). In 1981, Professor Ma Shijun put forward the theory of a complex ecosystem integrating social, economic and natural factors. He pointed out that nature was the foundation of the entire society and economy, as well as the foundation of the entire complex eco-system, and advocated the building of a new eco-city (Cao, 2001). It was as early as 1990 that Qian Xuesen, a renowned Chinese scholar, proposed the building of Shan-shui cities (i.e. cities of mountains and water), for the sake of which he recommended a full use of the natural conditions of urban areas and a combination of urban gardens and forests. Some coastal cities in China began to spontaneously build a garden city or a forest city as their greenbelt development goal. Shanghai was an example.

The Municipal Construction Committee of Shanghai launched a project on the research and construction of ecological gardens. Based on the theories of ecology, landscape ecology and ecological economics, it suggested that large-scale afforestation should be carried out in both urban and rural areas in light of the features of traditional Chinese gardens. It was also suggested that afforestation should be closely tied to the strategic target of improving the eco-environment, which helps to build an ecological garden system ranging from green points, green lines, green surfaces and greenbelts to green networks and stretches of green land (Cheng, 1993).

In the early 1990s, China probed further into the construction of an ecological city. The introduction of the eco-city concept promoted the transformation of urban green space system research from concentrating on urban landscaping into focusing on a complex ecological greenbelt incorporating ecological, social and economic elements. It was advised that the construction of ecological infrastructure should underpin the sustainable development of urban areas, including the urban green space system, forestry, the agriculture system, nature protection system and cultural heritage network, which are able to offer fresh air, food, sports, recreation, safety shelters, aesthetics and education as well as other ecological services and functions. According to Chen (1993), an ecological garden, within an inherent ecological garden system, offers landscape, diversity, economic efficiency and combination. The thinking and theories of the eco-garden enlightened some urban designs in the 1990s and exerted a positive influence on cities such as Beijing, Chongqing, Zhongshan and Shenzhen.

The Law on Urban Planning, enacted in 1990, states that the planning of urban areas should take into account the planning of a green space system. The Standard for Classification of Urban Green Space, promulgated by the State Council in 1992, also points out that municipal governments should organize administration departments for urban planning and urban landscape to jointly draw up plans for urban afforestation and make appropriate arrangements for the development of a greenbelt in public and residential areas, green areas for environmental protection, ecological landscapes and scenic forest land. In 1998, when the standards regarding the comprehensive

improvement of the environment and green space in urban areas were fulfilled, the Ministry of Construction (MOC) formulated, based on the policy of building advanced greening cities nationwide, the Evaluation Standards (Draft) of a National Garden City (Ministry of Construction, 1992). As a result, governments of various cities all targeted the construction of garden cities, which therefore promoted the building and design of urban green space and eco-environments in China (Liu and Yang, 2010).

The late 1990s witnessed the introduction of thinking on turning the land green with parks and woods. This project, from the perspective of regional and national landscape planning, covered urban agriculture, urban forestry, natural parks and other open space. Jiang and Peng (2003) of the Chinese Academy of Forestry advised that a forest ecology network system should be built in both urban and rural areas given the harmonious co-existence of cities and forest (Che, 2003). They further pointed out that, with urban areas as the starting point, efforts should be made to build forest corridors on the foundation of forest and water networks, which pass through ecological core areas composed mainly of woodland, and further construct an urban forest network system that is able to meet the requirements of urban environmental preservation, ecological connection and protection, and bio-diversity improvement.

6.2.3.3   *The third stage of urban green space development since early 2000*

In 2001, the State Council produced a notice on strengthening urban green space development, which increased the comparability of programmes for urban green space systems made by cities nationwide and made them more scientific and reasonable. In the following year, the MOC (2002) regulated in the Notice on the Outline (Draftl) of Urban Green Space System Planning, that the principal assignment of planning was to scientifically determine the targets for urban greenbelt development in various cities and properly arrange the construction of different types of urban gardens and green fields as well as the spatial layout of macro-scale green space in the entire city area. The concept of an urban greenbelt developed rather than being confined to urban and rural levels as it advocated the organisation and development of key greenbelt elements

in accordance with the ecological functions of urban, natural and artificial surroundings and for the sake of the eco-environment. Critical factors of planning were also diversified as they included not only greenbelt elements in a city but also essential ingredients of green space embedded in an entire urban area. During the same year, the MOC enforced the Standards for Classification of Urban Green Space, which indicated the standardization and normalization of urban greenbelt classification in China.

From the 1980s onwards saw the development of China's research into urban green space systems, which has become more rapid since the 1990s. Currently, the study predominantly concentrates upon fundamental theories and methodologies. Research on basic theories includes discussions on the categorization of urban green space systems. These include the introduction of the development of urban greenbelts at home and abroad; conceptual research relevant to urban green space systems, studies on interdisciplinary relationships; developments and ecological mechanisms and the efficiency of urban green space; and research into the management mechanism and policies of urban green space systems (Liu and Zhang, 2005). Study on methodologies specifically contains remote sensing analysis, the application of computer technology, analysis of various factors related to the *status quo* and the planning of urban greenbelts, elaborations on the evaluation criteria, and the application of evaluation methods and ecological planning patterns and methods of landscaping.

At the beginning of the 21st century much of mankind pursues sustainable development, and hence, as far as China's research on urban green space systems is concerned, the country has embarked on its study of ecological green space systems in a holistic way. At the 18th National People's Congress, the central government put forth the decision to push forward the establishment of an ecological civilization system, set up a more sound mechanism for spatial development, resource conservation and the eco-environmental protection of the homeland and promote a new pattern of modernization featuring a harmonious development between man and nature. In recent years, China's study of the planning of urban green space systems, which involves four aspects -

theories, operations, evaluations and methodologies - focuses upon five popular perspectives, i.e. those of system, ecology, coordination, technology and objectives.

Accordingly, many cities have worked out successive programmes for an urban green space system. Today, China's urban green space planning systems have evolved from a prototype imitating the planning of recreational greenbelt by the former Soviet Union into a profound and multi-disciplinary system based on a theoretical framework with various focuses. A study by Liu (2005) on the development of China's urban green space system over ten years (1994-2003) indicates that, firstly, research on urban green space and its system were seriously deficient, lagging far behind compared with the attention they received in society; second, the urban greenbelt, one of the ten types of land use, accounted for 30% of the total urban areas, while study on urban green fields constituted a mere 1.71% of urban studies. Further, he underlined four major problems in China's research into urban green space systems, that is, relevant studies fell far behind actual development; theories were relatively superficial; research was not systemic enough and quantification was insufficient. Specifically, programme designers and architects, on the one hand, paid undue attention to the beautification and decoration of the unban greenbelt and its landscape functions whilst, on the other hand, overlooking its ecological value. Consequently, some counterfeit greenbelt projects were built, spoiling the original natural eco-environment instead of improving it.

There were some papers that gave introductions to examples of urban green space system planning, in which the planning mainly worked with local characteristics. Notwithstanding the fruitful findings, the programmes, in general, were not unified in terms of their content and short of rigorous requirements for their depth (Li, 2002). Following the study of Liu (2005), the design of urban green space system plans have been incrementally improved and become more systematic with the increased emphasis on environmental issues. Overall, prior to the reform and opening up, the development of urban green space theories in China had lagged behind and merely modest progress had been made in its construction (Che, 2003); however, with the introduction of progressive foreign ideologies and the emergence of research institutions, the

theoretical studies in this field have delivered remarkable achievements, bringing to the fore a new situation with vigorous development momentum.

6.3 Characteristics of the five case-study sites

This part of the chapter describes the characteristics of the chosen case study sites. It provides an introduction to the history, social-demographic and urban contexts in the selected sub-districts and details information about urban form, physical characteristics, and housing and green space types in the five case-study neighbourhoods. The general background and characteristics of each sub-district are described first, followed by the profiles of the five case-study sites, based on analysis of each neighbourhood's layout, a site survey capturing information about the house/building characteristics and green space types, and an interview survey providing information about the household backgrounds, behaviour, understanding of nature, feelings about the space and the use of open/green space. **Table 6.2** shows the overview of the physical characteristics of the five case-study sites.

Table 6.2: Overview of the Physical Characteristics of the Five Case-study Sites

Housing types	Urban Form/Context	
Historic Chinese (HuaihaiZhonglu Sub-district)	Population	98,789
	Density	69,504 per/km²
	Land area	1.41 km²
	Land-use	55% is covered by residential area, 35% of the area is commercial and retail 4% by social service facilities and 6% is green space
	Layout	Compact, with traditional lilong criss-crossing form.
	Housing characteristics	Chinese shikumen (houses-in-lanes), mix high-rise and 4-7 story state buildings, non-residential buildings
	Typology of greenspace	G1 public park, G15 street greens, G41 green space attached to housing estates, G42 Civic green space, G46 Green space attached to urban roads and squares
Colonial housing (Ruijinlu Sub-district)	Population	89,000
	Density	44,949 per/km²
	Land area	1.98 km²
	Land-use	60% is covered by residential area, 20% of the area is commercial and retail

		9% by social service facilities and 11% is green space
	Layout	Compact, irregular form
	Housing characteristics	French concession housing including garden villas and town houses, garden apartments; mix high-rise and 4-7 story state buildings, non-residential buildings
	Typology of greenspace	G1 public park, G15 street greens, G41 green space attached to housing estates, G42 Civic green space, G46 Green space attached to urban roads and squares
Traditional working class housing (Yuyuan Sub-district)	Population	101,937
	Density	86,387 per/km²
	Land area	1.18 km²
	Land-use	65% is covered by residential area, 25% of the area is commercial and retail 3% by social service facilities and 7% is green space
	Layout	Deformed compact grid
	Housing characteristics	Traditional working class housing with 2-3 stories; Historic Chinese housing with classical private garden; High-rise housing and non- residential buildings
	Typology of greenspace	G1 public park, G15 street greens, G41 green space attached to housing estates, G42 Civic green space, G46 Green space attached to urban roads and squares
State built housing (BansongYuan Sub-district)	Population	10,200
	Density	35,600 per/km²
	Land area	2.87 km²
	Land-use	75% is covered by residential area, 5% of the area is commercial and retail 4% by social service facilities and 6% is green space
	Layout	Compact, residential area grid form
	Housing characteristics	Including both low- and high-rise state housing (from different decades of urban development 1970s-1990s)
	Typology of greenspace	G1 public park, G15 street greens, G41 green space attached to housing estates, G46 Green space attached to urban roads and squares
High-rise private housing (NanjingDonglu Sub-district)	Population	120,000
	Density	49,793 per/km²
	Land area	2.4 km²
	Land-use	40% is covered by residential area, 32% of the area is commercial and retail

		8% by social service facilities and 20% is green space
	Layout	Compact, regular form
	Housing characteristics	High-rise housing (gated communities), 4-7 story state housing, non-residential buildings
	Typology of greenspace	G1 public park, G15 street greens, G41 green space attached to housing estates, G42 Civic green space, G46 Green space attached to urban roads and squares

To examine relationships between the housing and green space in a spatial setting, a range of information was collected about the case study sub-districts (see **Figure 6.8**). The urban form/context provides a description of the characteristics of the housing and the built environment within which they live. The following sections provide more information about the sample of each case study site, which investigated the physical features of the different housing and green space of this case study site in a more detailed study of these five case-study site/neighbourhoods. It focuses on each sub-district with:

- Site location and context.
- Spatial characteristics of the case study sites/neighbourhoods, i.e. layout of the neighbourhoods, housing types and green space, use of open/green space.
- Social characteristics such as age, gender and job.
- Household characteristics including household size and composition, tenure (70 years).
- Residential turnover, indicated by length of residence and residents' perceptions of the quality of the neighbourhood.
- Features of the built environment in the study sites and the sample character of the neighbourhood.

This general profile data of the case study sites/neighbourhoods is taken from the official sub-district website, i.e. the population, density, land area data of each district, from the Census Statistics of Shanghai. The general physical characteristics of the five case-study sites are provided by in-depth interviews with households, and also observation of the physical characteristics of the sites, using photos and maps produced by a site survey in a diverse range of urban sub-districts/neighbourhoods/sites.

土地使用规划图
Land Use Planning

Figure 6.8: Five case-study sites in Huangpu District, Shanghai

6.3.1   Case study 1) Historic Chinese -- (HuaihaiZhonglu Sub-district)

6.3.1.1   Location and background

The HuaihaiZhonglu sub-district is located in the north-east of the former Luwan district, with 19 neighbourhood committees (*jiweihui*) and a *Xintiandi* social work station. The boundaries of this sub-district are from east Tibet south road to west Chongqing south road; from south Jianguo east road to north Jinling east road, the region has a total area of 1.41km^2. It has a registered population of 98,798 people, while the actual population is 115,032 (Shanghai Statistics Bureau, 2014). The population density of HuaihaiZhoulu sub-district reached 69,504 people per km^2, which is one of the most densely populated areas of Shanghai.

The sub-district of HuaihaiZhoulu has been successively classified as the French concession since 1900 (Qing Dynasty) and 1914 (the Republic of China 1912-1949); during the 20-30s, the population of the concession grew rapidly and the price of land increased suddenly, so a large number of old houses were turned over to lane houses (*lilong*) and high building apartments, like the famous *Shijumen* architecture were identified as protected buildings as well as being known as the *Shideli* housing which is the site of the first national congress of the Chinese Communist Party. After 1990, this has been completely rebuilt to form a high-grade commercial area and has become a modern fashionable landmark of Shanghai. It is also the political and cultural centre with senior/rich residents, including wealthy businessmen, freelancers, intellectuals, retired politicians and warlords, and foreigners, living in a highly elegant environment.

The selected HC case study site, *Xichengli* from HuaihaiZhoulu sub-district, is a concentrated residential area comparable with Shikumen, and the old style living quarter's area which consists mainly of "*lilong*" historic Chinese neighbourhoods known as a "municipal civilized neighbourhood" within Shanghai. Moreover, the neighbourhoods range from a more compact form with a criss-crossing layout to a mix of new and secondary old style *lilong* residential housing. There are also different types of green space to improve the urban ecological environment, including the G1 public

park - Huaihia Park - Taiping Lake Park, Fuxin Park and green space attached to urban roads and squares (see **Figure 6.9**).

6.3.1.2 *Features of the built environment*

The *Xichengli* is bounded by the Madang road to the east, middle Fuxing road on the south, Danshui road to the west and Zizhong road on the north, thus the whole region forms a square shape. This area includes 40 neighbourhoods at its most disaggregated street level, which a total of approximately 1,756 households and a registered population of 5,754, but the data from the 2014 Census show only 3,452 residents living in this area with 1,646 elderly people and 86 disabled people.

Table 6.3: Characteristics of household's sample in the Historic Chinese Housing

Characteristics of households (n=60)	Total sample (%)
Male	50
female	50
Age 18-29 years	8
Age 30-59 years	34
Age 60+ years	58
Employed	42
Unemployed	58
Length of time lived here 1-5 years	17
5-10 years	17
10-20 years	25
40-60 years	41
Who live with Parents	34
Child	25
Couple	33
Parents, couple and child	8
Single	

The social characteristics of households sample is shown in **Table 6.3**. This table provides a breakdown of the responses by gender, age, economic status, tenure of property and those who live within the Historic Chinese housing case study site. The age of the sample in this site has many elderly and retired people, over 58% of the sample are over 60 years, and the smallest proportion is in the 18 to 29 age group. The length of time residents have lived in this area is 41% each for residents between 40 and 60 years, and 17% each for less than 5 years and 5 to 10 years. The proportion of

people living with parents, and couples with children are spread equally, but no single people live here. The social characteristics for this area include many retired elderly households and rental. The neighbourhood committee is an active point for home-based care and neighbourhood assistance which aims to carry out a variety of activities suitable for elderly people, and to improve the basic sanitary facilities, such as kitchen installation in the old housing.

6.3.1.3 *Character of the district/neighbourhood/site*

The indicators measuring the character in a district/neighbourhood/site relate to data collected mainly by the in-depth interviews. As show in **Table 6.4** in the sample from the Historic Chinese Housing case site, households with 100% satisfaction live in this district, but for the neighbourhood/site outdoor environment only 17% and 35% are very satisfied, more than half the proportion of households quite like, and less than 20% households do not much like, this outdoor living environment. The historic Chinese housing (*shikumen*) style living quarter's area is in the old and traditional "*lilong*" neighbourhood. These houses stand in a row, while each has an open air courtyard in the Chinese tradition, but the neighbourhood/outdoor living conditions with limited open/green space are on a smaller scale, and the old houses are without modern sanitation facilities.

Table 6.4: What do you like about the outdoor living environment in the Historic Chinese Housing? (Household interview questions 5, 6, 7)

	Site outdoor	Neighbourhood	District
Like very much	35%	17%	100%
Quite like	53%	58%	-
Not much like	12%	17%	-
Not at all like	-	8%	-
Don't know	-	-	-

Table 6.5 also shows what is disliked about the outdoor living environment on this site. The proportion of household participants in the sample that dislike this district is 25% because of its high population density and poor conditions in the house, green space, local facilities and services in an old area; with 17% in total reporting high air pollution

and 8% the high volume of road traffic. Moreover, some of the sample household seemed quite confused between the environment of the neighbourhood and outdoor space, both describe their dislike for the same reason of 41% and 33% in poor provision of public open/green space, 25% with the building environment (house, pavement, access, etc.) in poor condition, 17% of the sample responded with the local facilities and services being in poor condition and lots of people coming from countryside with bad habits, such as leaving rubbish or litter lying around.

Table 6.5: What do you dislike about the living space in the Historic Chinese Housing? (Household interview questions 7, 8, 9)

Site outdoor	Total sample (%)
Poor provision of public open/green space	33
The local facilities and services in poor condition	17
The building environment (house, pavement, access, etc.) in poor condition	25
Lots of people who come from the countryside have bad habits (Rubbish or litter lying around)	25
Neighborhood	
Poor provision of public open/green space	41
The local facilities and services in poor condition	17
The building environment (house, pavement, access, etc.) in poor condition	25
Lots of people coming from the countryside have bad habits (Rubbish or litter lying around)	17
District	
High population density and high volume of road traffic	8
High population density and poor conditions in the house	25
High population density and poor conditions in the green space	25
High population density and high air pollution	17
The local facilities and services are in poor condition (old area)	25

6.3.1.4   Open/green space in the sample

The sample site has extensive green space and recently developed public parks in the HuaihaiZhoulu sub-district. The respondents in the sample will be a focus of the research to understand which of the open/green spaces are used most by residents, how often and what they do. **Table 6.6** shows that half of household respondents used Fuxin Park most. This was laid out by the French in 1909 and was once the largest park in Shanghai (Pitts, 2013). A further 25% of local households use Taipingqiao Park most

and 17% Xintiandi Park. Only 8% of the respondents use the newly developed public green space is Yanzhong Park.

Table 6.6: Use of Open/Green Space in Site

Which open/green space do you use most	Total sample (%)
Fuxing park	50
Xintiandi park	17
Taipingqiao park	25
Yanzhong green space	8
How often	
At least once a week	25
Everyday/most day	59
During weekends	8
Pass by/free time	8
How travel	
By walking	100
By bicycle	-
By public transport	-
What do you do	
Exercise (walking/running/dancing)	59
Play chess/cards, meeting friends	8
Relax/enjoy sunshine or nature	25
Taking children to play	8

Table 6.6 also shows the proportions of the sample who reported scores on the indicators measuring use of open/green spaces in the site sample. The table indicates that 100% of the households walk to the open/green space, and 59% go there most days. A quarter of the respondents go to open/green spaces at least once a week, but only 8% of the sample reported just 'pass by/free time' during weekends. The majority (59%) of the respondents in the sample go to do exercise, such as walking/running/dancing in the park, 25% reported relaxing/enjoying sunshine or nature with the outdoor spaces, and also 8% go there to play chess/cards with friends while some parents or grandparents take children to play.
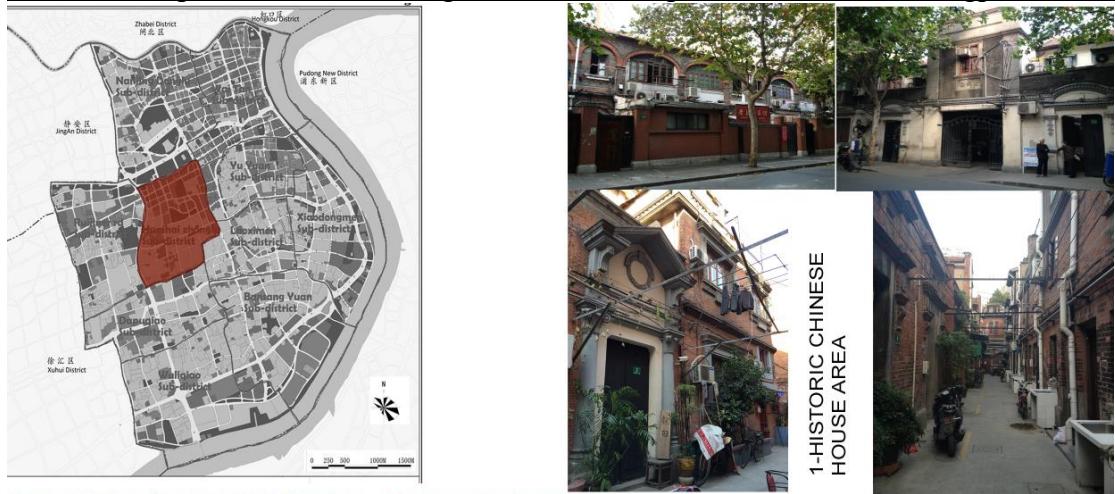
Case Study 1) Historic Chinese -- houses-in-lanes
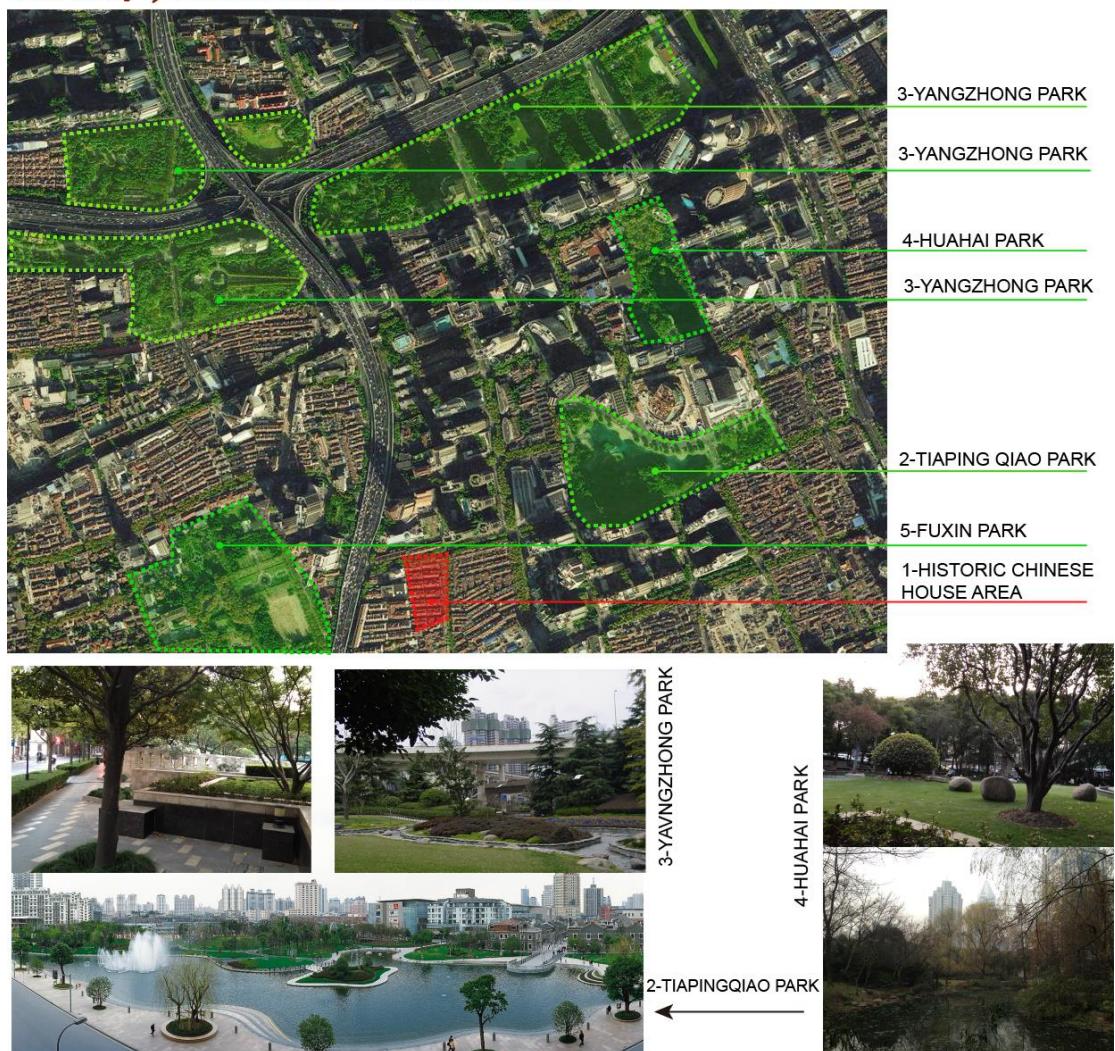
Figure 6.9: Historic Chinese-houses-in-lanes area in Huangpu District, Shanghai

6.3.2 Case study 2) Colonial housing – including garden villas and town houses garden apartments (Ruijinlu Sub-district)

6.3.2.1 Location and background

The Ruijinlu Sub-district is located in the west of Huangpu district, the administrative region runs to Chongqing south road in the east, south to Jianguo middle road and west road, west to Shaanxi south road and north to Yanan middle road and Jinling west road (see Figure 6.10). The total area of Ruijinlu covers 1.98km^2 and has a population of 89,000. The population density is 44,949 per km^2. The jurisdiction has 16 neighbourhood committees. Ruijinlu sub-district has a rich history and culture with rich human resources and a number of influential people who have worked and lived here in Chinese history, such as Sun Yat-sen and Zhou Enlai. The public infrastructure of Ruijinlu sub-district was comprehensive with a high condition of local facilities and services, including two universities, 10 secondary schools, 11 primary schools; the renowned Shanghai Ruijin Hospital; Sun Yat-sen's former residence, Zhou's residence, the Communist Youth League, the site of 'the first congress' memorial and other patriotic education locations. The district children's palace, the district library and other youth activities are also located here.

Ruijinlu sub-district was in the French Concession after 1914, with the provision of roads and rebuilding for the rapid growth of the concession's population. The northern and central regions are formed of a group of various types of housing styles, including garden villas and town house garden apartments, and a new and old *lilong* neighbourhood, as well as the *Cite Bourbobne* forming the entire group of *Shikumen* housing. Moreover, Ruijinlu sub-district across the famous Huaihaizhou road boasts the shopping centre, commercial offices, and the high-quality environment of the residential area. It has become a famous scenic spot used to hold the traditional "*Lilong*-style Tour".

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6.3.2.2   Features of the built environment in the study sites and the sample

The colonial housing case site selected *Shanna Village*, originally called Avenue du Roi Albert - also known as King Albert Apartments in Ruijinlu sub-district. It is located on Yaerpei Road (now Shanxi south road) No. 151 ~ 187, and the eastern side of Shaanxi south road and the northern side of Route Lafayette (now called Fuxing middle road), east near Mayer west road (now Maoming south road) and north near Avenue Joffre (now middle Huaihai road). *Shannan village* contains modern style apartments with European-style architecture, within preserved historic buildings built in 1932 by the French Catholic Church, Cape Oi Tong. The boundary is located at the corner of the road, the terrain is quite irregular, the land area of the apartments is about 16,200m^2, and it has four layers of brick French punctate multi-story apartment houses, with a total of 128 households. The design of *Shanna Village* provides an elegant living environment with a green space area of approximately 1,600m^2. Before the liberation, residents were mostly dignitaries, aliens and church staff. Even now, although the houses are a bit old, it is still Shanghai's leading boutique and residential district and an example of upscale living.

Table 6.7: Characteristics of the households sample in the Colonial Housing

Characteristics of households (n=60)	Total sample (%)
Male	50
female	50
Age 18-29 years	17
Age 30-59 years	58
Age 60+ years	25
Employed	67
Unemployed	33
Length of time lived here 1-5 years	-
5-10 years	17
10-20 years	41
40-60 years	42
Who live with Parents	34
Child	42
Couple	8
Parents, couple and child	8
Single	8

Table 6.7 provides some characteristics of the household sample and shows the proportion of respondents from the household in-depth interview survey. The age of the sample in this site is mainly 58% with 30 to 59 years old and the small proportion (17%) aged between 18 and 29. This indicates that just 25% of the sample is over 60 years old. Of the residents who live in the Colonial housing 41% had lived there for 10-20 years and 42% for between 40 and 60 years, [almost their whole life]. The length of time residents have lived in this area showed that only 17% had done so for 5-10 years, and no one for between 1-5 years. This table also shows that the majority of residents were employed (67%) and 33% of the sample had retired. This shows that the proportion of residents living with children (42%) and parents (34%) while living as a couple, as parents, couple with a child, and single were all the same at about 8%.

6.3.2.3 *Character of the district/neighbourhood/site*

Table 6.8: What do you like about the space to live in the Colonial housing (Household interview questions 5, 6, 7)

	Site outdoor	Neighbourhood	District
Very like	33%	25%	92%
Quite like	42%	50%	8-
Not very like	25%	25%	-
Not at all like	-	-	-
Don't know	-	-	-

Table 6.8 shows the proportions of responses from households in the Colonial housing site who described their district/neighbourhood by mentioning their satisfaction with the built environment, It shows that 92% expressed their satisfaction with their district as 'like very much' while 8% said that they 'quite liked' it. Over 50% and 42% of the sample expressed their satisfaction with their neighbourhood and site outdoor as 'quite like', and that 25% and 33% liked their neighbourhood and site outdoor environment 'very much', only 25% of the residents did not like it very much. However, this data suggests that a majority of the households enjoyed living in the Colonial housing with the district/neighbourhood/outdoor environment, and no one did not like living there at all.

Table 6.9: What do you dislike about the space to live in the Colonial housing (Household interview questions 7, 8, 9)

Site outdoor	Total sample (%)
Poor provision of public open/green space	40
The local facilities and services in poor condition	13
The building environment (house, pavement, access, etc.) in poor condition, and	13
Lots of people who came from the countryside had bad habits	13
Not well-maintained	13
Don't know	7
Neighbourhood	
Poor provision of public open space (too much car parking)	23
The local facilities and services in poor condition	15
The building environment (house, pavement, access, etc.) in poor condition	23
Lots of people who came from the countryside had bad habits	8
Not well-maintained public/green space	23
Don't know	8
District	
High population density and high volume of road traffic	17
High population density and poor conditions in the house	17
High population density and high air pollution	33
The local facilities and services in poor condition (old area)	17
Don't know	8

Table 6.9 provides the reasons for the residents' dislike of the built environment. The largest proportion of households (40%) live in Colonial housing with a relatively poor provision of public open/green space, and equal proportion (13%) disliked the poor condition of the local facilities and services, the building environment, lots of people coming from the countryside with bad habits and the outdoor environment not being well-maintained. This also shows that a majority (33%) dislike the high population density and high air pollution in this district and 17% disliked the high population density and high volume of road traffic, the poor condition of the local facilities and services and the old houses. Only a very small proportion responded 'don't know'.

6.3.2.4 Open/green space in the sample

The extent of residents' use of open/green space in the district and neighbourhood or study site is shown in **Table 6.10**. This suggests that 59% of the sample use Fuxing Park, and that over 33% of the residents use the nearest green space in Cultural Square. The new green space at Yanzhong Park within the commercial area attracted the smallest response (8%). All residents of the sample would walk to the open/green space. A high proportion (42%) of the sample would pass by or free times to go there every weekend, a quarter of the sample go there every day/most days and at least once a week. This also shows the majority of the sample goes to the open/green space to relax or enjoy the sunshine and nature and exercise in the park. A small number of residents take children to play.

Table 6.10: Use of open/green spaces in site district

Which open/green space do you use most	Total sample (%)
Fuxing park	59
Cultural square	33
Yanzhong green space	8
How often	
At least once a week	33
Everyday/most days	25
During weekends	-
Pass by/free time	42
How travel	
By walking	100
By bicycle	-
By public transport	-
What do you do	
Exercise (walking/running/dancing)	34
Play chess/cards, meeting friends	-
Relax/enjoy sunshine or nature	58
Taking children to play	8

Case Study 2: Colonial housing
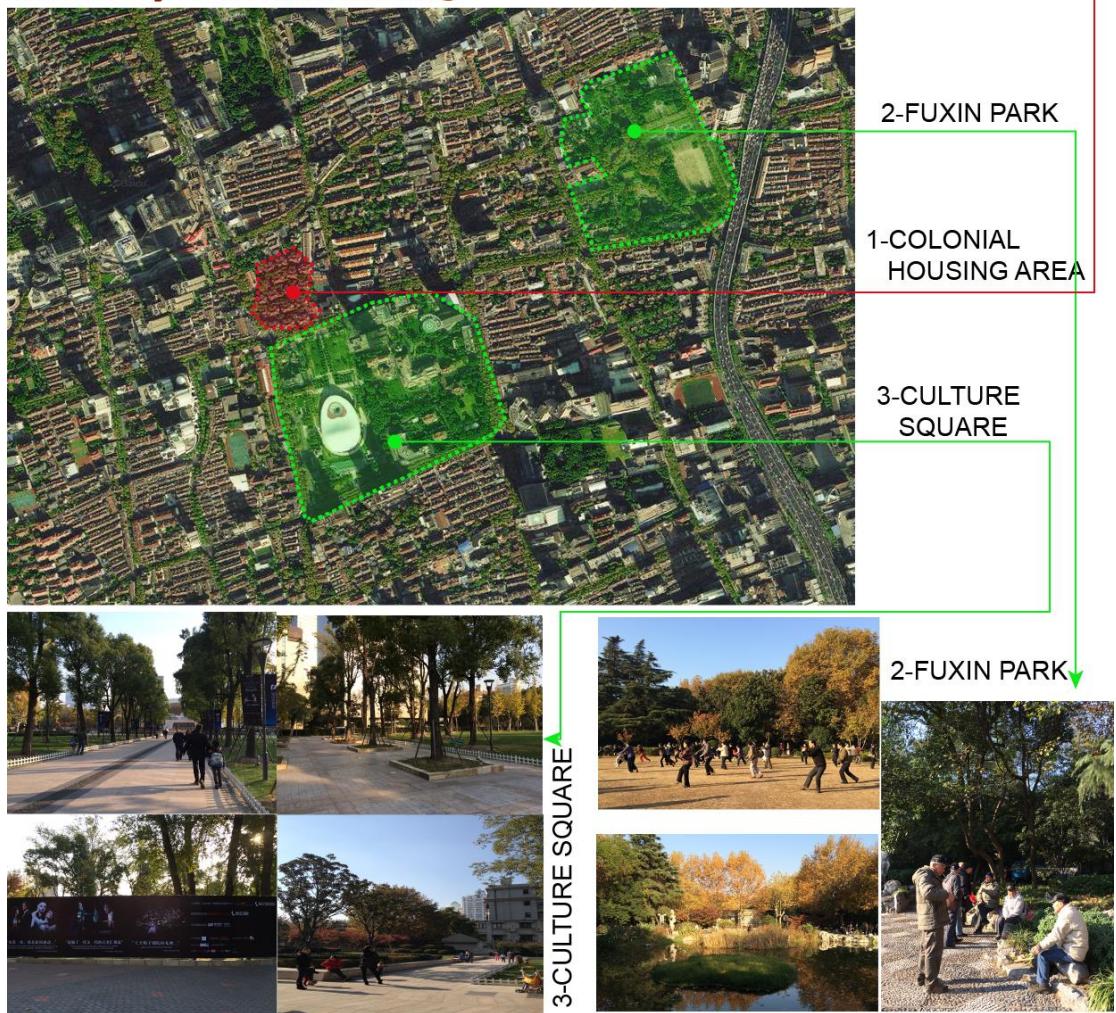
Figure 6.10: Colonial housing area in Huangpu District, Shanghai

6.3.3   Case study 3) Traditional working class housing (Yuyuan Sub-district)

6.3.3.1   Location and background

Yuyuan sub-district is located in the oldest core of Shanghai, east from Renmin Road, Sipailou Road, west to Tibet South Road, south, the beginning of Fuxing East Road, north to Renmin Road, Huaihai Road, which is an area of 1.19 km². As the old town area, Yuyuan sub-district is densely populated and there is currently a total of 29,000 households and 100,000 population by registered population. The population density is the largest in the world which is 86,387 per km².

Yuyuan sub-district is the birthplace of Shanghai and has more than 700 years of history; it has the famous Yuyuan Garden, the City God Temple and other attractions. After the liberation, the mall of the City God Temple went through a socialist transformation and constantly adjusted its commercial outlets, Yuyuan required repair and extension, the internal and external environment of the temple *via* strong regulation. The appearance of the area was increasingly improved. Especially since the 1980s, the area has gradually developed into a tourist area with the ancient city of Jiangnan landscape, which takes Yuyuan shopping mall as the centre and integrates it with financial tourism, commerce and catering. Chinese and foreign tourists come here frequently; the daily human traffic totals about 150,000 and holidays up to 200,000. Yuyuan has become an important window for Shanghai's spiritual civilization.

6.3.3.2   Features of the built environment in the study sites and the sample

The traditional working class housing case site is located in the old residential area near the Gucheng Park (see Figure 6.11). It is a typical shantytown with poor living conditions and environment, as well as old and poor housing quality, unsafe fire hazards and an incomplete basic infrastructure. The old residential area has a very high population density of migrants from the countryside and elderly Shanghainese who are poor and disadvantaged.

Table 6.11 Characteristics of the household sample in the Traditional Working Class

Characteristics of households (%)	Total sample (%)
Male	50
female	50
Age 18-29 years	16
Age 30-59 years	67
Age 60+ years	17
Employed	83
Unemployed	17
Length of time lived here 1-5 years	17
5-10 years	8
10-20 years	33
40-60 years	42
Who live with Parents	33
Child	42
Couple	-
Parents, couple and child	17
Single	8

The characteristics of the household sample in the traditional working class site related to data collected mainly by the in-depth interviews, based on a selected sample of residents who live in the traditional working class houses. The age of the sample is show in **Table 6.11**. This suggests that a small proportion of the sample was over the age of 60 (17%) and the age group 18-29 (16%) years, and that the largest proportion of the sample was between the ages of 30-59 (67%). This shows that the household participants were, on the whole, mainly employed with only 17% of the sample unemployed. The indicators also show the proportions of residents who had lived in the traditional working class housing for 10 to 40 years and for a short time, 1-5 years (17%) or 5-10 years (8%), and that a majority live with parents (33%) or a child (42%), small proportions live with parents, couple and child. Non-responders were living as single people or only a couple.

6.3.3.3 Character of the district/neighbourhood/site

The traditional working class houses site location is in the famous and oldest core of Shanghai within the Yuyuan sub-district. The indicators measuring the character in the

district, neighbourhood and site in **Table 6.12** show the satisfaction of the responses by the local households from the case site. This suggests that an equal proportion of the sample responded 'like very much' or 'quite like' the space to live in the district. However, about the space to live with the site outdoors and the neighbourhood was less liked which only a small proportion of the sample responding 'like very much' or 'quite like', and that over 59% responded 'not like much' and 25% 'not like at all' to live with the outdoor site, meanwhile, 42% of the sample responded 'not like much' and 33% 'not like at all' when asked about the neighbourhood. The phenomenon for this traditional working class house site area was satisfaction with the location in the core of the city but dissatisfaction with the poor living conditions and the environment in the old residential area.

The data relating to what people dislike about the space to live were also collected from the local households and **Table 6.13** provides the reasons and shows the scores for each site, neighbourhood and district. Over a quarter of the sample disliked the district because of the high population and high air pollution, and that the local facilities and services were in a poor condition within the old residential area. The main reasons that over 42% of the sample disliked the site and neighbourhood were the absence of public open/green space and the rubbish or litter lying around. Another small proportion disliked the low quality of the built environment and the poor condition of the local facilities and services. However, 25% of the sample answered 'don't know'. This distinguishing feature of this old residential area was the many people who had come from countryside and households with immigrant residents not the local Shanghainese. These incomers may not have enough education to totally understand the interview questions or the social-cultural background to know about this district and neighbourhood.

Table 6.12: What do you like about the space to live (Household interview questions 5, 6, 7)

	Site outdoor	Neighbourhood	District
Like very much	8%	-	50%
Quite like	8%	25%	50%-
Not like much	59%	42%	-
Not like at all	25%-	33%	-
Don't know	-	-	-

Table 6.13: What do you dislike about the space to live (Household interview questions 7, 8, 9)

Site outdoor	Total sample (%)
The building environment (house, pavement, access, etc.) in poor condition	17
Rubbish or litter lying around (not well-maintained)	41
Green space in poor condition	17
Don't know	25
Neighbourhood	
No provision of public open/green space	42
The local facilities and services in poor condition	-
The building environment (house, pavement, access, etc.) in poor condition	25
Lots of people who came from the countryside had bad habits	8
Not well-maintained public/green space	-
Don't know	25
District	
High population density and high volume of road traffic	8
High population density and poor condition in house	17
High population density and high air pollution	25
The local facilities and services in poor condition(old area)	25
Don't know	25

6.3.3.4 Open/green space in the sample

The nearest green spaces are the famous Yuyuan Garden and Gucheng Park, but there are also street greens and civic green spaces. The indicators shown in **Table 6.14** measured the most used open/green space in the neighbourhood, which was Gucheng Park with 100% of the sample preferring to go there and to walk to get there. Over a quarter of the sample would go to open/green spaces every day or most days when they pass by or have free time, and the largest proportion of residents (42%) went to the open/green spaces at least once a week with a small proportion (8%) only going during

the weekends. The majority of residents in the sample (54%) went to relax and enjoy the sunshine or nature in the park, and 31% of this sample takes children to play. Only a small proportion of the residents do exercise such as walking, running and dancing. However, Gucheng Park was opened in 2002 on 3.88 hectares adjacent to the famous Yu Gardens and Old town and provides the connection to nature and respite from this compact city for its residents to relax and exercise. It also connects the city landmarks to attract the tourists.

Table 6.14: Use of open/green spaces in site district

Which open/green space do you use most	Total sample (%)
Gucheng park	100
How often	
At least once a week	42
Everyday/most days	25
During weekends	8
Pass by/free time	25
How travel	
By walking	100
By bicycle	-
By public transport	-
What do you do	
Exercise (walking/running/dancing)	15
Play chess/cards, meeting friends	-
Relax/enjoy sunshine or nature	54
Taking children to play	31
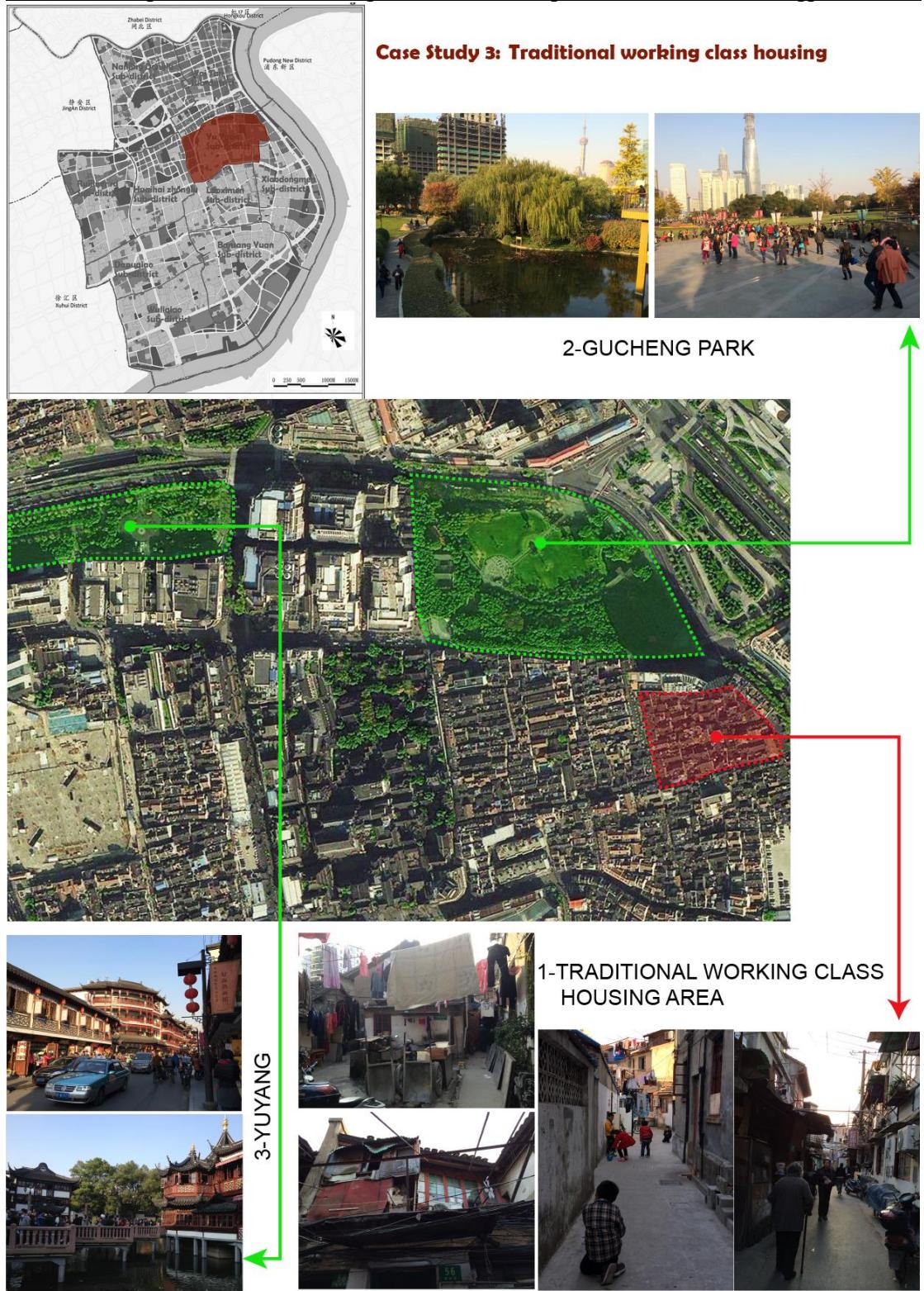
Figure 6.11: Traditional working class housing area in Huangpu District, Shanghai

6.3.4   Case study 4) State-built housing – (Bansong Yuan Sub-district)

6.3.4.1   Location and background

Bansong Yuan sub-district is located in the southernmost part of Huangpu district, east to Lu Jia Bang Road, south to Huangpu River, west to Jiangbian Road, Gaoxiong Road, Zhi Zao Ju Road; north to Lu Jia Bang Road. It has an area of 2.87km^2, and currently has 22 residential areas, 35,600 households and a resident population of 89,776 and a population density of 35,600 per km². More than 80% of the residents live in supported housing, which is not only a typical inhabited community, but is also the constituent region of the 2010 China Shanghai World Expo Park Pavilion area.

The state-built housing case site is located opposite Penglai Park and is typical state-built housing and location in the core of the city centre (see Figure 6.12). The district and sub-district government invested more to promote the practical projects and to solve daily problems of concern to the local households by the implementation of a local facilities and services renovation project and park greening projects with the aim of improving the living environment and quality of life of residents of this old housing.

6.3.4.2   Features of the built environment in the study sites and the sample

The data measuring the character of the neighbourhood for the state-built housing case site was mainly obtained by the in-depth interviews. The age of the sample is shown in **Table 6.15**. This suggests that a similar proportion (42% and 50%) of the sample was between the ages of 30 to 59 and aged over 60 years, and that a small proportion of the sample was between 18 and 29. This shows that the research participants were also equally proportioned between employed and unemployed. Moreover, the table also shows the length of time lived within the State Built Housing. 33% had lived there between 21 and 30 years and 17% 1-5 years, and over a quarter of the sample was between 5-10 and 11-20 years. The same proportion of the sample lived with a child as lived as a single person.

Table 6.15: Characteristics of the household sample in the State Built Housing

Characteristics of households (n=60)	Total sample (%)
Male	50
female	50
Age 18-29 years	8
Age 30-59 years	42
Age 60+ years	50
Employed	50
Unemployed	50
Length of time lived here 1-5 years	17
5-10 years	25
11-20 years	25
21-30 years	33
Who live with Parents	17
Child	25
Couple	33
Single	25

6.3.4.3 Character of the district/neighbourhood/site

This may have been located in the old residential area as **Table 4.8** shows the land use of BanSongYuan sub-district which was 75% covered by residential area, and only a small proportion of land covered by green space and commercial and retail land use. The data relating to satisfaction were collected at the case site, over 37% and 36% of the sample responded 'like very much' or 'quite like' this district; only a small proportion of the residents responded 'not like much' or 'not like at all' because this district has a high population density with high air pollution or poor conditions in the green space. **Tables 6.16** and **6.17** also show that over half the population of the sample residents quite like to live within the neighbourhood and the site's outdoor space, also, approximately half the sample do 'not like much' or 'not like at all' living in this space. Living in this site and neighbourhood produced no 'like very much' responses. This is because the outdoor and neighbourhood space had insufficient public open/green space and also the poor conditions of the built environment. There was also a problem with the parking within the old residential area.

Table 6.16: What do you like about the space to live? (Household interview questions 5, 6, 7)

	Site outdoor	Neighbourhood	District
Like very much	-	-	37%
Quite like	41%	50%	36-
Not like much	42%	34%	18
Not like at all	17%	8%	9
Don't know	-	8%	-

Table 6.17: What do you dislike about the space to live? (Household interview questions 7, 8, 9)

Site outdoor	Total sample (%)
poor provision of public open/green space	58
The local facilities and services in poor condition	-
The building environment (house, pavement, access, etc.) in poor condition	14
Lots of people who came from the countryside had bad habits, Rubbish or litter lying around	28
Don't know	-
Neighbourhood	
Pool provision of public open/green space (too many car parking)	58
The local facilities and services in poor condition	-
The building environment (house, pavement, access, etc.) in poor condition	17
No sense of community within the neighbourhood	8
Rubbish or litter lying around, Not well-maintained	17
Don't know	-
District	
High population density and high volume of road traffic	8
High population density and poor condition in green space	17
High population density and high air pollution	58
The local facilities and services in poor condition(old area)	-
Don't know	17

6.3.4.4   Open/green space in the sample

The land used for green space covers a small proportion (6 %) while residential land is the majority (75%) of the land use in the BanSongYuan sub-district. The recently developed public green space, Penglai Park, become the most used space of the local residents living in surrounding neighbourhoods. **Table 6.18** shows that 92% of the sample residents use Penglai Park and walk there and only a small proportion use

Zhongshan Park which is much farther and was reached by bicycle. This shows that over half the residents in the study site often go to the park most days or every day and at least once a week, and 92% do so by walking. 42% of the residents enjoy or relax in the sunshine and nature in the park. The same proportion of the sample would like to do exercise such as dancing, walking or running. Only 8% each take children to play and meet friends in the park.

Table 6.18: Use of open/green spaces in site district

Which open/green space do you use most	Total sample (%)
Penglai park	92
Zhongshan park	8
How often	
At least once a week	58
Everyday/most days	42
During weekends	-
Pass by/free time	-
How travel	
By walking	92
By bicycle	8
By public transport	-
What do you do	
Exercise (walking/running/dancing)	42
Play chess/cards, meeting friends	8
Relax/enjoy sunshine or nature	42
Taking children to play	8
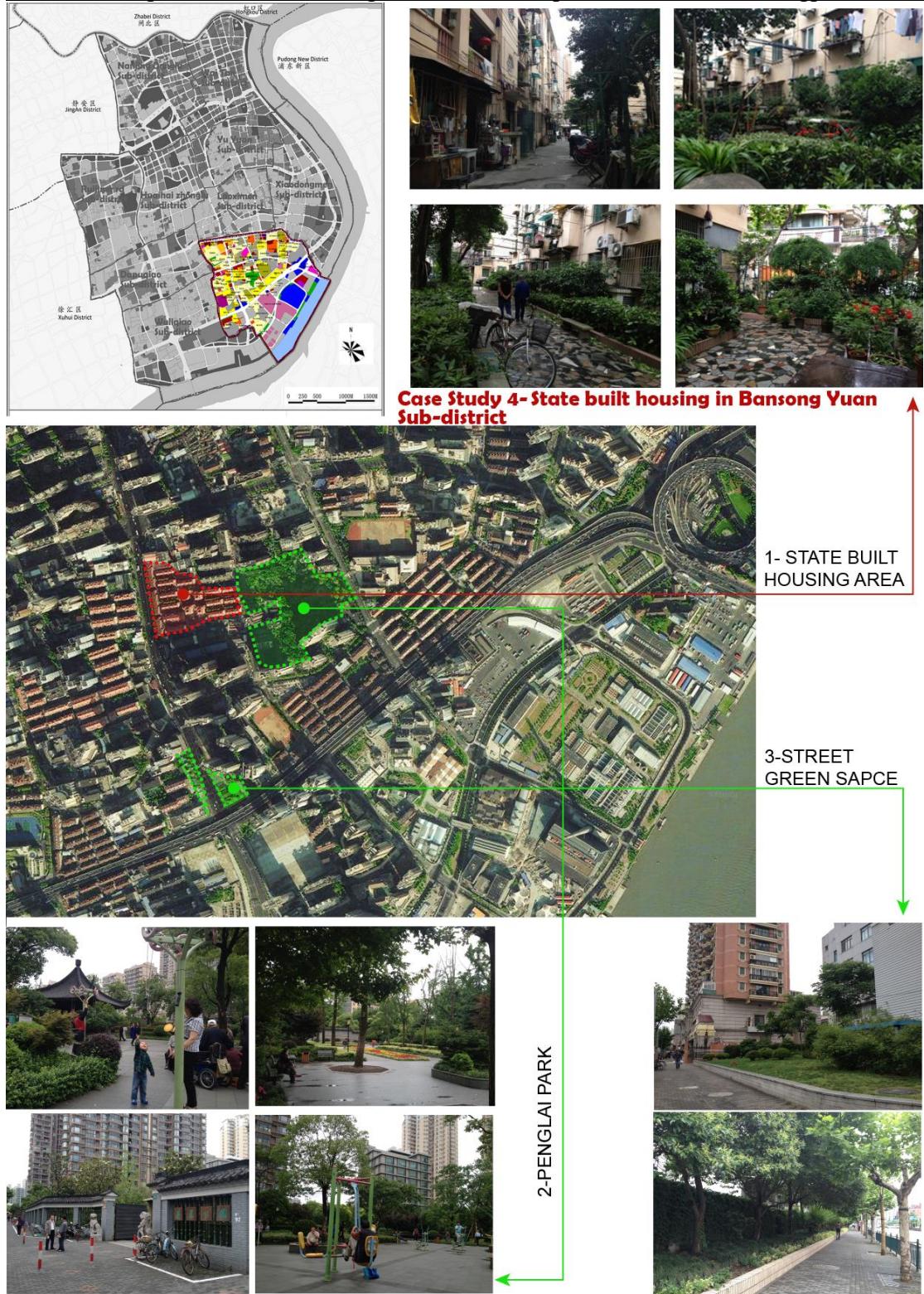
Figure 6.12: State-built housing area in Bansong Yuan Sub-district in Huangpu District, Shanghai

6.3.5 Case study 5) High-rise private housing (gated communities) (Nanjing Donglu Sub-district)

6.3.5.1 Location and background

Nanjing Donglu Sub-district is located in the northwest of Huangpu District **in the** core area of Shanghai; from east to Fujian Road, west to Chengdu North Road, south to Jinling West Road, north to Suzhou River; the east border is on the bund street of Huangpu District, the south border on the Middle Huaihai Road of the Huangpu District, the west border on Jingan District and the north border on Zhabei District. It has an area of 2.41km^2, under the jurisdiction of 20 *jiuweihui*; with 31,166 households and a population of 101,172 and a population density of 49,793 per km². Shanghai's direct beginning is located within the jurisdiction of the International Hotel. Within the jurisdiction of the People's Square is the centre of Shanghai's landmark, which is a blend of politics, culture, transportation and commerce in one garden-style plaza (see **Figure 6.14**).

Formerly, Nanjing Donglu Sub-district was fields on the northern outskirts of Shanghai, and was assigned to the British concession in 1848 (Qing dynasty). The sub-district of NanjingDonglu has a special and distinctive geographic location, known as Shanghai's "Five Centres": the first centre is the geographical centre, which is the Shanghai land surveying origin (International Hotel) and Shanghai Road *Zero Kilometre* in the People's Square. Second, the administrative centre is the city People's Congress, the municipal government and more than ten municipal bureau offices are located. Third, the cultural centre, include the Shanghai Museum, Shanghai Grand Theatre and a number of landmark cultural facilities with more than 30 municipal and district-level cultural and educational units. Fourth, is the commercial business centre, including the "First shopping street of China", NanjingDong Road, which includes 63 commercial buildings. Fifth, is the transportation hub which is an important transport corridor of Shanghai. There is also an intersection between Yanan Elevated Road and the North-South Elevated and 59 bus stops, the originating station and the underground transit station of No. 1, 2, 8 subway lines with 22 entrances.

Nanjing Donglu Sub-district also has a number of historic and recently developed public green spaces, such as People's Park and Yanzhong green space. People's Park was created in 1952 and is located in the centre of Shanghai's most prosperous region with several major museums and one of the top tourist destinations in the city (Pitts, 2013). Especially during the weekends and holidays, the corner of People's Square's becomes a "white-haired blind date" (parents match date for their children). An increasing number of adults are busy working and have less time to date, their parents seek to find a suitable marriage partner for their children when they do exercise and communicate with each other within the People's Park. This phenomenon is very special as shown is **Figure 6.13** where thousands of parents bring a list of their child's "resume" conditions gathered here to *stall* or *listing* style, looking for marriage partners for their children, rather like going to a 'match market'.

Figure 6.13: Parents match date for their children in the People's Park.

6.3.5.2 *Features of the built environment in the study sites and the sample*

For the high-rise private housing site a residential area called *Xinchang City* located in the northwest corner of Huangpu District was selected. Its east border is on Xinchang Road, south close to Shanhaiguan Road, west near the Chengdu Road and north close to the Xinzha Road, and also near the boundary of Zhabei District. It has a beneficial location and is a high-grade residential area with a high quality environment. It is a gated community's residential area with a closed-end management/maintenance system by real estate developers. The *Xinchang city* has a total area of 237.33 million m^2 and a construction area of 78,319m^2. The high-rise private housing has 23 floors for each high building; each apartment size is around 63-200m^2, and a total number of 612

households. The green space coverage rate of about 35% is the standard for a new-build residential area.

Table 6.19: Characteristics of the household sample in the High-rise Private Housing

Characteristics of households (n=60)	Total sample (%)
Male	50
female	50
Age 18-29 years	16
Age 30-59 years	67
Age 60+ years	17
Employed	58
Unemployed	42
Length of time lived here 1-5 years	25
5-10 years	75
10-20 years	-
40-60 years	-
Who live with Parents	31
Child	38
Couple	-
Parents, couple and child	31
Single	-

The social characteristics of the household sample are shown in **Table 6.19** which provides the breakdown of the responses by gender, age, economic status, tenure of property and who resides within the high-rise private housing case study site. The age of the sample in this site shows a small proportion of residents aged over 60 (17%) and aged 18-29 (16%). The majority of the sample had ages between 30 and 59 (67%). This shows that the responders from the sample are more likely to be employed than unemployed. However, none of the residents living in this high-rise private housing had lived there for over than 10 years, unsurprising since it was only built in 2006. 75% of the residents had lived there between 5-10 years and around 25% between 1-5 years. An equal proportion of the sample lived with parents, or child and parents or as a couple and child.

6.3.5.3 *Character of the district/neighbourhood/site*

The case site selected is in the core area of Huangpu district. 40% is covered by residential land use, 32% is used by commercial and retail with over 20% of the land covered by green space. Moreover, the case site also selected the contemporary high-rise housing, thus, all the local residents who live in the district, neighbourhood and site expressed a high level of satisfaction with the outdoor environment. As **Table 6.20** shows, the largest proportion of the sample like the space to live in the district and neighbourhood very much or 'quite like', no respondents gave another response. Also, 83% and 17% of the sample 'quite like' and 'like very much' the outdoor space. The main problems of this area which people dislike concern the space to live within the districts as well, as with the other case studies, the high population density, high air pollution or high volume of road traffic. The largest number of key issues complained that the open/green space was not well-maintained and a small proportion of the sample felt that there was no sense of community within the neighbourhood. The new residential areas have to reach a standard of green space coverage of over 30% or 35% and a high provision of facilities and services in the area. However, although the target coverage of open/green space was reached, the green space was not well-managed and maintained **(Table 6.21)**.

Table 6.20: What do you like about the space to live? (Household interview questions 5, 6, 7)

	Site outdoor	Neighbourhood	District
Like very much	17%	58%	75%
Quite like	83%	42	25
Not like much	-%	-	-
Not like at all	-	-	-
Don't know	-	-	-

Table 6.21: What do you dislike about the space to live (Household interview questions 7, 8, 9)

Site outdoor	Total sample (%)
Poor provision of public open space	-
The local facilities and services in poor condition	-
The building environment (house, pavement, access, etc.) in poor condition	-
Lots of people and noise pollution	8
Not well-maintained open/green space	67
Lack of car parking	17
Don't know	8
Neighbourhood	
Poor provision of public open space (too many car parking)	-
The local facilities and services in poor condition	-
The building environment (house, pavement, access, etc.) in poor condition	-
Lots of people who came from the countryside had bad habits	-
Not well-maintained public/green space	83
No sense of community with neighbourhood	9
Don't know	8
District	
High population density and high volume of road traffic	25
High population density and poor condition in house	-
High population density	50
High population density and high air pollution	25
The local facilities and services in poor condition(old area)	-
Don't know	-

6.3.5.4 *Open/green space in the sample*

The public green space in the NanjinDonglu sub-district is extensive with recently developed public green space in the core area of the commercial business centre, as the Yanzhong Park. In addition, this district also has a number of historic public open/green spaces, such as the well-known People's Park and People's Square. **Table 6.22** shows that the largest proportion (59%) of the sample use People's Park with only 8% of the local residents going to Yanzhong Park. This suggests that a quarter of the sample often goes at least once a week, or when they pass by/ have free time, and at least once a month. 27% go every day or most days and only 8% never go to a public open/green space possibly because some of the local households living in the residential area have

long distances to go. Also, photos in **Figure 6.14** show the high level of outdoor private open/green space within the case site neighbourhood.

Table 6.22: Use of open/green spaces in site district

Which open/green space do you use most	Total sample (%)
People's park	59
Changfeng park	33
Yanzhong green space	8
How often	
At least once a week	25
At least once a month	25
Everyday/most day	27
Never	8
Pass by/free time	25
How travel	
By walking	42
By bicycle	25
By public transport	33
What do you do	
Dancing	-
Exercise (walking/running)	36
Play chess/cards, meeting friends	-
Relax/enjoy sunshine or nature	46
Taking children to play	18
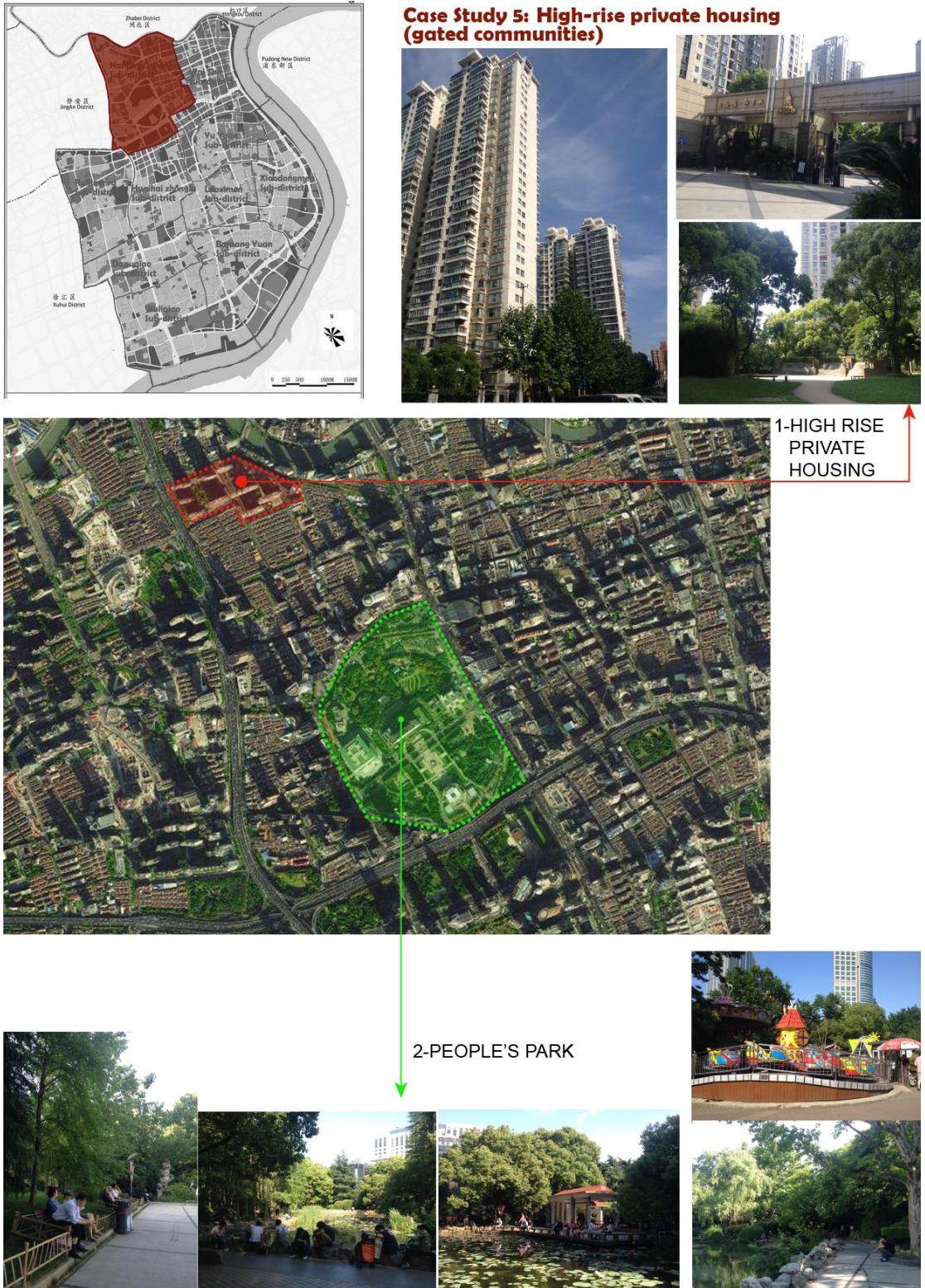
Figure 6.14: High-rise private housing area in Huangpu District, Shanghai

6.4 Summarizing: the similarities and differences between the five case studies

The data referred to in this section relates to the findings from the in-depth interviews, conducted with a sample of 60 households, and also some quotes from interviews with key stakeholders. The breadth of the analysis employed here is a detailed and critical understanding of social needs and nature along with feelings about the use of open/green space. To varying degrees, there are significant similarities and differences between the case study sites. The indicators measuring a case study site's characteristics were found to be significantly associated with three aspects of the sample: the features associated with the quality of the built environment in the study sites, the character of the district/neighbourhood/site and the open/green space to be found in each site.

The features suggestive of the quality of the built environment for the five case study sites comprise: Historic Chinese Housing (HC), Colonial Housing (CH), Working Class Housing (W), State-built Housing (S) and High-rise Gated Housing (H). It was considered appropriate to begin by asking the participants to discuss several of the questions about the general physical features of the lived environment and social characteristics such as age, gender, job, length of time lived at the site and who they live with. The household discussion thus questions the participants about their use of green space in the neighbourhood, followed by questions on the features of the built environment in the study sites and the physical characteristics of the neighbourhood. Analysis of the household survey - including multiple regression analysis - showed that significant differences were found in the satisfaction with life in the local neighbourhood/district; the reason for their likes/dislikes about the living space; and the frequency of respondents' use of green space in the five case study neighbourhoods.

6.4.1   Summary: features suggesting the quality of the built environment in the case study sites

The household survey findings showed that, on average, almost 60% of residents in the sample reported living with retired elderly people. Requests for improvements in the services and facilities in the local neighbourhoods is higher overall in the Historic Chinese Housing, Colonial Housing and State-built Housing study neighbourhoods than Working Class Housing and High-rise Gated Housing study areas respectively. Moreover, the findings also show the length of time lived in the Historic Chinese Housing and State-built Housing to be longer than in other sites. In terms of the average of the different socio-demographic groups who live with families (couples living with a child or living with parents) scored higher than other household types. The multi-person households - three or more adults e.g. living with parents, a child and couple together - were lower. Older childless and young single households scored lowest.

Analysis of the key stakeholders' interviews reveals that different types of house and neighbourhoods have varying levels of influence on participants' quality of life and use of green space. The housing in the historic sites which cannot be rebuilt, e.g. the Historic Chinese Housing and Colonial Housing, require protection, therefore, the local government should enhance the quality of the houses, such as by reconstructing the inside of the old buildings and adding basic facilities: air conditioning, fixed kitchens, stairs and toilets, etc. The quotes from interviews with local policy-makers/planners here were referring to ideas of quality of life and the historic characteristics in the old housing areas. PL1 highlighted this saying, "Huangpu district is the most historical and the highest density of population district in Shanghai, there are many different types of housing in the oldest town area and with limited green space, therefore, the real difficulty is how to deal with the conflicts between the protection of historical sites and providing residents with good quality living conditions … some residential areas have very distinctive local characteristics, we should not demolish and rebuild all the old houses, meanwhile, policies are needed for a wholesale reconstruction of old residential areas – updating the facilities of the old houses, and ensuring that there is access to green space and public facilities in the local neighbourhoods".

While the above shows that facing rapid urbanization and limited resources for development in historical areas have become one of the severe issues and challenges to addressing how to deal with the original local characteristics and socio-cultural identity within a more sustainable development process and improve the quality of the lived environment. The country is also facing a growing population of older people, which has significantly increased bigger issues. It seeks to attend to providing recreation, exercise and health facilities for users of different ages - especially for the elderly people - and also to attend to the increasing concerns about psychological and mental health.

6.4.2   Summary: character of the district/neighbourhood/site

The overview of the character of the five case study sites suggests significantly that all of the five housing types described can be found in close proximity in parts of each case study site and to various green spaces that constitute official Chinese government typologies. The findings analysis showed the proportions of responses from local households in the five case study areas who described their district/neighbourhood by mentioning their satisfaction with the built environment. There is a significant indicator with almost 90% expressing their satisfaction with their district/neighbourhood. The majority of those satisfied interview respondents live in Huangpu district because it is located in the inner city and historical core of Shanghai. However, there were negative reasons relating to the dislike of this district since it was one of the most densely populated districts in Shanghai with high air pollution and a high volume of road traffic.

The other largest number of key issues of dissatisfaction within the district/ neighbourhood were the complaints that there were no car parking areas, and the poor conditions of the housing, greenspace, local facilities and services in the Working Class Housing Historic Chinese Housing, and State-built Housing study neighbourhoods. Also the disappearance of local socio-cultural identity and characteristics was a bigger issue when the oldest housing areas were reconstructed. The poor management and maintenance of green space was an important issue, especially in the High-rise Housing.

The new residential areas have to reach a standard of green space coverage of over 35% and a high provision of facilities and services in the area, but no procedures to ensure that they are well-managed and maintained. Moreover, a small proportion of the sample felt that local socio-cultural identity and characteristics and a sense of community within the neighbourhood were disappearing. Also, feeling safe was an issue within the Working Class Housing neighbourhood.

The character of the district/neighbourhood was closely related to the quality of the urban living environment and is discussed in more detail throughout the interviews with stakeholder G1 who claimed "Huangpu district is the most historic and cultural district in Shanghai, there are many different types of housing in this area … which holds the historical house characteristics in the city while also keeping the unique cultural identity and characteristics of the socio-cultural history of this city … the provision of a good quality of life". LA3/LA4 also added "good green space can improve the satisfaction and quality of life of local residents … the green space can ensure the microclimate in the urban environment, cooling the temperature, reducing noise and air pollution … and public facilities and services can provide the daily outdoor activities of local residents … so, [we] need to enhance the important quality of life environment".

6.4.3   Summary: open/green space in the sites

Urban open and green space is important in any neighbourhood, the householder and stakeholder interviews discussions included questions about the use of neighbourhood /district green space and understanding how important green space is for the residents' quality of life. The five case study sites each have extensive green spaces that comply with the official Chinese typology of urban green space, this includes 'Comprehensive Parks' and 'Theme Parks' (G1) associated with a cultural and exhibition centre and green space surrounding various Metro stations; a diverse range of 'linear parks' and 'roadside green space' and 'attached green space' (G4); a mix of green space as small communal gardens; small courtyard, balcony and roof gardens; *de facto* 'allotments'

and areas of planted flowers, as well as lawned and tree-lined walkways between buildings directly associated with various housing developments.

Results from the household respondents in the sample show that the average score for residents' use of open/green space in the local neighbourhood is higher overall in the State-built Housing, Working Class Housing and Historic Chinese Housing than in the High-rise Housing and Colonial Housing study areas. In terms of the average frequency of use by the different types of housing, there are varying quantities of green space and public access to green space within local neighbourhoods. The findings show that, on average, over 90% of residents in the sample reported using green space located closest to home, often on foot. Most older residents in the sample reported using the parks/green spaces there almost every day, these include going to take exercise, relaxing/enjoying sunshine or nature, walking and dancing and meeting with friends. Also, some parents or grandparents take children to play. While the small number of young adult participants reported using parks/green spaces just when they 'pass by' or have 'free time' during weekends, they would like go there relaxing/enjoying sunshine or nature in the outdoor spaces or to meet with friends.

There was a variety of green space used by stakeholder participants, AR/PL2 discusses how green space or nature is important as follows "green space is very essential within the local neighbourhood, people can take a walk in the morning and evening with their children or pets, have a chat with people and do some outside exercises … it is also able to help balance people's daily life." Other participants choose not to use the green space for a range of reasons, the most common reason is, as AR2 reported, "we are usually busy at our work … working most days, so it is not often we can use these green spaces … yes, it is important, we would like to go to the green space just [for] complete relaxation away from a busy, stressful job … it will be used often after dinner or at weekends with families". However, most adults with children often use parks/green space more than childless adults, AR/PL1, AC4 highlighted "of course, that is very important for those people who have children. If they do not have green space in the district, they cannot go for a walk with their families after dinner, it's vital that we have

green space for them to enjoy the time with families …This is so significant, because the green space will make the residents have considerable benefits to their families that have either elderly relatives and/or children. And green space is very important for children in schools, as the playground may be the only place for students to do some outdoor activities to relax after classes".

All in all, while the green space is very important in any neighbourhood and has improved the local resident's satisfaction and their high-quality of urban everyday life, it also appears to offer various social, environmental and economic sustainability benefits. It has received considerable attention in response to environmental pollution, mental and physical health, climate change and helping reduce the risk of heat-related illnesses for urban dwellers. Additionally, all the findings employed here show the similarities and differences between each of the case study sites. They help to better understand the quality of the built environment, the character of the district/neighbourhood, and the everyday use of urban green space and housing in the Huangpu district of Shanghai.

6.5   Conclusions

This second substantive chapter of the thesis focused entirely on the development of the urban planning and green space system in Shanghai and provided a detailed introduction to the five case study sites with their location, context and basic profiles; socio-economic characteristics and, using maps and photos as evidence from residents, to better understand the diverse people and places of Huangpu district in Shanghai. The evidence presented in this chapter is taken from the textual analysis of historical and archival material; the societal demand and use of urban planning/green space; textual analysis of different periods, the urban planning approaches used and contemporary policy implementation. In combining findings relating to policy documents, interviews with stakeholders and evidence from residents, this chapter offers insights into the disagreements, conflicts and tensions between policy/planning and residents' views on the strengths and weaknesses of landscape design, housing provision and green space

and the similarities and differences between 'district', 'local' and the five housing types. The rationale and aims of this chapter are to highlight the relationship between policy and practice and complexity and diversity as applied to urban green space. It offers a detailed and critical understanding of the evolving social and physical changes taking place in Shanghai and Huangpu district in order to contextualize the material presented in the subsequent chapters.

Chapter 7   Everyday Life: Landscape Design, Housing and Green Space

7.1 Introduction

This final substantive chapter focuses on the data generated from the in-depth interviews with local households and stakeholders and observation in public and private spaces. Section 7.2 starts by exploring their understanding of the importance of nature and green space with 'everyday' connections in the city. Section 7.3 then highlights landscape design, housing and green space in the changing context of the contemporary city in relation to changes in urban everyday life. The key differences and similarities of residents from different socio-economic backgrounds living in different housing types within diverse spaces of the Huangpu district in terms of the context and importance of green space are examined.

Section 7.4 presents data to identify evidence of links between the quality of the built environment and the importance of urban green space for local residents. The associations of both key stakeholders and local household in-depth interviews relating to design aesthetics, sustainability, the mix and quality of public and private green space are presented. The final section discusses the issues, challenges and implications for policy and practice, and the chapter concludes by reflecting on the material and findings presented in chapters 5 and 6 in order to cross-reference professional, policy and residents' views/perceptions/priorities with regards to landscape design, housing and green space in the city.

7.2 Nature and Urban Living

7.2.1 Understanding the Importance of Nature and Green Space in Chinese Cities

The in-depth interviews with local households and key stakeholders exposed the local residents' views on the place of 'nature' and understanding the importance of both nature and green space in cities. What are described as the 'contested natures' need to be understood according to what we observe and perceive of nature through our different senses. How we should understand the meaning and significance of nature has been a reliable theme of discussion drawing on the history of Chinese traditions and the changed cultural perspectives of nature in the city as a vital part of everyday urban life. However, there was no deep understanding of its concepts or dynamics. Interviewees realised that understanding nature and the kind of 'nature' that surrounds everyday life was important. Moreover, recognizing the reasons why having nature and green space within the urban fabric is important also highlights the benefits of green space to the urban environment of Shanghai today.

Table 7.1: Understanding of Nature in the City (by Household interviews question 12)

• Understanding of Nature	• Interview sample (%)
• Air, water, food safe, no pollution, etc.	• 20
• Green space in cities, e.g. public parks, trees, flowers, grassland etc.	• 23
• Wild-nature, Not damaged by humans. e.g. mountains, rivers, forests etc.	• 35
• Living environment of humans and co-existence with nature, and everyday life.	• 12
• Don't know	• 10

Table 7.1 shows that local households' interviewees expressed a shallow understanding of the concept of nature and the forms that it takes in contemporary cities. Results from the household survey show that over 35% stated that nature means wild-nature, not damaged by human activities, as with the mountains, rivers, forests etc. A slightly smaller proportion of respondents (23%) described nature as being the same as the

green space in a city, including public parks, street green space, trees, flowers, grassland etc. 20% defined nature as air, water, safe food, no pollution etc. 12% saw nature as referring to the human living environment and co-existence with nature and everyday life. Almost 10 % of the total sample answered the question 'don't know', suggesting that, according to those respondents, the limited awareness of the concept of nature be influenced by on the interviewees' education and the grown experiential of live environment. A number of respondents remarked about their understanding of the concept of nature and the kind of 'nature' that surrounds everyday life:

> **HL10:** In the city, I think [nature] can be trees, flowers, grassland, green space … our public parks.

> **CH1:** I think [nature] should be Wild-nature, original ecology environment … undeveloped space … without damage by humans. e.g. natural mountains, river, wetland, forest etc.

> **S8:** … well, it is difficult to explain, [nature] for me should be linkages within everyday life, where a place for nature is a harmonious relationship between man and nature…

> **W5:** … I don't know.

> **H7:** [Nature] should be no pollution air … safe food and clear water…we can see the blue sky and white cloud … more trees and green space … we can enjoy [going] outside every day.

Understanding the complex concept of nature depends on their work where they live and on their education. The respondents from working class housing with a low level of education and who had moved from the countryside gave answers such as 'don't know' and confused the concept of nature. However, nature is that which we observe using different forms of sensory perception of nature, it is claimed that these 'contested natures' need to be understood if we are to understand what motivates people when they interact with their living environment.

Furthermore, all the other key stakeholder interviewees showed a deep understanding of nature and green space in the cities. The key stakeholders discussed the range of elements of the natural world, such as wildlife, woodland, mountains, rivers or animals and clearly defined nature as being able to exist without human activities or civilization.

But an understanding and awareness of nature in contemporary cities can then be quite confused about the specifics of nature and green space and hybrid nature and green space or green space as pure nature. One interviewee discussed nature and green space which he described as:

> *"Green space or parks are a suitable* [form of] *nature for* [a] *contemporary city, combining as they do the processes of globalization and the technologies whereby we have learnt to manipulate and change or hybridise nature. Green space and parks show perfectly the hybrid nature of our relations with the natural world ... green space can be seen as a kind of man-made nature, as soon as human activities are involved, a green space can be regarded as an open public space which is more friendly or naturalised than a hard-paving plaza ... Generally, when we talk about nature we may be linked to the wild environment or the original ecological environment. But in the city, I think it means a natural lifestyle, but it is only imitating a part of nature"*

> (In-depth interview with a member of the urban planning department in Shanghai, G3, 2013)

It is recognized that urbanization and city development will have a negative environmental influence through the consumption of natural assets and the overexploitation of natural resources. Nature or the natural urban environment is also reduced and generates new hazards through developing urbanization. To understand nature in cities, the interviewee here was referring to the enhancement and connection of nature in urban ecosystems being quite important as some evidence recommends that personal experience of natural things in everyday life is a main determinant for understanding environmental issues:

> *"People more easily understand the link between ecology and nature;* [the*y*] *think that ecology is a bridge that connects human beings to nature, while nature means fewer man-made factors... Nature is clearly important for wildlife and for casual recreation, but it also has other important roles to play in response to climate change, which leads plants and animals to shift their comfort zone, this ecological continuity of the nature will help to make territorial adaptation more achievable ... Now pollution risk permeates all areas of everyday life and space, such as air, water, soil pollution ... because nature is reducing every day, so how* [can we] *protect natural spaces, and keep them away from human activities?"*

> (In-depth interview with an architect AR2, 2013)

Some interviewees claimed that the social meanings and everyday use of nature are seen as a central issue for understanding the changing role and significance of risk and uncertainty in contemporary society. Another interviewee was arguing that an ambiguity and ambivalence about nature are at the heart of social and urban life in late modernity:

> *"The natural environment is very important; nature or green space is all around us and directly affects the quality of people's everyday urban life ... It's an enjoyable part of our way to connect with the nature of life, such as the places where children play, local parks in which we enjoy exercise and social activities, or make people who live there feel they have returned to nature even though they live in the heart of the city. It also helps people to know and care for animals, birds, cats, squirrels ... however, nature itself is threatened and more importantly into the future, its value* [will be] *in providing an important site for public sociability and communication with neighbourhoods, and these activities can be understood as negotiations and practices to address the social and environmental paradoxes of late modern urban life."*

<div align="right">(In-depth interview with a landscape architect LA6, 2013)</div>

Although there is an increasing recognition that these complex concepts of nature depend on the different people and cultures and their environment, this can mean that they have quite different understandings when they speak.

7.2.2　Urban Nature and Green Space

The importance of nature or green space in cities has been acknowledged to varying degrees since the nineteenth century when its implication in providing an escape from extensive air pollution was a major driver in creating new parks and green space in European cities (Swanwick *et al.*, 2003). China, however, has seen a marked increase in awareness of nature in recent years, particularly the public concern about environmental impacts, climate change and increasing pollution, such as the heavy smog generated by urban growth. In addition, the value of nature and green space is one vital component of the urban living environment and is important in any residential neighbourhood. **Table 7.1** shows that local households expressed a respect for nature and green space and their important contribution to urban living. In addition, the

findings in **Table 7.2** indicate the frequent use of neighbourhood open/green space for recreation.

Table 7.2: How important is nature or green space in cities? (%)

• Importance of nature or green space	• Interviews
• Very important	• 60
• Important	• 30
• Fairly important	• 8
• Not Important	• 2

Results from the local household interviews show that - of those who answered this question - over 60% stated that their awareness of nature or green space in cities was very important and over 30% saw it as important. Only 8% of the sample answered fairly important and 2% not important. This shows that household interviewees' responses confirmed the exceptional importance of nature or green space in cities and identified the future importance of nature or green space in the everyday lives of urban residents.

> **CH1:** Of course … very importance [sic.] of nature or green space in our living area … especially in the compact city…nature and green space can filter air pollution, attenuate noise, cool temperatures, infiltrate [sic.] flooding, etc.
>
> **HL6:** Yes, very important … nature or green space can provide an attractive place and improve the quality of our life… it can also increase housing costs and property values.
>
> **S10:** Sure, important…as the PM2.5…
>
> **W3:** …Very important… [nature and green space] can promote good mood and the general public health of urban residents' everyday life.

Nature and green space is very important in any neighbourhood and has received considerable attention in response to environmental pollution, mental and physical health, climate change and helping reduce the risk of heat-related illnesses for urban dwellers. It is worth noting the benefits of the provision of high-quality and accessible green space including increased housing prices and property values, especially in the re-constructed residential community areas. Additionally, nature and green space often serves as space for physical activity and exercise, which is associated with improving people's health and psychological well-being.

Furthermore, the household interview findings showed the frequency of local residents' use of neighbourhood open/green space or parks for recreation in Huangpu district. On average, over 70% of residents in the sample reported using green space/parks in their local area at least once a week (**Table 7.3**), with many using them several times a week, most days or several times a day. This figure was higher for residents in the Historic Chinese Housing case study site (84%) and State-built Housing case study site (92%) than those residents in the Traditional Workers Housing case study site (67%), Colonial Housing case study site (58%) and High-rise Housing case study site (52%). Only 8% of the total sample stated that they *never* used the green space/parks in their local area.

Table 7.3: Frequency of use open/green space for recreation (% of sample)

Frequency of use	Historic Chinese	Colonial housing	Traditional working	State built housing	High-rise	Total
At least once a week	25	33	42	50	25	35
At least once a month	8	-	8	8	25	14
Everyday/most day	59	25	25	42	27	36
Pass by/free time	8	42	25	-	25	25
Never	-	-	-	-	8	8

However, according to those respondents, there is no private green space within their residence area (as in the Historic Chinese Housing and State-built housing) or if there was less green space, they did use the public green space or parks most days.

> **HL3:** …the parks … I would like to go to 'Fuxin Park'… go there every day … because this park very close with my home [sic.], and [I] enjoy meeting with people in the park…talking and walking.

> **S4:** The park or green space I only go to the nearest park [which is] 'Penglai Park'…I cannot go so far…because I am old now…I would like to [visit] the park every day, just sitting there and relax/enjoy the sunshine.

Other residents (High-rise Housing) reported their lack of use of the public park, specifically those who are adult and need to work hard. This impacts on their use of a park and, in some cases, they never go to one.

> H2: …it is difficult to take time to go to the public park…I need to work every workday, and have to take some extra study during weekends … so I really have no time to go.

> H8: I am very busy…have no more time to go … maybe [if I] pass by then [I] will go sometimes.

Access to the public park or open green space is mostly used by older people and children. This may be due to older people who have already retired, who have the time to do some outside exercises and have social networks and neighbourhood communication space to help balance daily life. Children with more access to a park and recreational facilities are more active than those inside home; children's health is empirically linked to nature and green space.

These findings also give some indication of the issue of where open/green space or parks are located in relation to home. This was often raised by local households using it every day. The interview survey also identified six basic reasons for use: relax and enjoy the sunshine; getting away from it all and being in a natural environment; exercise and active enjoyment, including walking, running, dancing, sport and specific activities; social activities, such as playing chess/cards, meeting friends; taking children to play and attending events (by key household interviews question 16).

Moreover, **Table 7.4** shows that key stakeholder interviewees acknowledged the important benefits and existence value of nature or green space in urban living. It is clear from the finding that this sort of categorization helps to understand the particular characteristics of different groups of defined by the range of the benefits e.g. ecological, social and everyday, health and well-being and amenity.

Table 7.4: Understand the value (or benefit) of Nature/green space in the City (by in-depth interview with stakeholders)

Understand the value of nature/green space in the cities	Interviewee
Ecological functions (air, water pollution) • The green space is one of the important functions to reduce poisoning of the air, water and soil in metropolitan areas. • Shanghai is a very high-density compact city, so the need is to build more green space for people who live in the city.	(AR1) (AC3)
Social and Everyday benefits a) **Social networks, communication with neighbourhoods and do some outside exercises** • Green space is an important site for public sociability and communication with neighbourhoods, and these activities can be understood as negotiations and practices to address the social and environmental paradoxes of late modern urban life. • The green space will make the residents have social networks and neighbourhood communication space; it also offers sports activities or some space for outdoor exercise. b) **Relaxation and leisure activities in the green space** • Green space is essential. People can take a walk in the morning and evening with their children or pets, have a chat with people and do some outdoor exercises. • We are usually busy at work; we would like to go to the green space just for complete relaxation away from a busy, stressful job. • Green space is able to help balance people's life, more leisure activities, singing or dancing in open spaces during the morning or evening and weekends. c) **Connections with nature in the green space** • We enjoy it as it relaxes us and is a good way to connect with nature and where you can learn about nature in the green space/parks. It also connects us with the passage of the seasons and the unchangeable pattern of growth. • It is a peaceful place which surrounding trees, flowers and grassland, the mental refreshment of simple physical work in natural surroundings for creative ends. • There are other everyday urban experiences, practices and knowledge that involve connections with nature but the green space or public parks offer particular opportunities for an embodied and sensual engagement with nature. d) **Enjoy the time with families, especially for those people who have children and for the old people** • Yes, it is important, especially for the old people and the children. Because adults have to work most days, so it is not often they can use these green spaces, but they will be used often after dinner or weekends with the families.	(G1) (LA2) (AR/PL2) (AR2) (LA2) (G2) (LA1) (G4) (LA3) (G3)

• I think the green space is very important for my family, it was particularly impressive when I had my child, he liked to play in the green space, and enjoy being with some other children.	(AR/PL1)
• Of course, that is very important for those people who have children. If they do not have green space in the district, they cannot go for a walk with their families after dinner, it's vital that they have green space for them to spend time with their families.	(AC4)
• This is so significant, because the green space will provide residents with considerable benefits for families, the elderly and children. And it's very lacking in green space for children in schools, as the playground may be the only place for students to do some outdoor activities to relax after classes.	
Health, well-being (physical, mental and spiritual health)	
• The green space is a very important part of life and it benefits both people's mental and physical health.	(AC2)
• Green space can be measured by the level of physical and mental health enjoyed by the inhabitants of an area.	(LA6)
• It is an enjoyable part of our way of life, especially after a hard day at work, to get away from it all, if people can go for a walk in a green space where there are flowers, grass and water, it will be mentally therapeutic as well.	(AR/PL3)
Aesthetic, the environmental quality of life	
• I see a green space as making the city more attractive. A place of beauty that improves the quality of life.	(AC1)
• Recently, you would find out the increasing importance of green space in the city, more green space will be reflecting the high level of living comfortably for residents of Huangpu District in Shanghai.	(LA5)
• It is one of life's pleasures. The green space is most important to us.	(LA4)
• Green space is the satisfaction of seeing a beautiful picture created by designers and enjoyed by everyone who passes and lingers there.	(LA6)

The interviewees identified and understood the reasons for the importance of nature/green space, the main benefits commonly attributed to urban green spaces in **Table 7.4** are rather narrowly drawn, for environmental and economic benefits should be able to tease out the 'existence' and 'use' values of green space discussed above. Nevertheless, the more overt social and everyday benefits, and especially the uplift on the value of ecological functions, should not be underestimated. It was evident throughout the interviews that seeing the contribution to the *social and everyday benefits* of urban nature/green space has a special value both for its existence and important benefits for people's day-to-day life, and a use value for a varied range of

diverse activities as well as its use for enjoyment, therapy, social networks and recreation. In particular, it enables:

- Social networks, communication with neighbourhoods, and taking some outdoor exercises.
- Relaxation and leisure activities in the green space.
- Connections with nature in the green space.
- Enjoyable times with families, especially for those people who have children and the old people.

The *health and well-being benefits* of urban nature/green space are vitally important; they provide people with both the physical and mental health benefits derived from being near nature/green space in urban areas. The above interviews highlighted that

> *"It is an enjoyable part of our way of everyday life, especially after a hard day at work, to get away from it all, if people can go for a walk in a green space where there are flowers, grass and water, will be therapy mentally as well."*

<div align="right">(In-depth interview with an architect/planner AR/PL3, 2013)</div>

There is an increasing desire to engage in healthy outdoor activities and to benefit from the psychological and spiritual effects arising from the way that they allow escape to reduce anxiety and the stress of contemporary urban life while achieving an enhanced therapeutic state and refreshment. Therefore, the future should fully recognise that nature and green space can be seen as a great outpatient department whose therapeutic value contributes to the physical, mental and spiritual health and well-being of local populations in a compact city. Furthermore, urban nature and green space are now widely recognised as major contributors to both the *ecological functions* and the aesthetic, *quality of the live environment*. It has a special, vital role in the urban landscape and urban life, both for its existence value and the main benefit is that people know that it is there and able to contribute to the urban landscape - as well as providing a high-quality and attractive amenity and ecological functions that help adapt urban areas to the effects of climate change on a local scale, such as reducing energy usage through tempering wind speeds and urban cooling, absorbing carbon, noise mitigation and ameliorating air and water pollution (Whitford *et al.*, 2002).

7.3 Everyday Life: Landscape Design, Housing and Green Space

Everyday life encompasses to an almost imperceptible extent the ordinary experiences related to all activities that are engaged in for improvement. But from some more philosophical perspectives, 'everyday life has been theorized as the sustaining ground, matrix and underpinning for other social practices' (Sandywell, 2004). Its vital concerns will be drawn out with reference to the critical and influential writing in the leading work *The Critique of Everyday life* by Lefebver who defines his critique of everyday life as the 'revolutionary way' and highlights that 'man must be everyday, or he will not be at all' (Lefebver, 1971, p.1). Lefebvre claimed this aphorism was central to the reappearance of the critiques of everyday life as leading to the revolution of the everyday and experiential dimensions of urban life and that the city is significant as a site of struggle between, and resistance to, the powerful and those who are less powerful. This also recommends, as Schmit shows, that the "starting point for critical social theory should always be everyday life, the banal, the ordinary … changing everyday life: this is the real revolution … and any point has the potential to become central and be transformed into a place of encounter, difference and innovation of a collective movement and asserting a 'right to the city' (Schmit, 2012, p58). Therefore, engagement with the theoretical discussion of 'everyday life' is worthwhile to understand the diversity and complexity of everyday relationships between landscape design, housing and the use of green space in cities and the interactions with regards to changed urban everyday life.

Key stakeholders in the interviews discussed the understanding of housing and urban changes since 1979 after the open door policy. Urban growth and housing system reform have been reflected in the changing urban everyday life. The interviews will interrogate the key differences and similarities of the specifics of housing change within the diverse spaces of Huangpu district in terms of the context from different socio-cultural backgrounds (see **Table 7.5**).

Table 7.5: Understanding the Housing Changed in the City

Interviewee	Understanding the Housing Changes in the City
(G1)	The urban housing market of China has been transformed from a **heavily-subsidized, centrally planned system to a free-market economy** since 1980 after the **housing system reform** … when the house becomes a product, the **quality of housing** decides the housing price … it is under the market economy situation with construction and selling by the real estate development company on the open market.
(PL1)	In the past, planning focused on the problems of quantity, nowadays the focus has been transferred to **quality of housing** … and to the **'people-centred' approaches** of urban planning and housing design.
(PL2)	Since the 1990s, rapid house real estate development and the price of housing has become high in China's residential housing market. Especially in the old housing area (the shanty town), developers have **to remove and** rebuild a **new residential area** (high blocks of flats, so-called commodity housing). However, when the **type of housing was changed**, the **everyday life also changed**, e.g. the neighbourhood's relationships and the social communication. The old housing area was **more social-friendly** with greater **safely and trust** … Moreover, the removal or rebuilding of the old housing area will bring a big problem if it **destroys the historic culture and local characteristics.**
(AR2)	During the period 1979 to 1998, the welfare housing and work housing were the main types of housing whilst commodity housing was rare. After 1998, **commodity housing started to dominate the market**. After 2005, the public rent housing and affordable housing such as cheap housing have been launched for those with middle to low incomes who could not afford a house.
(AR/PL3)	The development of **houses and green space went together** with the development of real estate. The **real estate reform started** in 1992, the subsidized, centrally-planned, housing system was ended and the **commodity housing** started.
	During 1979 to 1993, China was in a stage of great development … During 1992 to 2003 was a period when China started to develop social housing … and many **high-rise buildings** …
(LA3)	in order to adapt to the need to expand the housing stock, "**integrated planning, design, construction and management**" has become the main form of architecture … After the 1980s, house planning generally focused on the following aspects: allocate the **public facilities** according to the scale and location of the living area; begin to consider the group combination form with diversification, varied space organizations; **consider the living environment** … It breaks the concept of conservative planning, highlights the concept of "**human-centred**" and insists on **sustainable development**.

> After 1998, the residence planning in the mature market shows diversity and the **marketization of investment**, changed governmental duties and other reasons have changed residential construction from being government-led to **market-driven**... The residence construction entered a **quality-oriented** development stage **from** a **quantity-oriented one**. When referring to residential planning and house design...the concepts of **"human-centred" and "sustainable development"** ... create a living environment **with local characteristics** and a **historic-culture identity.**

Throughout the interviews, understanding of housing and urban change was argued to be driven by aspects such as:

- **Urban housing system reform** – the diversified housing system in China started with the 'national physical housing allocation system' during the early 1930s. The PRC was established in 1949. After the open door policy since 1979, the housing system has been transformed to a commercialized market economy housing system, construction and selling is by the real estate development company on the open market in China.
- **Housing types changed from low-rise housing to high-rise housing.** After the housing system reform, the types of housing changed (*shikumei*, State-built housing, working class housing) to high-rise housing (gated communities housing).
- **Widespread concern at an increase in the quality and condition of housing and the living environment –** the urban housing market of China has been transformed from a heavily-subsidized, centrally planned market to a free-market economy. However, under the market economy situation, construction and selling the commodity housing should increase concerns about the quality and condition of housing and its contributions to an attractive and comfortable living environment.
- **Increased recognition, supported by an improved principle based on the 'people-centred' approaches of urban planning and housing design -** the urban planning and housing design was focused on the principles of the 'people-centred' approach, it improved the high standards and elaborate design for housing and the living environment, and also emphasized sustainable development through green building and a low-carbon ecological environment in the high density, compact city as the model for future cities.
- **Social networks and everyday life changes** – the type of urban housing changed, social networks and lifestyles were also changing as the neighbourhood's relationships and social communication changed. The traditional old housing areas - the *lilong* - had low-rise housing and social-friendly inclusion and a feeling of safety with trusting neighbourhood relationships.
- **Historic culture change, lack of local identity and characteristics of housing -** Shanghai urbanization has been growing rapidly, there seemed to be an overall change in the historic-culture identity with a lack of the original, characteristic, local housing after the re-construction of the oldest downtown area.

7.3.1 Residents' Everyday Use of Green Space

Indeed, as the following table shows, there have been considerable changes in people's everyday lives which affect their use of green space.

Table 7.6: Understanding the Changes in the Everyday Use of Green Space in the City

Interviewee	Understanding the Changes in the Everyday Use of Green Space in the City
(G1)	The **increases in green space** might provide just one big park in one district. Nowadays, there are **lots of small parks and street grassland** as well. So the usage rate will be more. For example, before, you might have to take the bus to reach the park. Now we can reach them on foot because the policy is **to reach 500m^2 of grassland in five minutes.**
(G2)	There has been significant growth in the everyday use of green space since 1979. As soon as the material conditions were improved, **quality of life** has become one of the primary targets. Today, people spend their **weekends and vacations on journeys** to parks and suburbs in Shanghai. Because of the prevailing use of automobiles, increasing numbers of families drive to Jiangsu or Zhejiang Province to spend their weekends.
(G3)	Changing from scattered greening projects to **the comprehensive planning of green space** can be the biggest improvement.
(G4)	Previously, residents cared more about **the basic daily needs of life**. As long as the **living conditions have improved,** the residents then pay more attention to **ecology-related health issues**. Concerning health, people would like to do more **physical exercises** and care more about **air quality** [and] believe that green space is beneficial to their **health and living environment.**
(PL2)	Since the 2000s, the economic development and living conditions have improved. Looking forward, a more **high-quality environment in residential areas** and a high quality of housing is required. Especially, the space and activity areas for **children and old people** need to be considered.
(AR/PL1)	Landscape design has started to develop since the late nineties and been in a mature stage since 2000. There was **no standard policy** for the design of green space before. Nowadays, residents increasingly enjoy green space or open space to take some **outside exercise**, walk with their family etc.
(AR1)	Developers make the environment and green space better as a selling point. Also, **the function**, of green space differs according to the user…the **children's playgrounds** should be near the buildings and separated in different places. Moreover, how often **children play outdoors** and use the facilities is also an important consideration.
(AR2)	The first breakthrough emerged in residential landscaping while people were more focused on the **quantity of green space**. After 2000, the term "landscape" appeared. The development of commercial properties … further promoted urban greening by **increasing the quality and design** … including using water and

	three-dimensional green spaces. So the landscaping can promote the residence **meaningfully**.
(AC1)	There were not many parks in the past and most of them **charged a fee**… Now, the green space and number of **public parks have increased**. From the perspective of people's needs, they tend to protect the public space when they found it **improves the aesthetics** of the environment and the comfort of life.
(AC3)	Another possible reason is that people now are more aware about the **importance of green space**, which has also become an important manifestation of the achievement of the government … the increased requirement of the **high living environment.**
(AC4)	In the past, people tended to pull down the wall of the parks, making them free to use. However, this led to significant problems as China has a huge population, once parks are free to use, it will **create security risks**. It will **destroy the ecology** of nature or green space.
(LA1)	Only People's Park was public green space in the past. At that time, parents took their children to the park **for outdoor activities**, young people went there for romance and the **elderly went for exercise**. There are more and **more green spaces now**. The new communities think **highly of the greening and functional needs**. Therefore, The People's Park might be used for large scale public or charity events, which are much more frequent than before.
(LA2)	The function of landscape has changed from offering a place for people to live to following **aesthetics and artistic** pursuits. People's **daily lives** have become involved in the landscaping on a daily basis.

The data from interviews with key stakeholders also show that urban green space has been changed when the national housing allocation system transformed to commercial housing, dominated by the market economy, alongside a parallel provision of high-density, high-rise housing in the compact city. More recently, predominantly within 'gated communities', accelerating growth is causing trends that directly or indirectly affect the urban landscape or living environment. These changes arise from the desires and increasing concern about the good quality of life and providing more green space for neighbourhood communications and relationships. As such, urban growth and change emphasises the need for a more intensive development of public green space/parks. This has seen a marked upsurge in interest in, and concern for, both the quantity and quality of green space in the city. As the number and size of public green space and parks increase, the policy to requisition and improve lots of small parks and street green space has helped to reach the target that 'residential areas should be within five minutes of an open/green space of at least 500m^2 which provides general facilities

for recreational activity'. From the perspective of people's needs, they tend to protect the public space when they found it increases a multifunctional, aesthetic, attractive landscape that contributes to the high quality of the living environment.

Evidence from the interviews also shows how local residents everyday use of urban green space has been contributing significantly to social networks and inclusion because it is free and access is available to all, especially for children's outdoor play and elderly people's outdoor exercise and psychological health. It also provides social activities and events, including enjoying nature and parks with the family during the weekends and vacations or everyday use. The importance of nature/green space in urban areas has been recognized to have ecological functions since the last decade when widespread environmental degradation and increasing urbanized pollution became more visible as the air and water pollution emerged. Therefore, enhancement of the physical urban green space by reducing pollution, moderating the extremes of the urban climate and contributing to sustainable landscape planning is needed to improve people's everyday lives.

7.4 Quality of Life in the City

This section presents the data and identifies evidence of a connection between the quality of the features of the built environment and the importance of urban green space for the quality of life in the city. The key stakeholders and local householders were asked to define quality of open/green space and about their understanding and awareness of quality of life in the city. The overall associations found in their interviews were examined. Table 7.7 shows that local householder interviewees have a very simple definition of what represents quality in an open/green space.

Table 7.7: A summary of local household's interviews definition of quality of open/green space

• Good quality of open/green space should be:
• Good provision of both the quantity and quality of green space in urban areas.
• Well-managed and maintained public open/green spaces.
• More 'naturally' green space/ not damaged by human activities.
• More attractive, aesthetic and comfortable open/green spaces.
• Providing public facilities for recreation within a localised area.
• Providing recreational and exercise health facilities for users of different ages, especially outdoor play for children and for elderly people.
• A quiet, cleaner, greener, feeling safer and trustworthy, healthy environment for relaxation and enjoyment.
• Aware of the weather problem and have shady spaces for hot days.
• Good design with a 'people-centred' approach.
• Keeping local characteristics and historic-cultural identity.
• Coexistence between 'man and nature in harmony'.
• Good provision of green space and water space, and more species of vegetation.
• A good, reasonable, multifunctional design.

The householder interviewees' responses showed that defining a good-quality of green space should include being well-managed and maintained; more attractive, aesthetic and comfortable for different aged users, especially for children's outdoor play and elderly people's activities.

> **CH1:** The good residents' area should be with more green space, provide basic public facilities and local services … a good standard of maintenance… and safety is also important.

> **H8:** …all trees, grassland and green space should be well-managed and maintained…our neighbourhood has enough green space but without good maintenance.

> **S2:** …well, should be like the Penglei Park … provides recreational and exercise health facilities … and suitable for different aged users … especially outdoor play for children and elderly people's activities.

The maintenance of green space emerged as a very important issue for participants, as in the amount of litter and graffiti, unclean footpaths and the poor condition of public

facilities and the playground for children's outdoor play. Moreover, feeling that the space was safe and trustworthy was also an important issue in the discussions of quality green space. Furthermore, this would seem to follow the findings from the key stakeholders' interviews about the depth of their understanding and awareness of the quality of life in cities. For example:

"The good quality green space should have a more elaborate design, such as showing a strong sense of hierarchy and integrating with hard materials. Along with the growing cost of the labour force in China, an elaborate landscape which requires relatively more maintenance will become unaffordable. Without good maintenance, the garden will deteriorate. In some recent projects of Vanke, the quality of greening is not good at the start, but growing better without any maintenance. But most buyers expect to see what the mature scene would be like after ten years."

(In-depth interview with a planner PL1, 2013)

"First of all, the greening landscape should be planned well. A good plan could have a reasonable functional arrangement, a reasonable layout, a sufficient number of greenbelts, rigid pavements and good supporting facilities. This is the first step to having a good plan. Then, the rich urban space can be created, in which there are abundant plants. At the second level, the good planning and design can provide a display of high quality through good construction, with good materials and good construction technologies. This basically can achieve the condition for a high-quality green landscape."

(In-depth interview with an architect/planner AR/PL2, 2013)

"Good landscape design should have good services for people. Its design must be able to provide for the daily use in people's corresponding activities. In Shanghai, there is a housing estate (named so-and-so). It uplifted the basement to let the sunshine go into the underground garage and made a waterfall in the south. Outside is greenery and a pool. When you are parking, you can enjoy the sunshine, water pool and the green landscape. This feeling is marvellous. Because this garage is facing the green area, the people above cannot see the garage and can only see the water pool and the green landscape, so this space is shared without any mutual interference. I think this piece is always a demand ignored by us, since more and more people are driving cars."

(In-depth interview with an architect AR2, 2013)

It was also clearly emphasized that the quality of life should require an open/green space for children's outdoor play and where elderly people can take exercise, as highlighted below:

> *"The high-quality residential landscape should be really suitable for all users and different types of people ... We hope it is within the range of the green space where the elderly and children are both safe at their doors ... They can do physical exercises ... There are also recreational activities ... I suggest that dancing should not be put in residential areas, it is too noisy. You enjoy yourself but others may not enjoy. If you want to go to the park, you'd better go to public places ... It will be easier to understand if it is defined using descriptive language, so its privacy is the privacy in the entire park, the enclosure, its thickness and so on, but as for every little separate space, we still hope they can be used not only seen. We can also enjoy sunbathing and daydreaming."*
>
> (In-depth interview with an academic AC2, 2013)

Moreover, some interviewees have debated about local characteristics and satisfaction, as follows:

> *"In my opinion, the high-quality landscape should first meet the functions and reflect the local characteristics. It must get high satisfaction from the public and cannot be like this: 'the experts say yes for it but the public don't like it'. This type* [of landscape] *cannot be said to be high-quality."*
>
> (In-depth interview with an academic AC2, 2013)

> *"The home buyers value the green rate 35% of a residential landscape; however, I don't insist that the building with a high green rate has good landscape quality. As to residential landscape, I pay more attention to the environmental beauty, especially in cities. I have explained the reasons from the start. The high-quality landscape should be firstly judged by its relationship with the design concept of the landscape and the architectural environment, characteristics of the residential population and the natural environment. There is no modern and ancient difference. It will be great if it is the right one. The second is to see whether the expression of concept is in place or whether there has been digression, whether the expression is not so fantastic and so on. The last is to see the processing of details. The later maintenance and management of landscape can also be the factor affecting the quality of the landscape. To sum up, an upscale residential landscape is a joint effort by high-quality developers/enterprises, a high-quality design team, a high-quality construction team and a high-quality maintenance team."*
>
> (In-depth interview with a landscape architect LA4, 2013)

Overall, the findings reveal evidence that identifies the quality features of the built environment and how important the urban green space is for promoting the quality of life in the city. Households in more densely developed neighbourhoods, who are more likely to use their well-maintained and managed public green space, consider that it provides public facilities for recreation within the local area and provides a sense of place: cleaner, greener, attractive, feeling safer and trustworthy, a healthy environment for exercise, relaxation and enjoyment. However, the findings from the professional respondents clearly emphasized that the quality of life should involve more good landscape planning and elaborate design. The involvement of urban planners, designers and ecologists is also essential to articulate strategies for urban green space that explicitly advance environmental equity, local characteristics and satisfaction, and also have to consider the open/green space for different uses, especially for children's outdoor play and where elderly people can take exercise within areas with high residential densities.

7.5 Issues and Challenges for Landscape Design and Urban Planning

The evidence from the research shows that there are several critical issues and challenges that relate to urban planning, green space and housing in the city. Throughout the interviews the high-density urban areas and the limited land use; history and culture; the lack of green space and inadequate levels of management and maintenance, and the quality of life of their citizens were highlighted.

7.5.1 High-density Urban Life

Shanghai's urbanization has been growing rapidly for over 40 years, the urban land of the central city has expanded quickly and limited resources for development are increasingly concentrated in the city. Thus, facing rapid urbanization and a pressing need for land for urban development has become one of the severe issues and challenges to addressing how to deal with green space within the more sustainable development process which is now its aim. This was claimed by G1/G2/G4"Huangpu district is the

oldest downtown area of Shanghai, it has a very high density of population with approximately 30,000 people per km^2 … the biggest challenge is the shortage of land resources and the cost of developing public green space in the compact city is getting high. Actually, from 1999 to 2006, there was a rapid development of public green space in Huangpu District … the district government funded about 6 billion CNY to providing 20-30 acres of land for green space development, which was a very courageous decision involving the transfer of their residential or commercial land to green space … but the land exploitation for green space has gradually declined since 2006, because of the scarce land resource and the growing cost of compensating those relocated, which has significantly increased from 10,000 CNY to 40,000-50,000 CNY per m^2 for the construction of green space."

However, facing the challenge of extremely high density and limited land resources, the normal way to solve the problem, as suggested by G1/G2/G4, is "to deal with this problem is due mainly to emphasize reduction of their existing population from the central city, especially from Huangpu district … we encouraged local residents to move outwards to relieve overcrowding in the city centre. The land in this area can be redeveloped as high-density residential areas with a third of the industrial land for commercial use and also be seen as a significant ecological development project to relieve the heat island effect and improve the quality of civil life." The growth of health, well-being and the multi-faceted green space for the sustainability debated in the metropolitan city, is essential to ensure that the potential economic and social developments arising from speedy urbanization are optimized to reduce land-use shortages, improve the quality of life and protect the ecological environment.

7.5.2 Historical values and cultural identity

There seemed to be an overall lack of adequate historic protection and cultural change in Shanghai, which is related to the discussion set out in sections 7.2 and 7.3 which highlighted the historic development and understanding of cultural change in cities. The interviewees provided a strong argument that one of the challenges to urban planning,

green space and housing in the city is the need to strengthen the historic protection and cultural identity. G1 claimed, "Huangpu district is the most historic and cultural district in Shanghai, there are many different types of housing in this area, especially in the oldest town district, which holds the historical characteristics in the city while the quality of housing is low-grade … thus, the real difficulty is how to deal with the conflicts between the protection of historical sites and the provision of good quality living conditions for residents. If all old buildings were to be demolished and rebuilt as new residential areas, it will look better but meanwhile they lose the unique cultural identity and characteristics of the historical housing in this area, so the Huangpu district will have no more local characteristics than any other district." Overall, Huangpu district only has a small amount of the land that can be improved because most land has been rebuilt in recent years already, therefore, the original local characteristics and socio-cultural identity will also disappear rapidly when the oldest downtown areas are re-constructed.

AC2 also highlighted the issues of the 'culture change' saying, "I think there are some problems, such as, Shanghai is a city of immigration and culture is diversified. We usually have the expressions "Shanghai-style culture' and "Shanghai-style garden", in fact, people have different opinions on what 'Shanghai' definitely is … This is why on the basis of being not able to determine the characteristics, cultural characteristics and garden features of Shanghai, we may not find the trend while guiding a modern innovation … thus, the biggest challenge of this work is to rediscover what kind of identity Shanghai has, and understand the historical changes in the landscape design in Shanghai ... In modern times, these cities, especially the coastal cities such as Shanghai, all have local characteristics and their own unique social culture, this is an important direction in this research ... Moreover, from the perspective of historical houses, such as *Lilong* or *Shikumen* in Shanghai, each has its own historical value and local characteristics which are a combination of the exotic, native building style. However, the pattern of a *Lilong* cannot be a suitable high density living form in the city now, thus the *Lilong* or *Shikumen* have today become a kind of relic of the historical features … Today's houses have lost their characteristics, and that is also so in terms of

landscape, today's residential areas are totally operated from the perspective of the market, it is more according to this selling point and some selling points of developers, so some landscape environments of many residential areas take on a mixed appearance now, and even combine some European styles. This is not saying that designers are blind, while designers don't know how to cherish the tradition, it is a relationship between supply and demand from the free market … for example, they think a so-called French-style garden is more high-grade with a higher degree of market acceptance … From this point, I think the housing and landscape of today's residential areas have run-away from the native or local characteristics, they do not only have the characteristics of Shanghai, and also don't have characteristics of China, so you can see the same building and landscape style in Shanghai or other cities."

In spite of this, development is now relatively centralized, and the buildings are more characteristic, which were European styles during the colonial period at that time and styles of each period combined with the features of Chinese traditional buildings. Therefore, Huangpu district is a district with many characteristics of Shanghai-style culture. It needs to understand and revise how the history and culture of Huangpu district has formed, including the origin of historical buildings, something about the residents in the whole district or the whole of Shanghai, and including that you should be familiar with what form of atmosphere is demanded in this district. Indeed, the policy also has to show that the government has emphasized the conservation of a national historical city and implemented the support to improve the urban cultural conservation system whilst highlighting the conservation of characteristic features and producing an innovative mechanism for cultural conservation (Urban Planning of Shanghai, 2015).

7.5.3 Urban Environmental Sustainability and Ecological Functions

The problem of how to enable urban development while enhancing the relationship between housing and people's access to, and use of, a green space environment will become more prominent as one of the biggest challenges facing communities today in the development and urbanization of the world and also in Shanghai. Interviewees

identified that rapid urbanization has created numerous environmental destructions in the cities, as the global warming and air pollution in Shanghai continues to improve, and other issues will be intertwined. LA4 highlighted, "Shanghai is the largest and most modern city in China and has experienced speedy growth and urbanization. The follow-on environmental and ecological consequences of urban extension have caused considerable concern and several problems have emerged, such as the environmental degradation and increasingly urbanized pollution becoming more visible as air and water pollution. There is less valuable agricultural or green land and the ecology has become further fragmented…thus, protecting the environment remains one of the significant challenges for our city … we should aim for a combination and balance between people's demands and nature's demands, and to approach an ecosystem that services the environmental balance in limited land resources which satisfy the demands of people's activities and nature."

The environment/sustainability debate continues in cities where people and activities have created a myriad of complex social and ecological challenges, with often severe environmental consequences including the highest impact of atmospheric, water and ground pollution. As LA4 also give details, seeking to deal with "these challenges is to provide the important impact of the value of the urban environment…we need an understanding across many disciplines and spheres of knowledge and the strong involvement of leaders…what needed to be done is to try to achieve the basic principle of ecology under the premise of satisfying people's necessary demands… Firstly, regional resources: determined by the environment, we should escape the disruptive changes in regional characteristics and propose less action, more thought, less destruction and more improvement. Secondly, hard landscaping: the size should be basically and rationally controlled; materials should support environmental protection, which creates a comfortable environment and avoids waste. Thirdly, the green space environment: adopting the natural terrain to form an ecological community and introducing local plants that can live together with the environment, sustainability is very important. Fourthly, utilization of water resources: no water to drink near the rivers, no water to use along the rivers, and urban land subsidence, these typical Chinese

city features are related to water. In the design, strengthening the collection and utilization of rain, using plants to purify wastewater in the city and strengthening the underground infiltration of rain are our responsibilities." This is related to the argument about the challenges of environmental protection and the ecosystem services approach. However, the policy also showed that the government has explored the land-use and land-cover changes during 1975-2005 which focused on the effects of the urbanization process on air and water quality, local climate and biodiversity (Zhao *et al.,* 2006). The new urban plan - Shanghai 2015 - emphasizes nourishing a green and low-carbon ecological environment and building ecological nodal spaces to ensure a basic ecological bottom line to improve the important quality of ecological protection and function.

7.5.4 Quality of Urban Green Space and Living Environment

Typical large city problems such as environmental and socio-cultural deprivation, increasing population density and urban sprawl cannot adequately support urban basic infrastructure and services for the growing number of urban residents. In addition to inequities in health and well-being, neighbourhood degradation and urban environmental quality have become more serious concerns and are central issues in most cities (Kamp *et al.,* 2003). This is reflected in the crucial challenge of providing the principles underlying the different approaches to improving the quality of living and human well-being. On this topic, interviewees AR2 and LA6 highlight that "Huangpu District is the oldest central district of Shanghai with relatively high land prices, a high volume rate of residential areas, high population density and less green space. Under the conditions of rapid urbanization and re-development of this area … we have to pay more attention to residential activities, mainly to meet residents' satisfaction and demands in the multidimensional perception of residents' quality of life. In addition, Huangpu district lacks large amounts of green space, there are some small green spaces such as street green space and small-scale parks, but not enough for the whole Huangpu district area … therefore, the challenge is to improve the quality of living conditions, such as the quality of the old houses which usually lack basic public facilities like their own toilet and kitchen, and the skills to manage and maintain the quality of urban green

space and public facilities." Overall, the interviewees identified the indexes of perceived residential environmental quality and neighbourhood attachment concentrations on the relationship between high quality green space and the basic facilities of housing. However, government officials also provide the public policy to encourage vertical greening and green roofscapes and improve both the quantity and quality of greening in the living environment.

7.6 Conclusions

This chapter has sought to understand the diversity and complexity of everyday relationships between landscape design, housing and the use of green space. In doing so it has presented data from the in-depth interviews with local households and key stakeholders, and observation in public and private spaces in the Huangpu district of Shanghai with reference to ideas presented in the literature review. In doing so it has highlighted a re-emergence of long-standing historical perspectives regarding the value of nature and how this changing relationship is shaping the contemporary city. What has become clear throughout this chapter are the opportunities, weaknesses and limits of planning and policy in ensuring that the re-emergence of historic values concerning urban nature and everyday life is enabling a more progressive relationship between the provision and use of green space and housing in the contemporary Chinese city.

Chapter 8   Conclusions and Recommendations

8.1 Introduction

The final chapter will conclude this thesis by drawing together connections and discussing the key arguments from the academic literature with reference to the findings from the research as outlined in each substantive chapter. The chapter starts by summarising the premise of the research and how the research design was developed to reflect the aims and objectives. The chapter then discusses the contribution to knowledge and theoretical implications of this research, to better understand the theoretical insights and empirical evidence that can contribute towards urban change and urban everyday life. It seeks to ensure a more equitable access to, and increased quality of, green space in residential areas. Further, the chapter then outlines key findings and recommendations for policy and practice from the research in order to inform a more progressive relationship between landscape design, housing and the everyday use of green space in Chinese cities. Finally, the chapter will explore the scope for further research.

8.2 Reflection on Research Aim and Objectives

The present research sets out to explain the interactions/associations between urban planning, policy and the use of open space in residential areas in Huangpu district, Shanghai. It examines the issues of historic and contemporary relationships between landscape design, housing and the everyday use of green space in Huangpu district by addressing the following three objectives:

- To understand historic changes in the design, form and function, and relationship between the provision of housing and open space in Huangpu district;

- To critically consider the contemporary political, economic and policy context and everyday practices associated with open space and residential life at different spatial scales in Shanghai;

- To offer policy suggestions regarding the planning, design and provision of open/green space in residential areas in China, and to emphasize the diversity and complexity of open/green space provision in residential areas.

The research design and methodology chosen for this research have been developed in order to generate robust and reliable data sets that provide rich and detailed understandings of residential areas and green space in the case study areas of Huangpu district. In order to address these issues, the research utilizes qualitative research methods shaped by the research aims and objectives. A multi-methods approach has been developed and adopted which includes a literature review, in-depth interviews with key local stakeholders and households, participant observation in public spaces and textual analysis of policy and planning documents. In order to answer the related research objectives these separate steps have been followed:

- **A review of historic and contemporary changes in Chinese cities** in order to understand the changing relationship between urban planning and the everyday use of open/green space in cities.
- **Textual analysis of contemporary policy documents/plans**. A search of contemporary policy documents and plans focused on Chinese urban national policy and local policy in Shanghai.
- **In-depth interviews with key stakeholders** including urban planners, politicians, architects, academics and landscape architects. The interviews explored respondents' perspectives on trends in housing development, design and the parallel growing concerns about how to 'green' Chinese cities in order to make them more sustainable.
- **In-depth interviews with key households** - in the categories of housing development outlined above, undertaken at the housing cluster scale, this research focused on a small number of residents by undertaking in-depth interviews which took place in their homes or other relevant 'public' and 'private' green spaces within the five case study sites in Huangpu district.
- **Observations** were undertaken in a wide variety of settings at residential quarter and housing cluster spatial scales in Huangpu district, including public and private green spaces, in order to understand how people interact, how social space is constituted and nature is imagined.

8.3 The Contribution to Knowledge

The contribution to knowledge of this thesis is to better understand the diversity and complexity of everyday relationships between landscape design, housing and the use of green space in Huangpu district. Given the rapid urban change and the diversity of Chinese urbanisation, there is important work to be carried out to highlight historic Chinese traditional and cultural values, which reflect the broader progression of Chinese society and everyday life. By drawing on theoretical implications, it has emphasised the co-evolution of the relationship between political, economic, social-cultural and spiritual structures and ideas and thought about the relationships between nature and the impact of important features of historic and contemporary Chinese cities.

Chinese culture is closely related to the philosophy of Daoism, Confucianism and Buddhism, always adhering to the principle of 'learning from nature' and a 'harmonious relationship between man and nature'. It has adopted the concepts of 'nature' underpinned by a more sustained engagement with the traditional culture and essential philosophies, which reflect the long-standing traditions of shaping the naturel environment in cities in the past. These are still influencing current urban planning and landscape design, and represent an ideal, harmonious, spiritual and living environment. It is clear throughout this research that there are opportunities, weaknesses and limits to planning and policy in ensuring that the re-emergence of historic values about urban nature and everyday life which are enabling a more progressive relationship between the provision and use of green space and housing in the contemporary Chinese city. However, it is vital that such critical research is undertaken so that theoretical insights and empirical evidence can contribute towards urban policy and planning agendas that seek to ensure more equitable access to, and increased quality of, green space in residential areas, among different social groups and in different cities.

8.4 Recommendations for Policy and Practice

In order to inform a more progressive relationship between landscape design, housing and the everyday use of green space in Chinese cities, the findings of this research lead to a set of recommendations which are suggested for policy and practice:

1) **In developing comprehensive strategies for urban green space system planning, planning and landscape should be addressed using an integrated and 'joined up' approach.** To face the often contradictory realities of urban development and rapid economic growth in China, the evidence from this research highlights a coming together of political and institutional concerns - if not always the practicalities - of ensuring closer integration of green space provision and housing, in order to achieve progressive economic, social and urban change. A fundamental policy transfer relating to policy, the planning system and decision-making in the case study locations and at national, urban and local levels could highlight the extent to which there is a 'joining-up' of policy and practice.

2) **Identifying the local characteristics and emphasizing the conservation of historic-cultural values.** Urbanization in China has been growing rapidly, there seems to be an overall change from the historic-cultural identity that lacks the original local characteristic of a city when the oldest downtown areas are re-constructed and re-developed. Therefore, good planning for urban and landscape design needs to understand and revise historical changes and cultural values. Moreover, wide-ranging improvement of this is needed if the local authority is to emphasize the conservation of the historic-cultural values of the city and provide a stronger identification of the local characteristic features.

3) **Importance of urban environmental sustainability and ecological functions.** There is an environment/sustainability debate in cities where people and activities have created a myriad of complex social and ecological challenges with often severe environmental consequences including the highest impact on atmospheric, water and ground pollution. However, the importance of nature/green space in urban areas has been recognized in ecological functions since the last decade when widespread environmental degradation and an

increase in air pollution emerged. Therefore, enhancement of the physical urban green space to help reduce air pollution, moderate the extremes of the urban climate and to contribute to sustainable landscape planning is needed to improve people's everyday lives. This need to enhance the urban environment's sustainability and emphasize the increase of green space and a low-carbon ecological environment, build ecological nodal spaces and ensure an ecological basic bottom line to improve the important quality of ecological protection requires a functional approach.

4) **To improve the quality of urban green space and the living environment.** Urban green space changed when the national housing allocation system transformed into commercial housing, dominated by the market economy but alongside a parallel provision of high-density, high-rise housing in the compact city. More recently, predominantly within 'gated communities', growth is undergoing trends that accelerate and influence the urban landscape or living environment directly or indirectly. It seeks to attend to the desires of increasing concern about a good quality of life and provide more green space in neighbourhoods which, in turn, provide opportunities for social relationships to develop. This needs to provide good design using the principle of 'people-centred' approaches and develop detailed designs; emphasize integrated development with good management and maintenance of public open/green space. It also provides recreational, exercise and health facilities for users of different ages - especially for children's outdoor play and elderly people's outdoor exercise and psychological health - and provides for social activities and events. However, from the perspective of people's needs, the city tends to protect the public space when they identify that it increases the multifunctional, aesthetic contributions to a high-quality living environment.

8.5 Scope for Further Research

This research examines historic and contemporary relationships between landscape design, housing and everyday uses of open/green space in urban China. In doing so, this thesis has drawn on theoretical debates and focused on the understandings of the contested concepts of nature and everyday life in order to offer critical insights into urban political, economic, social and cultural change in Chinese cities. The multiplicity of Chinese urbanization and rapid urban change means there is important work to be carried out to better-understand how comprehensive urban processes are playing out in particular ways in a diversity of spaces and places, among different social groups and in different cities. It is also suggested that such further research is undertaken so that theoretical insights and empirical evidence can contribute towards urban policy and practice that seek to ensure more equitable access to, and increased quality of, life in the cities. However, there is still more that future research might include:

1) **On the theoretical aspects**
   - The findings of the research can be used to understand the historic changes and cultural context in the design, form and functions of Chinese cities.
   - Perceptions of the knowledge of the concepts of nature and everyday life in urban China.
   - The various socio-cultural propositions suggested in this study require deeper exploration of rapid urban change.
   - Examining traditional values as a repository of knowledge that can inform urban planning.

2) **Focused on urban planning and landscape design**
   - On the creation of high quality living environments.
   - To enhance the multi-functional use of open/green spaces in urban areas.
   - To provide the skills to manage and maintain the quality of urban open/green space.
   - Landscape design guidelines, to ensure the enhancement of the quality of everyday life in contemporary Chinese cities.
   - To improve in quality and quantity the design of housing and landscapes.

3) **Focused on children's outdoor play and elderly people's everyday use**

- In what ways are children and elderly people controlled, constrained or prohibited in their use of urban open/green space in cities?

- What impact might the change in policy have?

- Allowing families to have more than one child policy and elderly people rapid have on the future planning, design, use and management of urban open/green space for children's outdoor play and everyday use by the elderly?

- What impacts on the planning, design and management of Chinese cities might air pollution and changes in the one child policy have?

4) **Interesting for suggesting possible future relationships between ecological and sustainable landscape design**

- New technology, such as the use of a 3D print approach

- Vertical greening, green roofs capes and rain gardens.

8.6 Summary

This thesis seeks to explain the interaction between urban planning, policy and use of green space in residential areas. It examines the claims that it contributes positively to how the political, economic, social, cultural and spiritual relationships between nature and the everyday must be understood as an important feature of historic and contemporary Chinese cities. Given rapid change and the diversity of Chinese urbanisms, there is nonetheless important work to be carried out to better understand how broad urban processes are playing out in particular ways in a variety of spaces and places, among different social groups and in different cities. It is vital that such critical research is undertaken so that theoretical insights and empirical evidence can contribute towards urban policy and planning agendas that seek to ensure more equitable access to, and increased 'quality' of, green space in residential areas. The findings show that the quantity and quality of well-planned open/green spaces consistently provide the delivery of economic and social benefits for local communities and also contribute positively to residents' quality of life and wellbeing. Undergoing unprecedented rates of urbanization, residents' perceptions of nature/green space in the density of a neighbourhood were found to be particularly important for the recognition of urban environmental sustainability and ecological functions, where issues include environmental pollution, flooding, climate change and the risk of heat-related illnesses for city dwellers.

The analysis indicated that diverse everyday experiences of green spaces have shown their ability to filter air pollution, cool temperatures and infiltrate storm water. Moreover, they can also provide support for physical activity, public health and psychological and mental well-being, since connections with nature could help reduce stress, combat many urban ills and improve the quality of life for urban residents. Additionally, parks/green spaces often serve as open space for different aged users for recreation, physical activity and health facilities, especially for children's outdoor play and elderly people's exercise. Children with more access to a greenscape and outdoor recreation facilities are more active than children with less access, the results for elderly

people are similar. It can therefore be argued that the focus for the environment is one of social justice, where access to nature/green space should be for everyone with the provision for green space to be made publicly accessible in perpetuity.

Ensuring that access to green space is seen as providing a social benefit for all residents is a challenge for both the environment and social justice. This challenge is due to historic changes in the design, form and function of urban development; the high densities found in some residential neighbourhoods and the rapid and explosive rates of Chinese urbanization. Therefore, access to green space is becoming increasingly recognized as an environmental and social justice issue. Recently, the sixteenth provision of central policy proposal was to promote the new residential block system whilst the closed system, such as gated communities, should not be utilized in the future. The local communities which have been built should be gradually opened to create access to a greenscape and internal roads should become public roads to ease traffic congestion and promote environmental and social justice. However, access to green space is not supported by an evidence base, nor is there only guide of quantity on how far or mins are enshrined with urban green space codes, but are difficult to implement.

The urban policies, practice and research on green space access in China are also limited, the ecological functions of green space are poorly understood and parameters for the quality of green space remain undefined. It is unclear to what extent each feature contributes to the quality of the living environment since green space differs in terms of size, heterogeneity, quality, range of facilities, availability of organized recreation, perceptions of meaning or safety and availability for differently aged users or potential users. Residents' perceptions of the quality and character of the neighbourhood are positively associated with a range of health facilities and more open space for the community, the attractiveness of a green space with increasing economic success/quality of life. Meanwhile, density is negatively associated with no parking areas and poor management and maintenance of green space. Green space can also provide a forum for everyday social interaction and a greenscape can increase

perceptions of a local community of trust, safety and meaning. Therefore, from the perspective of residents' needs, more research is required to ascertain what contributes positively to urban residents' quality of life and well-being. The findings suggest that urban planning and landscape design should support the principle of a 'people-centred' approach and improve the positive management and maintenance of the greenscape as well as its local identify and character. It should also emphasize integrated multifunctional, aesthetic development and also focus on improving the condition of services and facilities to create a perception of a high-quality built environment.

In sum, the theoretical integration of landscape design, housing and green space offers fruitful insights and resources for policy makers, planners and developers to begin to offer more comprehensive strategies for urban green space planning. This work is vital in order to develop a more integrated and 'joined up' approach to urban re-development that seeks to respond to both an historic re-articulation of human/nature relationships and the changing nature of housing and everyday life in Chinese cities. However, to be 'joined up', policy and practice demand a careful balancing act. It involves collaborations between the national and local government, different community groups, and a willingness of stakeholders to compete with the interests of powerful real estate and local residents' participation.

The active involvement of different professionals such as urban planners, architects, landscape designers and ecologists is also necessary in order to articulate strategies for ensuring closer integration of green space provision and housing in order to achieve progressive economic, social and urban change whilst pursuing an increasing understanding of the role of academic knowledge and expertise in 'brokering' better relationships between policy makers/planners and the diverse range of urban residents in enabling future policy and practice. But, how this is to be manifested, supported and effectively implemented requires further investigation. The theoretical and empirical material presented in this thesis also offers insights that increasingly underpin policy,

practice and research; a conceptual connection has been made from bottom-up expertise in brokering better relationships between policy makers/planners and a diverse range of urban residents in enabling future policy and practice. Such progress is vital for improving professional knowledge and skills for advancing the design of landscape and housing and the delivery of quality services and good management and maintenance of public green space in a manner that better attends to the needs of diverse social groups in the contemporary Chinese city.

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Appendix A: Chronology of Chinese History Dynasty

Phase	Year	Dynasty	Society
Ancient era (The Chinese classical gardens)	2704-2100BC	Five Emperors	Late Neolithic, tribal society
	2070-1600BC	Xia	Stone and Bronzes, Territorial State
	1600-1046BC	Shang	Bronzes, Territorial State
	1046-771BC	Western Zhou	Bronzes and Iron, Feudalism
	770-221BC	Eastern Zhou	Iron, Contending Sates
	211-206BC	Qin	Empire, Unification, Authoritariarianism
	206BC-220	Han	Empire, Unification, Feudalism
	220-280	Three Kingdoms	China divided
	265-420	Jin	Empire, Unification, Feudalism
	420-589	Southern Dynasties	China divided
	386-534	Northern Dynasties	China divided
	581-618	Sui	Empire, Unification, Feudalism
	618-907	Tang	Empire, Unification, Feudalism
	907-960	Five Dynasties	China divided
	902-979	Ten Kingdoms	China divided
	960-1279	Song	China divided into North Song and South Song
	1271-1368	Yuan	Unification, Feudalism, Ruled by minority
	1368-1644	Ming	Empire, Unification, Feudalism
	1644-1911	Qing	Unification, Feudalism, Ruled by minority
Modern era (The hybridization of ideas on Public Parks)	1840-1949	Republic of China	1840-1911: (Later Qing Dynasty) A semi-feudal and Semi-colonial society.
			1911-1949: China overthrew the monarchy. The old-new democratic revolution
The contemporary era green spaces	1949-Present	People's Republic of China	1949-1979: The socialist ideology of the Mao era
			1979: The post-Mao era and the 'open door' policy (Communist and Socialist)

Appendix B: Questions for the Local Household Interviews

PART1: ABOUT YOU

1. How long you have lived here? 您在这个小区居住多久了？
   ☐ Less 1 year　☐1-5 years　☐5-10 years　☐Up to 10 years

2. Tell me about your family, who live here with you? 可以聊一下你的家庭吗？有几口人？是和父母孩子住一起吗？
   ☐ with Parents　☐with Child　☐Couple　☐Single

3. Tell me about your job? 请问您是做哪方面的工作？
   ☐Employed　☐Students　☐Retire　☐ Others

4. Can you please tell me about you age? 请问你是哪个年龄段的？
   ☐ Less 30 years　☐30-59years　☐60 or up

PART2: WHERE YOU LIVE

5. Can you tell me what you like about you outdoor space? 您喜欢这里的户外环境吗？

6. Can you tell me what you like about the neighbourhood? 您喜欢这的小区环境吗？

7. What do you like about living in Huangpu district? 您喜欢居住在黄浦区吗？

8. Can you tell me what you dislike about living in you outdoor space? 那您能说说这户外环境有哪些是自己不满意的？

9. What do you dislike about living in the Neighbourhodd? 那您能说说这个小区有哪些是自己不满意的？

10. Can you please tell me what you dislike about living in Huangpu district? 那您能说说居住在黄浦区有哪些是自己不满意的？

11. What do you think makes a good quality of life? 您认为如何能让生活有好的品质？

PART3: NATURE AND USE OF GREEN SPACES

12. What do you think of when you think of nature? 您能和我说说是如何理解什么是自然？

13. What kind of 'nature' surrounds you every day? 您日常生活周围所环绕的自然是怎样的？

14. Which green spaces do you use most in Huangpu District? Why and How often? 在黄浦区，哪个绿地空间您最喜欢去？为什么？多久去一次？

15. Which is the nearest and which in the furthest away? 哪个是最近距离的，哪个是最远的？

16. Why do you go there and what do you do? 您是如何去，您在那做些什么？

17. If you don't often use green spaces can you tell me why not? 如果您不常去绿地空间，请告诉我为什么？

18. What would encourage you to use green space more often? 怎么可以让你更常使用户外的公共空间？

19. Do you think it is important for people to have their own 'private' green spaces? If so why? (eg small gardens, vegetable patches, roof terraces etc) 您认为能拥有自己的私人绿地是否重要？如果是，为什么？（比如说小的私人花园，小菜园，屋顶绿化等）

20. Which the private 'green spaces' that you use most? 哪些私有绿地是你最常用的？

21. Do you think that it is important to have certain kinds of trees, plants, animals, and specific green spaces in the city? Why? 您觉得增加城市的绿化是否重要？为什么？

22. How could green spaces in your neighbourhood and Huangpu be improved? 在您居住的黄浦区您觉得哪些公共的绿地空间是需要改进的？

PART4: THE QUALITY OF GREEN SPACES

23. What do you think is good quality of green space in Huangpu district? 在黄浦区，您认为什么是好品质的绿化空间？

24. Do you think that there is equal access to good quality green space for all residents of the district? 您觉得这个小区有提供足够的绿地公共空间吗？

25. Do you think that the local authorities provide enough good quality green space where you live? 您觉得政府方面有提供好的公共绿地吗？

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26. Has housing/ and or green space changed since you were a child? 和孩子时相比，我们的住宅和环境有什么改变吗？

27. If you could design your perfect green space for where you live, what would you include? Please explain and describe in detail. 如果您可以设计自己的理想的居住环境，您会如何设计，想包括哪些东西？请具体描述下。

28. I have asked all my questions, is there anything you would like to tell me that you think we didn't cover that you think is important for my study? 我问完了我所有的问题，请问您还有什么和我研究相关的问题或有趣的事可以和我分享或讨论呢？

Appendix C: Questions for Key Stakeholders Interviews

PART1: YOU AND YOU JOB 您和您的工作

1. Can you please introduce yourself? 请您介绍下自己？(姓名，年龄，什么公司，工作经验等)

2. Tell me your job title and your role and responsibilities with respect to housing and green space? 请问您的工作头衔，职责以及主要的负责事项是？

3. How much of your work is focused on housing and green space? 您的工作中有哪些方面是涉及住宅与绿地方面的？

4. What are the challenges you face in working on housing and green space in Huangpu district/ and or Shanghai? 关于上海或黄浦区的住宅与绿地方面，您觉得所面对的最大的挑战或问题是什么？

5. If there are challenges, how do you seek to deal with them? 当面临这些挑战和问题时，您是如何应对并解决的？

6. What kind of ideas informs your work on housing and green space? 您在住宅和绿地的建设工作中，经常会涉及的观点是？

PART2: NATIONAL & LOCAL POLICY 国家与当地政策

7. Can you tell me which are the most relevant national government policies that impact on planning and landscape design? 请问在城市规划和景观设计中，最重要的或最具指导性的国家政策是？

8. Can you tell me which are the most relevant local government policies that impact on planning and landscape design? 请问对规划，住宅与景观设计影响最大的当地政策是什么？

9. How do national policies and plans about housing/ and or green space influence the design of housing and green space? 国家政策或规范怎样影响住宅或景观设计？

10. How do local policies and plans about housing/ and or green space influence the design of housing and green space? 当地政策或规范怎样影响住宅与景观设计？

11. Is there an integrated strategic plan for housing/ and or green space at national levels, metropolitan, district, and neighbourhood levels? 有没有全国或是区域，城市，邻里范围的整体战略规划或是相关政策？

12. How do you think that a more 'joined up' approach to planning for housing and green space provision can be achieved? 您认为用 '联合' 的方式能达到更好的住宅与景观的设计吗？

13. How do you think that the official policy and planning agenda for housing/and or green space is being implemented in practice at national/city/district/neighbourhood levels?在城市/区域/邻里范围中，您认为国家与当地政策法规在住宅与景观设计上是如何具体实施的？

PART3: GREEN SPACES IN HUANGPU/SHANGHAI HOUSING AREA

14. Can you please give me some examples of what you consider to be the most popular green spaces to be found in Huangpu/Shanghai amongst local residents? 请举例说明上海黄浦区最受大众的欢迎的绿地空间？Please explain why you think these are the most popular? 请解释为什么会这么受欢迎？

15. Can you please give me some examples of what you consider to be the least popular kind of green spaces to be found in Huangpu/Shanghai amongst local residents? 请举例说明黄浦区最不受大众的欢迎的绿地空间？Please explain why you think these are the least popular? 请解释为什么会这么不受欢迎？

16. Do you think that some areas of Shanghai/Huangpu/or specific neighbourhoods have more popular green space than others? 您还知道上海有哪些受欢迎的绿地空间？

17. What do you understand to be good quality green space in residential areas? 您如何理解什么是高质量的住宅景观？

18. What are the barriers to providing good quality green space in housing areas in Huangpu? 提高黄浦区住宅绿地质量的主要障碍有哪些？

19. Do you think that the current provision of housing/ and or green space in Huangpu satisfies the needs of all local residents? 您认为现在住宅绿地的面积是否满足现有居民的实际要求？If not how do you think that the provision can be improved? 如果没有，需要如何改进？

20. How have the priorities for planning and design of housing and green space in China changes since 1979? 从 1979 年以来我国的住宅及绿地规划和设计是如何变化发展的？

21. How important is green space to the residents of Huangpu/Shanghai? 对上海黄浦区的居民来说，绿色空间有何重要性？

22. How important is nature to the residents of Huangpu/Shanghai? 对上海黄浦区的居民来说，自然环境有何重要性？

23. How has resident's everyday use of green space and housing changed in Huangpu since 1979? 从1979年以来，黄浦区的居民对于绿地的日常使用有什么转变？

24. How well does the city authorities understand and value residents' requirements for the provision of nature and green space? 市政官员如何理解当地居民对于自然环境和绿地的需求？

25. How important is the design of green space and housing in ensuring good quality urban neighbourhoods in Shanghai? 好的绿地和住宅设计对确保城市居住质量有何重要性？

26. Are there tensions between policy and planning for housing/ and or green space and the demands and priorities of property developers? 政策规范与住宅规划/或绿地的需求与房地产的发展是否有冲突？

27. I have asked all my questions, is there anything that you would like to talk about that you think my questions have not have covered? 我已经问完了所有问题，请问您在住宅和景观方面还有什么好的想法与提议？

28. Thank you, I have asked all my questions! Do you have specific policy documents, plans or any other material that you can give me that you think will be of use to my research.

Appendix D: List of the Key Stakeholders

NO	Interviewee	Occupation	Organization
1	G1.	Government Official	Shanghai Municipal Urban and Rural planning office (Director)
2	G2.	Government official	Shanghai Municipal Council of Greenspace, Director general
3	G3.	Government official	Shanghai Municipal Council of Greenspace
4	G4.	Government official,	Shanghai Municipal Council of Greenspace (Huangpu District) Section Chief
5	PL1.	Urban Planner	UA International Planning & Architecture Design
6	PL2.	Urban Planner,	Tongji University, Journal of Urban Planning
7	AR /PL1.	Architect/Planner	Shanghai TSK Architecture Design Co. Ltd
8	AR /PL2.	Architect/Planner	Certified Architect, Class A. General Manager.
9	AR/PL3.	Architect/Planner	Certified Architect, Class A with both Architecture and Planning.
10	AR1.	Architect,	professors with residential design, the State Council Special Allowance, Chief architect.
11	AR2.	Architect,	Certified Architect, Class A. Chief architect
12	AR3.	Architect,	Certified Architect, Class A.
13	AC1.	Academic	Tongji University Landscape department. Head of Department
14	AC2.	Academic	Tongji University Landscape department.
15	AC3.	Academic	Shanghai Jiaotong University Landscape department. Landscape Designer, Head of Department
16	AC4.	Academic	Shanghai Donghua University Landscape department.
17	LA1.	Landscape Architect	Shanghai GO.M. Landscape Design, Director.
18	LA2.	Landscape Architect	Nanjing KeP Landscape Design, Director.
19	LA3.	Landscape Architect	Shanghai J.J.Z Landscape Design, Director manger.
20	LA4.	Landscape Architect	Nanjing Urban Planning & Landscape, Director.
21	LA5.	Landscape Architect	Shenzhen WenKe Landscape Planning& Design, Director.
22	LA6.	Landscape Architect	Shanghai ASW. Landscape Planning& Design, Director.

Appendix E: Summary of Interviews (Stakeholders)

1. How important is green space to the residents of Huangpu/Shanghai?

a) Importance and function of the green space (air pollution, physical and mental health)
  - ➢ The green space is a very important part of life and is benefit both people's mental and physical health.(AR1)
  - ➢ The green space is one of the important function to reduce poisoning of the air, water, soil in the metropolitan. (AC3)
  - ➢ Shanghai is a very high-density compact city, so the need to build more green space for people who living the city. (AC2)
  - ➢ Green space it can be measured by the level of physical and mental health enjoyed by the inhabitants of an area.

b) Social networks, communication with neighbourhoods, and do some outside exercises
  - ➢ Green space is an important site for publicly, sociability and communication with neighbourhoods, and these activities can be understood as negotiations and practices to address the social and environmental paradoxes of late modern urban life. (G1)
  - ➢ The green space will make the residents have social networks and neighbourhood communication space, also will offers sports activities or do some outside exercises.(LA2)

c) Therapy, relaxation and leisure activities in the green space
  - ➢ Green space is very essential, people can take a walk in the morning and evening with their children or pets, have a chat with peoples and do some outside exercises. (AR/PL2)
  - ➢ It is an enjoyable part of our way of life, especially after a hard day at work, to get away from it all, if people can go for a walk at a green space where there are flowers, grass and water, will be relaxed mentally as well. (AR/PL3)
  - ➢ We are usually busy on our works, we would like to go the green space just complete relaxation away from a busy, stressful job. (AR2)
  - ➢ Green space is able to help balance people's life, more leisure activities, singing or dancing at open space during the morning or evening and weekends. (LA2)

d) Connections with nature in the green space
  - ➢ We enjoy it, it relaxes us and is a good way to connections with nature and where you can learn about nature in the green space/parks. It also to connection with the passage of the seasons and the unchangeable pattern of growth.(LA1)
  - ➢ It is a peaceful place which surrounding trees, flowers and grassland, the mental refreshment of simple physical work in a natural surrounding for creative ends. (LA3)
  - ➢ There are other everyday urban experiences, practices and knowledge that involve connections with nature but the green space or public parks offer particular opportunities for an embodied and sensual engagement with nature. (LA6)

e) Enjoy the time with families, especially for those people who have children and the old people
   ➢ Yes, it is important, especially for the old people and the children. Because adults have to working almost days, so is not often to use these green space, but it will be used often after dinner or weekends with the families. (G1)
   ➢ I think the green space is very important in my family, is particularly impressive when I have myself child, he like to play in the green space, and enjoy with some children together.(PL2)
   ➢ Of course, that is very important for those people who have children. If does not have green space in the district, they cannot go for a walk with their families after dinner, it's vital that have green space for them to enjoy the time with families.(AR/PL1)
   ➢ This is so significant, because the green space will make the residents have considerable benefits to the families that with elderly and children. And its very lack of green space for children in schools, as the playground may be the only place for student to do some outdoor activities to relax after classes. (AC4)

f) Aesthetic, everyday use and the quality of life
   ➢ I see a green space as making the city more attractive. A place of beauty and improved the quality of life.
   ➢ Recently, you would find out the more importance of green space in the city, more green space will be reflect the high level of living comfortably for residents of Huangpu District in Shanghai. (LA4)
   ➢ It is one of life's pleasures. The green space is most important to us.(LA6)
   ➢ Green space is the satisfaction of seeing a beautiful picture created by designable and enjoyed by everyone who passes and stay there.

2. How important is nature to the residents of Huangpu/Shanghai?

a) Then meaning of Nature and Green space is make stakeholders quite confused. Almost stakeholders understanding about the elements of the nature world, as wildlife, woodland, mountains, animals or rivers. And the natural world should be exists without human being or civilization. But in the metropolitan, the entirely pure natural scenery can hardly be realised, only can harmonious integration of nature and human being by applying nature-artificial methods (to design of urban wildscapes or green space), made the nature be more commodification for urban life.

b) People more easily to understanding the link with ecology and nature together, think the ecology is a bridge that connection with human being to the nature, while the nature means less man-made factors. (Generally, when we talk about nature we may be linked to the wild environment or the original ecological environment. But in the city, I think it means a natural lifestyle, but it is only imitate a part of nature. AR2)

c) Nature is clearly important for wildlife and for casual recreation, but it also has other important roles to play in response to climate change, as leads plants and animals to shift their comfort zone, this ecological continuity of the nature will help to make territorial adaptation more achievable.

d) It's an enjoyable part of our way to connections with nature of life, as make people who live there feel they have returned to nature even though they live in the heart of the city,

and also help people to know and care for animals, birds, cats, squirrels.

e) Green space or parks are an apt nature for modernity, combining as they do the processes of globalization and the technologies whereby we have learnt to manipulate and change or hybridise nature. Green space and parks illustrate perfectly the hybrid nature of our relations with the natural world. (green space can be seen as a kind of man-made nature, as soon as human activities are involved, a green space can be regarded as an open public space which is more friendly or naturalised than a hard-paving plaza.G3)

f) The social meanings and material uses of nature are seen as a central issue for understanding the changing role and significance of risk and uncertainty in contemporary society. Arguably an ambiguity and ambivalence about nature are at the heart of social and economic life in late modernity.

g) The nature environment is very vital, and directly affects the quality of people's life. But nature is reducing every day, so how to protecting the nature space, and it keep away from human activities?

h) Now pollution risk permeates all areas of everyday social life and space, and more importantly into the future, so nature itself is threatened.

3. Do you think that the current provision of housing/ and or green space in Huangpu satisfies the needs of all local residents? If not how do you think that the provision can be improved?

➢ In the new residential area almost had achieved the green space up to 30% green rate of the area, but in the old housing probable not satisfies the needs of green space for all local residents. The old house area is hard to enhance more green space because the scale is limited, the way to create vertical greening or green roof is more frequently. (G2)

➢ The growth of public green space in Shanghai is significant, because the local government has provided large area of land for urban greening, such as Yanzhong Park. We has to plant more trees and enhance more urban greening to provision of green space in Huangpu satisfies recently years. (G2)

➢ In the national official planning police (by MOHURD) required exceeds 10-11square metre of green space per person, there is 13 square meter of green space per person in Shanghai. Nevertheless, the total area involves green space in the suburb of Shanghai, actually, in central areas, such as Huangpu Distract, there is only 2-4 square meter of green space per person which is much less than the official requirement. (Ministry of Housing and Urban-Rural Development)

➢ Shanghai is certainly not satisfied with the standards. It's made out of that Shanghai is a Garden city. A lot of city green spaces are count into the suburbs of the forest and balcony where growth plant. The real green space in the city is defiantly not meeting the National Garden City requirements.

If not how do you think that the provision can be improved?

➢ In China, the population density is too high, increasing the area of green space means to reduce the number of building, but reducing the number of building means to decrease the efficiency of land usage. There is no way to increase the provision, unless reducing the population density by driving people to the suburb. I think the biggest problem in China is to improve the quality of the green space, rather than increasing the quantity. (G3, AR/PL1)

➢ It can only lean on government's support and encouragement. However, there is a shortage of land resource in the central area. Shanghai has to achieve the balance of green space in a bigger picture—more green space in the suburb, and less quantity but can be higher quality in the central area.

➢ It is really hard to improve the green space in the old residential. Other way is can improve their management, and keep the living area tiny. However, the biggest problem of the old residential is parking. Because the old housing area have no space for parking or underground parking when the build. So , all free spaces used for parking now and without any plants.

4. How well does the city authorities understand and value residents' requirements for the provision of nature and green space?

➢ The policy basis is per capita area of green space which involves forecasted population and expected greening rate. Then we estimate how much new green space needs to be built and what target needs to be achieved in the following years. After that, we do the development plan of green space on the basis of the master plan. In this stage before implementation, functions, surrounding impacts, quality of service, financial supports and land resource will be inclusively considered.(G4)

➢ All the residents and representatives like us focus on public green space constructions, the requirements can be feed backed to the government and we also will according to annual analysis on population, density, existing green spaces and their service radius, we establish integrated greening development plans and modified in every year. (G1)

➢ In planning stage, public participation approaches are limited to posted plans and open comments. The problem is that the public can hardly propose suggestions without data support. Some specific demands, such as seat provision, can rarely be recognised by the public before constructions have been completed. Nowadays in China, most retired seniors, the main body of park users, are not abundantly educated due to the historical reason of "culture revolution". Thus, they cannot have the comprehensive understanding about the entire urbanisation states or the total demands for urban greening, or propose any sophisticated recommendations for planning of green spaces.(G3)

➢ The level of our civilisation is not high enough to have a comprehensive understanding of local users' actual needs. A project is not often specifically evaluated by decision makers who are only interested in gross land use and general layouts. Because, Public participation is not impossible. Decision makers have no idea about this problem. It may be stipulated

by experts. The indicator of greening rate is believed to be scientifically determined. It is based on population forecast and some other precise evidence. (PL1)

➢ Of course, the environmental situation is changing to a better direction rapidly.
There is no standard of the green space quality, only has the quantity of green space rate. So some house builder can design the green space better than others use the same 30%. From the smaller perspective, garden design department or a specific number of administrative departments, such as streets and districts. They may use a special way to control a particular project. And you just mentioned the quality and area control. Basically, it is to control the area but the quality is also reflected from those financial reports. Then there will have a several years plan inside government planning. For example, Chinese government will come up with a distinctive plan every five years, called five-year plan. For example, Shanghai including one city and nine towns. Any new Landscape planning should corporate with those nine towns and one city. (AR1)

➢ The most important thing is reply on report and information from the relevant departments, as well as the basic spirit of this country. Then there's a special place is that different governments in different cities have different requirements. You cannot simply view the government as an individual authority. It has various level departments and different controlling way to keep it works. For example, there is a deputy mayor in charge of urban green space landscape. The larger the government department control more macro level. It is used to set up basic policies comply with the law, and to provide support for green space funding these projects, planning and reasonable space, and then to balance the characteristics of the city and balance each region. It's followed the large index of control, which includes all aspects of financial support perspective. (AR2)

➢ I think officers never considered this issue. China is using collective decision-making. They are intent to operating thing without taking responsibility. And this constitution does not have the long-term nature, because the government is general frequently, which cause the difficulty of longevity of constitution and policies. But our specialty is obligatory long-term plan (AC4).

➢ According to the conversation and discussion of municipal officials, they do not necessarily understand the needs of the residents for natural environment and green space. Part of the cause of the problem is the residents do not know what kind of specific demands on the natural environment and green space they can require, and another part of the reason is residents cannot make their opinions release out to the public efficiently. Otherwise, the municipal officials pay more attention to his performance, which project can provide more benefits to their performance will be chosen. (LA2.3.4)

5. **Are there tensions between policies and planning for housing/and or green space and the demands and priorities of property developers?**

   a) **Almost stakeholders think there should be no conflict, because:**
➢ This is actually a kind of balance. To the citizens, it is better to tear the house down and build the green space, but the developer would like more land for develop new house. However, in the recently years, developer realized that to improve more green space or

build better quality environment, it will make the price of the housing rise, and all the cost will shared by resident who buy these house. Otherwise, if the price of the housing is too high, the government have to be controlled in a scale and balance that satisfied the needs of all the players. (G1)

➢ It depends on the government's determination. Today ecological civilisation is highly valued in this country and needs to be rapidly developed. I don't think that ecological civilisation contradicts housing development. Urban greening is always positive and sustainable and deserves public awareness and improvement. Ecological reservation is permanent. It deserves the priority of local development. We should sacrifice a part of economic benefit for the entire improvement of ecology. (G2)

➢ Planner's opinion is no tensions between policies and planning for housing/and or green space and the demands and priorities of property developers, on other hand, the policy should be help each other forward, it will experience the phases of adapting, maintaining and updating. (PL1, PL2)

➢ Now, those high-quality estate build with more green space will became the benchmark design. I think that should be promoted. So it is a virtuous cycle that if those properties can protect the environment before sale. (AR/PL3)

➢ I think there is no conflict, designer are comparing their landscape design between each other. What housing developer do now is that they will compare lots of landscape design and chose the most satisfied one and ask their designer to work out a better landscape design. (AR1)

➢ I think they are seeking a balance between housing area and green space. Conflict will appear when the balance is not being meet. For example, you would not get a higher payment if the quality of house were unsatisfied. So, I think there is common benefit between house and plant. Furthermore, the cost of plant is much lower than a house. Business will prefer to use lower cost and better design to attract more consumers. This point will not cause any conflict. (AR2)

➢ This is not; the Planning Board has allocated which area is for development of real estate, which area is for green space, which is for commercial aims. Our level of regulatory control in urban planning has been given. What can be sure that is green space can promote the development of the surrounding area. For example, Taiping Bridge Park, the entire Huaihai district suddenly growth up after it's completed. In fact, the Government is regard green space as infrastructure. Now, a lot of projects will finish the landscape design before sell the land. Once the landscape construction completed, this piece of land will have its own premier value. So, it's not a problem, but a side promotion of its development. (AC1)

➢ No, we cannot use the development of estate recent years to give a definition of real estate. I think the real estate urbanization is a very good topic and propositions. Chinese existing physical environment is not beneath a very good condition to study this issue, and should find an effective way to promote urban construction and real estate development. In other words, if there is no real estate construction last decade, some of Chinese industries may not start up that early, including architecture, landscape planning. We have a basic material and economic foundation within this decade, which lead to such a big development today, including the introduction of some advanced ideal from other countries. We cannot because of the quality of government decision-making and other aspects of the present stage to deny the achievements of this decade. This process has a lot of problems; we can study these issues out recommendations to policy makers, and make it move to a more positive way.(AC3)

➢ I think the conflict is not very big, because the government has some mandatory policy now. For example, if developers want to develop this piece of land, before the government approving the land can be developed, will require developers to help the city to do some urban green space construction. I think this area is still doing well. Government police is not entirely privatized, there are some parts are favor the public.(LA1)

➢ No, the policy and regulation have specification important mean to ensure the positive development of estate. (LA3)

b)   Some opinion that there is a conflict, because:

➢ This Conflict is refers to the market conflict, commercial demand and space usage requirements. For the demand of business, business wants to increase residential volume to maximize profits. From the user is concerned, the person who needs to buy a house prefers fewer houses in his residential for more green space. Government should pay more attention on balancing this conflict between efficient usage and personal needs by consulting demonstration, setting up the corresponding standard management regulations.(AR/PL1)

➢

➢ There is a conflict between the real estate business and expand green area of inhabitants occupy.(LA2)

➢ Strictly speaking, policy guidance and standardize that ensure the healthy development of residential planning, green space demand and real estate. The parking problems I mentioned before is not to be seen as the contradiction between the development of policies and regulations and green demand and real estate? The key is that when there is a conflict how the government adjusts the direction of policy.(LA4)

6. **What do you understand to be good quality green space in residential areas?**

➢ The high quality of housing; Firstly, the housing should be rational design; the space should be more privacy, the scale of size not too small, and also have to consider the housing's direction and ventilation. Secondly, the residential areas should with low density and good environment, the landscape of the residential areas need designable, the views need more broaden and also have to consider the transportation around. (G1）

➢ Trees should be primarily encouraged for urban greening. Besides, seasonal colour should be varied and diverse, such as colourful leaves in autumn and flowers in spring. They are all good results of urban greening. (G2)

➢ Great ecological capacity and complete facilities. (G3)

➢ The good quality green space should be more elaborate design, such as to showing a strong sense of hierarchy and integrating with hard materials. Along with the growing cost of labour force in China, an elaborate garden which requires relatively more maintenance will become unaffordable. Without good maintenance, the garden will be deteriorated. Some recent projects of Vanke, the quality of greening is not good at the start, but growing better without any maintenance. But most buyers expect to see the matured scene which would be like after ten years. (PL1)

- First of all, the greening landscape should be planned well. A good planning could have reasonable functional arrangement, reasonable layout, a sufficient number of greenbelts, rigid pavement and good supporting facilities. This is the first step to have a good planning. Then the rich urban space can be created, in which there are abundant plants. At the second level, the good planning and design can reach the display of high quality through good construction, with good materials and good construction technologies. This basically can achieve the condition for high-quality greening landscape. (AR/PL1)

- Firstly, the point, line and plane should form a system. The treatment could vary according to landscape at different levels. Secondly, it is better to combine terrain and function for elaborate design. Furthermore, the good construction should be used as a guarantee. (AR/PL2)

- I feel it is better to use water. The waterscape must be large and on the edge of waterscape it is the house. It is also primitively ecological, like the wetland. Another point is that the trees is definitely required, not only grass. The grass and trees must be in good management.

- Also the activity sites for children and elderlies are taken into consideration. They can do physical exercises. There are also recreational activities. I suggest the dancing should not be put in residential areas, it is too noisy. You enjoy yourself but others may not enjoy. If you want to go to the park, you'd better go to public places. (AR/PL3)

- I think we should consider it from two main aspects.Firstly, is the green rate of the area that is a main index; secondly is the housing plot ratio. If the area of this piece of land is 10,000 square meters and you construct the building covering 30,000 square meters, then its plot ratio is 3.It means the ratio of area of dwelling structure and land surface. Generally in the past, the plot ratio of high-rise residential area is 3.5. I think even if this ratio is good, the dwelling cannot be called as high-quality residential area.

- The degree of congestion in environmental psychology actually refers to the density and I once talked about it in my courseware. The previous research on degree of congestion covers two densities which are the external density and the internal density. The internal density means how many people living in each household and the external density means how many people held in an acre. Thus when you say that several tall buildings cover a small area with low building density, but the population density is already very high. In fact, it has been very crowded, so I think the building with plot ratio of above 2.5 cannot be called high-grade building. The traffic factors, foreign factors, urban relationship and surrounding environment all have impact on it. But for a piece of land, these two indexes are both important. (AR1)

- Good landscape design should have good serves for people. Its design must be able to provide the daily use for people's corresponding activities. In Shanghai, there is a housing estate (named so-and-so). It uplifted the basement to let the sunshine going into the underground garage and made a waterfall in the south. The outside is the greening and pool. When you are parking, you can enjoy the sunshine, water pool and the greening landscape. This feeling is marvellous. Because this garage is facing the greening area, the people who above cannot see the garage and can only see the water pool and the greening landscape, so this

space is shared without any mutual interruption. I think this piece is always a demand ignored by us, since more and more people are driving cars. (AR2)

➢ The landscape in our place is often basically discussed from the aspect of hard and soft landscape. The so-called hard landscape refers to some sites and constructions. I mean in China, such a flinty high-quality landscape should meet the staying and activity demands of a person because China's urban residential density is very large, so your flinty site should hold as much people as possible. While holding more people, you can also have such a certain activity zoning that contains the privacy and semi-privacy sites. The soft space mainly refers to the space giving priority to plants. Then I believe that the relatively high-quality soft space should be systematic and be of multiple levels. We cannot just pursue the sense of form, in other words, the visual things. (AC2)

➢ In my opinion, the high-quality landscape should first meet the functions and reflect the local characteristics. It must get the high satisfaction from the public and cannot be like this: the experts say yes for it but the public don't like it. This type cannot be said to be high-quality. (AC3)

➢ We hope it is within the range of the green space where the elderly and children are both safe at their doors. It will be easier to understand if it is defined with descriptive language, so its privacy is the privacy in the entire park, the enclosure, its thickness and so on, but as for every little separate space, we still hope it can be used to not only be seen. We can also enjoy the sunbath and daydreaming. (AC4)

➢ Personally I feel it should be the usability of inside occupants and the reasonability of functional convenience. The most important function is facilitate to use. All people like the green, so the higher green rate is relatively popular, whereas the reasonable and suitable using degree is more important. (LA1)

➢ Reasonable transportation and high green rate can provide residents with comfortable neighbourhood space for communication. (LA2)

➢ Human is the main body of use in residential areas and the goal of residential planning and landscape design is launched around demands to embody the concern for people. The residential planning should adapt to the future life pattern, it should create a convenient and comfortable living environment, it should show the personality and should nurture body and mind. Aside from the external beauty, the residential landscape which put human needs in the first place can be the landscape with highest grade. (LA3)

➢ The home buyers value the green rate of residential landscape; however, I don't insist that the building with high green rate has good landscape quality. As to residential landscape, I pay more attention to the environmental beauty, especially in cities. I have explained the reasons from the start. The high-quality landscape should be firstly judged by its relationship with the design concept of landscape and architectural environment, characteristics of residential population and natural environment. There is no modern and ancient difference. It will be great if it is the right one. The second is to see whether the expression of concept is in place, whether digresses, whether the expression is not so fantastic and so on. The last is to see the processing of details. The later maintenance and management of landscape can be also the factor affecting the quality of landscape. To sum up, the upscale residential landscape is the joint efforts by high-quality developing enterprises, high-quality design team, high-quality construction team and high-quality maintenance team. (LA4)

➢ The high-quality residential landscape should be really suitable for all users and different types of people, it could have different functions. (LA6)

7. **What are the barriers to providing good quality green space in housing areas in Huangpu? 提高黄浦区住宅绿地品质的主要障碍有哪些？**

➢ It is hard to say, because the whole green space in housing areas should managed by the own property department. The management and maintenance fee is shared by all residents who live in this residential area. Overall the generally management fee not so high, that why should be more difficult to support to providing good quality green space in housing areas. Therefore, the begging planning and design of this housing area was deciding the future quality of the green space is good or not. (G1)

➢ The challenge is how to get a good plan or design. The design concept is varied from a design group to another, from local to international. A creative design may not be appreciated by every decision maker. Therefore a final result is often universally presented. Many design companies and teams consider a design as a commercial product rather than their own work. Thus, they rarely do site surveys, investigation, data collection and analysis. It is not my personal bias in favour of overseas designers, because they are very conscientious in preliminary surveys and research, even though they may finally present a similar result with local designers. In China, most analytic works are formulised without a specific focus, which may be the result of a pressing need for public bids or impatient decision makers. (G4)

➢ The current barrier is the market-oriented design and development. The market's orientation is so strong that most developers have to make more efforts to balance the cost and benefit. (PL)

➢ I guess the most crucial impediment includes the investment of developers, the economic investment of residents and developers in the later period and the cost per square meter. The key is the maintenance in the later period. Greening is different from construction. Upon the completion of construction, it doesn't need too much maintenance and too many cares. While the green space needs the maintenance and care as well as the professional maintenance team. It also needs the care from residents. Both of these two points are needed. (AR/PL1)

➢ One is the area. The developer attaches different importance on it, then invests on it and does maintenance on it. These are points that I can think of, because it will be easier if the area is larger. Only a small piece of area is hard to be done with. The investment and later maintenance are also very important.(AR/PL3)

➢ Firstly, the area of green space is limited. Secondly, at the time of original architectural planning, it is not simultaneous with the green space planning. It will be harder to plan the landscape after finishing the construction. Thirdly, it can be said that the owner's investment is limited. (AR1)

➢ One aspect is the cost. Usually the cost of three-dimensional landscape and multi-level landscape is quite high.Second aspect is the consciousness. The Chinese people's consciousness of improving the quality of life needs the gradual enhancement. For example, in the case of unconsciousness of developers, if they invest a lot, you may think it is a waste.The third aspect is the orientation. For example; the temporary home, this kind of greening will be simple. In spite of luxury mansion, new ways will be thought about to do greening. (AR2)

➢ In my opinion, the major obstacle might lie in a train of thought of developer. Here the developer and builder we mentioned have two kinds: one kind is the government. The

Chinese government always masters a lot of resources. The other kind is the so-called private developers, but as for our government, although it also stresses the welfare for the people, our Chinese government is pursuing a kind of the record of achievements in official career, a kind of superficial thing. In a project, it might not pay special attention to how this project will be five years or ten years later or for a longer period. In the same way, the developers do it in the same way. They may pay attention to how my houses will be sold. Thus from the beginning, my pictures were drawn beautifully and the model houses were nice-looking, and he may not show concern for the appearance of his house five years or ten years later. As a result, I think under this kind of guidance, designers is likely to passively go towards this kind of visual thing that seeks for form. Therefore this is a problem. (AC2)

➢ Nowadays it is not the ordinary people who have the final say. It is not from the angle of users. Our current policy is to meet the most basic conditions and we can give 60 points to it. While for the point of how to improve the use property and quality of green space at the door, the thing we are doing is not good. Bluntly, our humanized design is too few. We still have to learn from Japanese and Europeans on this point, especially in densely populated countries. For one thing, Japan, its requirement on the utilization rate of this tiny thing at door is extremely high, and it also lets the common people to participate in it themselves. For us, we greatly depend on developers and the common people just play a role of unruly civilian, but now the rules of game for our policymakers are to kick out the common people from the inside. For instance, in Japan, the community manages its green space by itself. The mayor will be even in the position for the rest of life since he or she are very familiar with the local culture and inherited things. Some things are not permitted to be touched. Of course now we are undertaking large-scale reconstruction, however, from today on, we are still digging out the root of each place. At least from the perspective of ecology, we should let the owners make their own decisions. We may say that the green space all belongs to others and I am just a participant. To turn everything into a business is a big hurdle. (AC4)

➢ From the point of view of developers, it is the cost investment. In China, relatively speaking, landscape is more neglected compared with architecture and planning. We often encounter this phenomenon that Party A will spend more money on the cost of landscape in the earlier period, but in the later period, they will substantially cut down the spending. The expenditure on construction and planning (especially construction) will always tend to exceed their expectations. They will put the cost share of landscape more on construction and would not like to give the construction share to landscape. In contrast, they give more shares on construction, so they significantly reduce the share of landscape. The reason is that the requirement of effect of the whole finished product in landscape on nursery stock and materials is relatively high. As a result, the reduction of cost will lead to that we have no way to use the nursery stock and materials with ideal specifications. (LA1)

➢ One point is the construction technological process. In China, the level of construction technological process is quite obvious. If you are living in big coastal cities such as Shanghai, Shenzhen or Guangzhou, it is no problem. As long as Party A is willing to spend money, Party A can make anything they expect. But while if you are in other second and third-tier cities, even if it reaches the involving degree, Party A is willing to spend money. You still can't find one to be able to do it for the construction is too poor. (LA2)

> ➢ There are many obstacles which affect the quality of residential green space and the high-quality residential landscape needs the cooperation by multiple teams. Then any problem among these teams will affect the quality of green space. Huangpu district is the absolute heart of Shanghai and the average quality of residential green space in entire Huangpu district is not so high. This can be seen from the results of the annual Shanghai Best Home Award. The evaluation results of greening landscape award for residential developments show that the residence projects in Huangpu district won few awards from it. Personally, I think the landscape quality of residential developments is largest associated with the development intention of developing enterprises and enterprise quality. (LA4)
> ➢ For city centre, the spatial area is limited. (LA6)

8. How important is the design of green space and housing in ensuring good quality urban neighbourhoods in Shanghai? 好的绿地和住宅设计对确保城市居住质量有何重要性？

> ➢ It must be because a standard of a good quality environment is the open space. And an important content of open space is greening. So the greening is the first standard to measures the good quality of urban neighbourhoods and housing area. (G1)
> ➢ The leisure time and time after working hours. In addition to reading books at home or watching TV or sleeping, if you want to do outdoor activities, it will be basically related to the green space. It is very important! (AR/PL3)
> ➢ It can improve the quality of life.I believe this is inseparable from the economic development. First of all, we are going to meet the basic requirements of our life.
> ➢ Definitely, I feel the effect of design on greening and people are very crucial. I think the design is an economic lever. It can turn decay into magic and change the ordinary into highlight and gracefulness. (AR2)

> ➢ The basic and traditional requirements of Chinese on life are as follows: clothes, food, shelter and transportation. Good green space and residential design can improve the quality of life of every one. (AR3)
> ➢ It is quite important because now our residential areas have covered a considerable part of area and space in urban construction. If this problem cannot deal with very well, it would be a huge disaster to the future urbanization. Although our generation cannot see this disaster, the next generations will see it, not only in landscape, but also in buildings. (AC4)
> ➢ It will certainly have higher improvement just on the quality of environment. Previously there was not so much green space and Shanghai looked to be not so warm and seemed to be colder and icier. It was not so friendly and so cordial. After having green space, we can have more space to do some physical exercises and daily activities since we did not have these places to do them. (LA1)
> ➢ The green space can ensure the travel safety of residents and can provide the beautiful and comfortable environment for the daily outdoor activities of residents. (LA2)
> ➢ Good green space and residential design can improve the microclimate in residential environment, adjust the temperature, increase the air temperature, prevent sun and reduce wind speed; it can also absorb noise, reduce dust, purify the air and protect environmental health; and it can organize the space, beautify the environment, enrich the contents of residential areas, create a good recreational environment for residents and improve living quality. (LA3)

➢ The importance of good green and residential design to ensure the quality of urban living is reflected in two aspects. Firstly, good green and residential design should first meet social benefits. Good green and residential design must meet the different requirements of people, thereby promoting human exchanges and contacts, leisure and fitness activities can be carried out under such circumstances. Good green and residential design must be beautiful, residents who living in such an environment feel physical pleasure.Good green and residential design also should meet ecological benefits which play a "positive energy" to our living environment. (LA4)

➢ The one assurance of living quality is the number of green areas. (LA6)

9. **What kind of ideas informs your work on housing and green space? 您在住宅和绿地的建设工作中，经常会涉及的观点是？**

➢ In terms of the housing, the residents need various kinds of houses. Overall, how to guarantee all the residents have place to live and their housing coverage is so important. However, in the different cities have different standards of housing, for example, the city of shanghai, we need control the large scale of the house, especially in the down town have designing the scale of house relatively small, normally about 90 ㎡, but comparative with the housing in suburbs should be more large, that will help to distribute the population from city centre to suburbs. We try to avoid provide to the large scale of the house, because the firstly reason is the limited of the land, and on the other hand is the national basically condition does not allow everyone to offer a large scale house. A typical example is like the housing of Hongkong also not provide to large scale size (because the city of Shanghai similar like Hongkong are internationality city, and limited of the land).In terms of the park, in fact, the most important issue is accessibility. How to access to the green space or park in the shortest time? From this point of view, we require a large scale of parks, but not too many, actually the more important is have to provide to more small scale of parks or greensapce, such as street green space, small plaza or open space in city.(G1)

➢ In China, good practices of landscape design and green space are still improving. Green spaces need to be specifically distinguished by their functions, such as ornaments or places. I think the best practice is economised greening design which brings its optimised efficiency of greening itself. It is important to have such specific indicators for design management to achieve the greatest effectiveness. (PL1)

➢ The most important issue is accessibility to the green space. And how to improve the quality of the green space. Hope design with more soft landscape and less hard landscape. (PL2)

➢ The national police was recommendation 'Ecosystems' and the 18th National Congress of the Communist Party of China also initiated development of ecological civilisation which indicated the public's growing demand for ecology-centred living environment along with social development. But the 'ecosystems' for the government just sounds like a slogan or concept, not really understand what is the essence of ecosystems. (P2)

➢ To emphasize the sharing in residential area and separate pedestrian and vehicular traffic in the residence area to make a better living environment. (AR/PL1)

➢ The green space should be planned systematically and processed hierarchically. (AR/PL2)

➢ Concentrated greening and separate pedestrian and vehicular traffic.as in the existing and proposed new residential areas shall, so far as is practicable, be separate from the main flows of through traffic. (AR/PL3)

- ➢ The high-end quality, high-end users
- ➢ Green space management and water management
- ➢ In the past, the national planning and building design are separate from landscape design. They used to do the planning and architecture design before the landscape design. Now we do them together because we cannot do the landscape when the planning and architecture part has done.From the perspective of the whole city, how is the city landscape planning? Therefore, we should do the landscape design from macro and micro points of view, considering the whole comprehensive of the design. (AR1)

- ➢ First, we can do the right design according to its characteristics and location. Secondly, from the needs of residents and greening because it's not only for visual entertainment, but also a place for human activities. These places should provide space for the amusement of residents and have many functions. For example, the use space and green space are not interfered with each other. Some spaces need interconnect and all these can be achieved through landscape design. These functions can be guided by design, meeting the residents' needs and improving their experience. (AR2)
- ➢ Separate pedestrian and vehicular traffic, the residence green space should return to its basic nature: to provide place for people to rest and relax. The environment of the residence area should be soft landscape as much as possible within the regulations. (AR3)

- ➢ My opinion is "Chinese style in contemporary design", because the classis age has gone. We don't have the conditions for classical design. We should do the contemporary landscape and garden and have to keep the local characteristics and traditions. (AC2)
- ➢ I want it to be diversified. I think now it is popular to respect the land conditions and should do it eco-friendly. (AC3)

- ➢ I have often mentioned that the ecological study should be human premise. This is only for the cities. Narrowly speaking, it should satisfied people's needs first rather than ecological needs. Generally speaking, people's needs can only be satisfied in a comfortable environment. Therefore, there is a ratio of activity space and green space in our residence design now, which is normally less than 2:8 (8 means green space). (AC4)

- ➢ Chinese like to talk about ecology recently years although they don't really understand what it is? But they think highly of "ecology". Another concept is "sustainable development", which is connected with ecology. Moreover, Chinese people like to find a theme on each project. There must be a theme no matter how it will be and what style it is. The theme must be able to deliver the main ideas to the public. (LA1)
- ➢ Distributed the residence and green space properly. (LA2
- ➢ The green space uses green plant material to make a unified and varied living area with a sense of rhythm. On one hand, it builds a bridge for the residents between busy city and traffic and connation the nature. Practice has proved that whether there is green space in the residence area has become a symbol of high quality residence area. It is also the priority of the house buyers. Designers should paid attention to how to make good use of the land within the national regulations. (LA3)

➢ The most frequent question raised by the client involved in my residence projects are "why do this and what does it mean to me". The first party does not have specific opinions. They only concern how the green space valued to the whole project. Residents often emphasize on the landscape aesthetics of their private house. The beauty of the green space is usually emphasized more often in the conversation between designers and residents. For example, they will talk about the beautiful green space they've ever seen in somewhere. The governmental project more focus on the humanistic values of the landscapes, as whether it is related to the local culture. (LA4)

➢ First of all, it's cost and effective. The most important thing in China is cost-effective. Secondly, less investment means ecology. Thirdly, where there is mountains and water, there is ecology. (LA5)

➢ Adjust measures to local conditions; consider the nature and sustainable development. (LA6)

10. **How do you think that a more 'joined up' approach to planning for housing and green space provision can be achieved?**

➢ I think that will be achieved, it is good if can 'joined up' approach to planning, architecture and landscape design from beginning. (G1)

➢ Of course join up approach is good because the planning in mean to be unified and comprehensive. You can just consider one aspect. When we are doing the planning review, basically all the departments will be involved from material to government, from economic community to culture and educational departments. You can either find it is a simple project of a residence design in the planning review meeting. We can only do join up project when concerning so many department. It cannot be separated. (PL2)

➢ Of course, join up means considering more aspects, including integrating the local history and culture. (AR/PL1)

➢ For one residence area, the designer takes the responsibility of the planning, architecture and landscape, which are a triune. (AR/PL3)

➢ Nowadays, the design (I am an architecture) cannot be separated from landscape. A design will fail if it completely ignores the landscape element. Therefore, it needs to be done from the perspective of residents. Although the landscape design sometimes is not included in the contract, we should do it from all angles, offering better conditions for landscape design in the future. (AR2)

➢ Should be reach a better result, but should find a perfect breakthrough point and balance point. (AR3)

➢ Certainly, every professional has its own considerations. From planning to building then landscape, the old-fashion opinion of "见缝插绿" will lead to inconsiderable results and the repeat of pre-planning. It will also affect the quality of the whole project. Therefore, a professional "join up" approach is better. (AC3)

➢ Now Chinese designers have already done so. However, we cannot say it is "join up" or on the same level. It was called early intervention at earlier time. We now have a meeting before project about the project design. People from all departments (planning, landscape, building, etc.) will attend the meeting and critically discuss the project from their point of view. Then tall he opinions will be summed up. (AC4)

➢ I think it is good to do so. We've tried but we found it hard to do. Perhaps landscape does not have long history as planning and it only has a short development period which is less than 20 years. Previously, landscape was called garden greening in China. We tried and

found that little attention has been pain on landscape in the planning stage by the investors. Although the investors are willing to listen some advice about the landscape, they don't really accept it. They think architecture and planning should be the main focus. Therefore, they usually reject the advices in landscape, making it harder to reach further development. (LA1)

➢ Yes, involve landscape in the residence area as much as possible. (LA2)

➢ The nature of "join up" should be complementary advantages and complement each other. Nowadays, some important projects will take the "join up" approach for tender. Companies with higher qualification join up those with lower qualifications and domestic companies join up foreign companies are the formal way of join up. One important reason is foreign companies cannot do the construction design of their projects alone, which has made have to join domestic companies in order to get involve in whole process such as the design of project idea and construction. In my opinion, I think the join up approach is beneficial if we can do the project according to the contract, especially well for the project quality when domestic companies join a foreign companies with high reputation. The reason is the urbanization development in China has just started but in a fast pace, while developed countries are urbanized. Everybody knows that the concept of landscape and the landscape practice derived from the process of urbanization. Along with the development of urbanization, the landscape design developed into an advanced system. We should keep learning and thinking about it. For this reason, I think join up approach is a relatively better way of cooperation.

➢ Join up should lead to better result.
Yes, join up approach can better unite housing and landscape design. (LA6)

11. **How has resident's everyday use of green space and housing changed in Huangpu since 1979? 从 1979 年以来，黄浦区的居民对于绿地的日常使用有什么转变？**

a) **The changed of Housing:**
➢ Since the 1980s the urban housing market of China has been transformed from a heavily subsidized centrally planned system to a free-market one. The environment has become a selected standard, so the quality of the residential area getting higher, because, when the house become products, the quality decides their price. So the price also got raised. (G1)
➢ Today, urban planning is becoming sophisticate and people-centred. In the past, planning focused on the problems about quantity, nowadays the focus has been transferred to quality problems. (PL1)

➢ Since 90s, rapid house real estate development and the price of house growth high in China's residential housing market. Especially in the old housing area (as shanty town) have to remove and rebuilding new residential area (high-flat, so-called commodity house). However, when the type of housing was changed, and the everyday life also changed, as the neighbourhoods relationship and the social communicate. The old housing area more social-friendly, and more safely and trust. Moreover, the remove or rebuild the old housing area will bring a big problem is to destroy the historic culture and local characteristic. (PL2)
➢ During the 1979 to 1998, the welfare housing and work housing were the main manner for housing whilst rarely commodity housing. After 1998, the commodity housing started to dominant the market. After 2005, the public rent housing and affordable housing such cheap house have been launched for those with middle to low income who could not pay for house. Around 1979, houses were built for basic needs. People needed housed to live and space to play. At that time, the investment for green space was limited. Gardens were the main form of green space. After the liberation, government did build up a great number

of gardens. They planed the garden facilities in the private residences, racecourse in each district. Secondly, the road greening resulted in increased city green space. These were governmental behaviour. The most famous one is Zhaojiabin road where used to be a drainage ditch before filled and greened. There are many similar examples in Shanghai. The regulation of the environment is quite comprehensive. (AR2)

b) The changed of Green space

➢ The green space getting more than before, there might be just one big park in one district. Nowadays, there are lots of small parks and street grassland as well. So the usage rate will be more. For example, before, you should take the bus to get the park. Now we can reach them by walk because the policy is to reach a 500 square meters grassland in five minutes.

➢ There has been significant growth of everyday use of green space since 1979. As soon as the material conditions were improved, life quality has become one of the primary pursuits. Today people spend their weekends and vacations on journeys to parks and outskirts of Shanghai. Because of prevailing use of automobiles, increasing number of families drive to Jiangsu or Zhejiang Province to spend their weekends. (G2)

➢ Changing from scattered greening projects to the comprehensive planning of green space can be the biggest improvement. (G3)

➢ Previously, residents cared more about the daily life of needs. As long as the living condition has improved and the residents then paid more attention on ecology-related health issues. Concerning health, people would like do more physical exercises and care more about air quality. Influenced by the government's advocacy, people believe that green space is beneficial to their health and living environment. (G4)

➢ Since 2000s, the economic development and living condition has improved, the request from residents also changed. Looking forward more high quality environment of the resident's area and the high quality of housing. Especially consider the space and activity for children and old people. (PL2)

➢ Landscape design has started to develop since the late nineties and been in a mature stage since 2000. First of all, it started from scratch. There was no any standard data for the design of green space before. Nowadays, from the perspective of city, there are systems in many parts of the design of housing. In the residence area part, for example, it is more specific in the managerial standard for the index of green rate. However, in recently years, residences more enjoy to the green space or open space to so some outside exercise, walk with family etc. (AR/PL1)

➢ The development of houses and green space were together with the development of real estate. The real estate started to reform in 1992, the subsidized centrally planned housing system was ended and the commodity housing started. (AR/PL3)

➢ It's investors who invest in the real estate. They make the environment and green space better is for a selling point. The allocation, as well as the function, of green space differs according to the user. For example, the children playgrounds should be near the buildings

and separated in different places. The index is how many metres for one child. However, there is one factor has been neglected, which is the number of children decreased. Moreover, how often children go outside and use the facilities are also an important consideration. Therefore, there are still many things to work on. (AR1)

➢ In the past, the residential landscaping relied on government in the past because of planed economy. The investment was limited. Therefore, the design was simple which just meet the basis requirement for activities. After the reformation, people became wealthier and require higher standard of greening.

➢ The first breakthrough emerged in residential landscaping while people were more focus on garden greening. After 2000, the term of "landscape" turned up. When commercial properties develop to a certain scale, you will find them are more beautiful than parks in the design. The government also realized this phenomenon. As a result, the government further promoted the urban greening by increasing the quality and design, and paid less attention on the greening rate. They not only did this by greening, but also by using water and 3D green. Along with the increased appreciation of greening, some landscape buildings have been built which well combined the green and building. People found that building some large scale of public greening in the city center can increase the value of the land. The most typical example is the Pudong Century Park. Compared to the current price for real estate in that place (around 10,000 to 20,000RMB/m^2), it was only two or three thousand per meter when the park has not been built. So the landscaping can promote the residence significantly. (AR2)

➢ There were not many parks in the past and most of them charged money. Not all the people treasure them though. For example, they spit and throw garbage on the ground. At that time, people's behaviour was influenced by the propaganda of the government. From the perspective of individuals, they destroy the public facilities was kind of rebellious behaviour. Now, the green space and number of public parks increase. From the perspective of people's needs, they tend to protect the public space when they found it increase the aesthetics of the environment, the comfort of life. Moreover, with the development of civilization, Chinese people started to learn from the western countries on how to protect public facilities and environment consciously. No doubt that it is a process. There are still many Chinese living in the rural areas who need to be educated and time to build up their awareness. (AC1)

➢ At the end of 1990, there were four landscape design companies in Shanghai and this figure increased to four hundred ten years later. First of all, the number has increased. Second, the Chinese economy is under huge development and people's needs have increased. Around 90% of the projects in the ACOM AND ASW foreign companies are in China. Another possible reason is people now are more awareness about the greening, which has also become an important manifestation of the achievement of the government. All the needs mentioned above resulted in the increase requirement of the industry. While there are changes, we should upgrade our requirement as well. (AC3)

➢ During 1979 to 1993, China was in a stage of great development. It always looked forward and introduced foreign investment. The house revolution has not yet emerged at that time because of money. All the people were earning money. The companies monopolized house

building. Before that, it has not been monetized and monopolized by the state-owned companies. This made all the places used were in such area, they have their own factory area, family area and nurseries. During 1992 to 2003 is a period when China started to build up public houses. It just found several buildings and many 点式楼, regardless of southern or northern dynasties. Earn money in the first ten to 20 years until some people can offer the commodity houses. They use the space of green basically still on the using public green area. Therefore, the public green land started to develop. I think we should study more on that decade when the social economical system was different, resulting in the difference of each part of the society. It is also reflected in our industry. It has things to learn from. Moreover, the society becomes more stable and less conflicts.

➢ There is a very strange phenomenon in Shanghai. The usage rate of the buildings built before 1950s is higher than those built after 2003. This is the difference between Shanghai Park and green space. Parks focus on gardening and people are strongly involved. While greening a ring in the ecological chain and involve less people. Greening considers less. One possible reason is its lack of privacy. In the past, people tended to pull off the wall of the parks, making them free to use. However, it leaded to significant problems. As China has huge population, once parks are free to use, it will create security risk. It will destroy the ecology of the park. All these problems still need to work on when doing city construction. (AC4)

➢ The best example is the Yanzhong Park done by Canadians. People are reflecting on this problem: why it has been abandoned in the city centre and the usage rate is very low. First, there were little residents around the land; secondly, the service culture, commercial culture, business culture and even politic culture in the land. However, I don't really agree this reason. We finally found that it has much green space in the middle of the land where people found them in a forest once get into. It has poor openness and usability. On the other hand, the old parks, such as Fuxin Park, Zhongshan Park, are in old neighborhoods. Their facilities have been renewed consistently. People can feel please in these parks. To compare, people can feel calm in public parks, which has resulted in the low usage rate. Therefore, there are many new neighborhoods in old city centres, the population is huge but has low usage rate of the Yanzhong Park. The Xujiahui Park is also under a environment with strong Urban heat island effect, but it has more landscape design. So its usage rate is much higher than the Yanzhong Park although the former has lower green rate to the latter.

➢ I think more attention has been pain to the landscaping although it is still less important than architectural and planning. During 1980 to 1990, people just wanted to own a private house because many of them were living together with their families and relatives. After 2000, landscaping still attract no attention. People were hoping to have bigger houses so that they can live separately. There were no commercial houses until 1995. People did not request a very high quality of greening. They had no clear concept of "residence area" and just wanted a little green space. After 2000, more attention has been paid to landscaping. People not only focus on the house quality, but also the facilities and function. The best residence areas own their own fitting and swimming facilities, with good green space. These are important now. Only People's Park has green space in the past. At that time, parents took their children to the park for outdoor activities, young people went there for romance and elderly went for exercise. There are more and more green space now. The new communities think highly of the greening and function needs. As a result, people don't have to go far away to find a green area. Green spaces were built near each other in the

past. If people living in Huangpu district might go to People's Park. But it changed now. Parks are more separate now. Therefore, The People's Park might use for large scale public events or charity, which are much more frequent than before. (LA1)

➢ The function of landscape has changed from offering a place for people to live to purchasing an aesthetics and artistic. People's daily lives have involved in the landscaping day by day. (LA2)

➢ Take the house planning in the past as an example, in order to adapt to the need of expanded the housing scale, the "unified planning, unified design, unified construction, unified management" has become the main form of architecture. Communities' more than eighty hectares. After 1980s, the house planning generally focus on the flowing aspects: allocate the public facilities according to the scale and location of the living area; begin to consider the Group combination form of diversification, a variety of space organization; consider the living environment, green space between houses and centralized green space, which are welcomed widely. The study of city well off in China since 1990s and the residential technology industrial project in 1995 have promote the Chinese house construction and planning entered into a stage of contemporary residence development considerably. On the basic of pilot residence area, the well-off residence area shows new characteristics. It breaks the concept of conservative planning, highlights the concept of "human-centered; and insists in sustainable development. (LA3)

➢ After 1998, the residence planning in the mature market shows diversity. The housing regulations changed from welfare housing to monetary distribution. Individuals became the main consumers. The diverse needs, marketizations of investment, changed governmental duty and other reasons have promoted the residence construction from government led to the market-driven. It has led to a more diverse situation of the residence planning. The residence construction entered a development stage of quality-oriented from quantity-oriented. When refer to residence planning and house design, the market mechanism advanced the concepts of "human-centered" and "sustainable development". The creative events of planning can create a living environment with local features, advanced facilities and meet the living standard of 21 centuries.

➢ Why in China before 1979 or before 1990s, the space among residential neighborhoods built by our country did well? Including Chao yang Apartment, there was non-municipal space among them for communication. Since ancient times, in China, the mutual public space is very rich and the communication space can reach this requirement. Everyone will work together to make this public space very well if we possess this kind of communication space. Since our current social system asks for the privatization, it leads to the result that once we close the door, everything will be privatized. Thus things beyond the door closing are public things. We all use a kind of economic way and means to measure everything and all of us have been accustomed to this way. However, it should not be such a way in life. Therefore I say that under this kind of system, our architecture designers can only pile the bricks up layer by layer like this, and for public space with this feature, there is no way. You let the elderlies in the house and they have no public place to go. Thus it is quite important to let the design guide the life behavior of people. At this point, the decision makers in our country don't have good orientation and even don't have good methods because the residential design specifications just requires it like this. Although designers can think of these problems, they have no way to operate. (LA4)

Appendix F: Review of Housing Systems in China

In 1978, China initiated its economic reforms and embarked on an 'Open Door' policy, the policy led to changes in land tenure - the transfer of the use right of land tenure for an agreed time-period guided by the contract between the land user and the state government (Wang, 1999). The time-limits for different categories of land uses such as the residential use within 70 years; the industrial use within 50 years; educational, scientific, cultural, health and sport uses within 50 years; commercial, tourism and recreation uses within 40 years; comprehensive (mixed) and other development within 50 years (State Council, 1900). After the contract period, the land and all its attachments would automatically revert to the city or county without any compensation. However, the role of the state in housing system and how the housing problem should be resolved has been the subject of debates after end of the 1970s (Wang, 1999).

As the State Council (1991) No. 30 Documents pointed that China's urban housing system reform since 1980, when Deng Xiaoping propose to sale of public housing and adjust housing rents to reform the rent system in the public sector, encourage urban residents to buy their houses (Wang, 1999). Deng was a reformer and served as the Paramount leader of the People's Republic of China who led China towards a market economy and housing system reform. After Deng's proposed, new approaches and policies have been initiated to commercialise the urban housing provision system and encourage private and joint-venture companies building commercial housing for a profit and selling properties on the open market at market prices. However, during the last 30 years, the urban housing system reform has experienced three stages: first stage is exploration and pilot of urban housing system reform, starting with the 'open-door' policy was inaugurated, the urban institutional reform that has driven China's extraordinary growth, and also the reform of urban housing system caused by the institutional and urbanization; second stage is comprehensively implementing of the urban housing system reform, it is rapidly developed by the centre governments approaches and policy promulgated; third stage is control the urban commercial housing market and establish social housing system, according to the nature of the urban housing market and affordability of residents, the government more pushes to control and appropriate legislation of the commercial housing development, and establish social housing system for low-income residents.

The First Stage: Urban housing system reform of exploration and pilot stage (1978-1990)

Under the guidance of the Deng and appropriate policy by the centre governments, urban housing system reform starting with exploration and pilot stage, one of the major objectives of this was to establish housing commercialization and socialization system. Moreover, this stage has to explore of three main points:

1) Selling the new and old public housing

In 1982, the government started to sell the new and old public housing for urban residents, the housing price were pay by government, unit and individual each of 1/3. But until 1984, the government renews policy, such as if the individual get the high-income and also the unit not enough ability to afford for housing, the individual payment should to increase to 2/3 or pay for the total amount.

2) A commercialized housing development

The Constitution of PRC point out urban land in China was owned by the state (the city governments directly) in December 1982. As same year, Shenzhen was the first city to levy urban land use fee. However, in September 1984, the State Council was resolve to establish integrated urban and rural development company, to encourage urban housing investment and construction, and start to profit and transfers or selling properties on the open market.

3) To reform the low-rent system

In January 1986, the State Council established the 'Housing rents reform leadership group and office', the aim of this group and office can be resolved and guided of the urban housing reform, one of the major objectives of this was to reform the low-rent system in the public sector. As the same year, the Housing reform office of State Council confirmed the pilot city with Tangshan, Bengfu, Yantai and Changzhou four cities as 'Increase housing rent and raise in salary', and with the experiments thought of the reform to the rent system and to establish housing development funds for housing reproduction, production the virtuous cycle of input-output, and improving the conditions of living environment.

The Second Stage: comprehensively implementing and rapidly developed of urban housing system reform (1991-2000)

In 1991, General Administrative Office of the State Council set out "About the opinion of comprehensive implementing of urban system reform", this document statement the aim and objectives of urban housing system reform in different stages and show of the housing system reform already from exploration and pilot phase to comprehensively implementing stage. The outline of urban housing system reform is (State Council, 1991):

1) The government is looking to encourage and support sell new and used public housing for profit as commercialization properties. With the new housing was design specification for small and medium-sized family, and have to selling first then for rent. Moreover, the initial payment shall be not less than 30% of the housing total price; the rest may apply for housing low-interest mortgages. The used public housing price has to according to standard value on the open market. However, after five year when residents was bought their houses, then allowed to selling properties on the open market at market prices.
2) The dominant core of adjustment low-rent for the urban housing system reform, increase the rent price for the existing public housing and implement new rent standards for the new public housing.
3) The first set out to deep develop utility and economy commercial housing.
4) The first states to establish housing developments funds and joint-venture companies building housing.

After the outline of urban housing system reform, the State Council was emphasize that to speed up the housing construction and promote urban housing system reform is the important responsibilities of the local governments at various levels, and issued of three main points in No. 43 document "About deepening urban housing system reform decision" in July 1994, such as first time proposed to establish economically affordable housing and low-rent housing for low-income family; and to encourage high-income family to buy the commercial housing; first time to put forward to strictly control the commercial housing of high-grade construction and development project; first time to come up with the full implementation of the housing accumulation fund system(State Council, 1994). However, the urban housing system reforms have rapidly developed, since the No. 43 policy promulgated, and continued to be deepening to reform the rent system in the public sector, starting to implement economically affordable housing construction project and sell for low-income families in 1995. The centre government was stop the physical housing allocation system and stating with housing assignment currency in July 1998. This is the milestones of the urban housing system reform and completed the transformation of traditional Chinese urban housing system to commercialization system.

The third stage: establish Social housing system, and deepening develop housing reform and control the urban commercial housing market (2001-2010)

In the last 10 years, the prices of commercial housing has increased rapidly and the lack of appropriate legislation and regulations to control the commercial housing market. Since 2001, to establish social housing system and how to control the commercial housing prices and market have been the most serious social problem in China. The centre government pushes to a series of important polices to keep house prices and commercial housing market, establish and complete the social housing system suitable with the China's situation. In response to the uncontrolled commercial housing market issue, the Construction Minister in 2001 proposed to initiated draft of the Housing Act, one of the major objectives of this is to ensuring the real estate owners Lawful rights and promote to appropriate regulations to controls the commercial housing prices and market. Moreover, the State Council was statement No. 24 Document of 'Some suggestions about solving the housing difficulties of low-income families' in 2007; emphasize to solving housing shortages problems of the low-income families was the very important duty of the local governments at various levels (State Council, 2007). However, the No. 24 Document was one of the milestones of the urban housing system reform, such as the commercial housing development and social housing development both equally important of urban housing system reform within China, and emphasis on establish to complete of the urban Social housing system, the main point are:

1) To establish and promote to the Social housing system, and expanded to the scope of supply for the low-rent housing from 'Minimum income family' to 'Low income family';

2) Proposed to complete of the urban multi-housing system, according to the local resident's income to supply with different housing policy: minimum income family supply to rent social housing; Mid-low income family encourage to buys economically affordable housing and other High income family have to buy commercial housing;

First time proposed to adjustment of investment for the housing system, focus on developing economically affordable housing; also continue development collect Unit collect money build house system and solving the housing difficulties of low-income families. However, to establishing complete of the urban social housing system to solving housing shortages problems of the low-income families have to consolidated the guarantee function by the government, and further standardize and develop the economically affordable housing, also need actively develop the rents or sell of the secondary housing market. Moreover, continue to encourage to buys commercial housing, support to construction the commercial housing with low-priced, small and medium model for the common residents.

Types of Housing system in China

Housing system in China is diversification, started with 'national physical housing allocation system' during the early 30 years since the PRC was established in 1949. During the housing system reform time, the system of housing transfer to housing commercialization system, housing Security system, unit collect money build house system and residents fund-raising collaboration builds a house system four mainly types of housing system.

First is Housing commercialization system

Commercial housing was initiated since 1980 after the housing system reform; it is under the market economy situation, construction and selling by the real estate development company on the open market in China. Moreover, according to the law, regulations and relevant rules, the commercial housing can be freely traded and rent on the open market, including residential, business housing and other buildings.

Second is Housing Security system

Since initiated the 'Open Door' policy in China, the housing reforms experience started from 'national physical housing allocation system' to 'commercial housing on the market economy', then transfer to 'housing security system'. Because of the increase of the gap between rich and poor, most residents cannot be the part of the physical distribution's system and also no affordability for the commercial housing on the open market at market price. In the meantime the policy of government was lack of executes effectively which result in the problem of the housing. For the purpose of protecting the right of poor group in the city and keeping the steady developing of economy, most cities accept the policy of using the economically affordable housing and low-rent housing to decrease the pressure of housing. In early June 1991, the state council statement that "development of economically affordable housing and low-rent housing in the cities, have priority to solve the serious housing shortages for the low-income families" in the 'the notice of how to comprehensively implementing of urban housing system reform' document (State Council, 1991).After this policy was inaugurated, the economically affordable housing and low-rent housing, which comes into being as governments solve the social problems from the housing problem, is an important part of the Social Security System.

Economically affordable housing

Economically affordable housing has to be provided with social security functions of the commercial housing, and especially in economy and applicability features. The mean of economy is should be lower prices housing when it compare with open market of the common commercial housing, and affordable to buy by the low-income families; because the economically affordable housing was save part of the construction fee tax from local government, so the cost got slightly lower than ordinary commercial housing. In addition, the applicability is to emphasize the useful effect of housing, such as small-middle size of the apartment area (control of 60 -110 square meters in the area), cut down the cost of construction but not reduce the standards of the housing quality. However, the buyers of economically affordable housing are requirements to be low-income families, such as need to be less than or equal about 60,000 Rmb with whole year income of this family, and also need to be the local registered permanent residence of the city.

Moreover, the government explicit of economically affordable housing is belongs to the Social Security System, the person who bought that house has only limited property rights of the housing, if want to be free trading this housing on the open market that have to up to 5 years after bought, but should to pay the price spread between the common commercial housing and economically affordable housing for the local government. In effect, the requirement of the low-income families is very broad concept and lacking clarity to confirm the personal income, because did not establish the system of personal income application and social credit system in China yet. Therefore, the government is very difficulties to determine the low-income families for who require the economically affordable housing. However, Ministry of Construction (MOC) in August 2006 was issued to guide the economically affordable housing should be change the form of 'affordable to buy' to 'affordable to rent' for the low-income, the low-rent housing, economically affordable rent housing and capped-price housing will be mainly part of the Social Security System in China.

Low-rent housing

Low-rent housing is the national and local government in order to solve the housing shortage problem of the lowest-income families, it is to be provided with social security functions and public welfare features. The government has to take rent subsidies, rent relief and real match rent three ways to implement practice of combining low-rent housing policy. In effect, usually take two ways to rent this low-rent housing, one is funded by the government to build and low-rent for the lowest-income families; other is to pay the rent subsidies for the lowest-income households. In addition, the low-rent

housing only for rent to the lowest-income families not be free trading this housing on the open market at market prices, and without inheritance for the resident. However, the policy of low-rent housing was slowly implementing in the early years, since 2005 in July, the Ministry of Construction and Ministry of Civil Affairs both to statement the policy about "how to apply, examination and management of the low-rent housing with the lowest-income households", therefore, the national and local government to establish social housing system, and to provided social security functions of 'economically affordable housing' turn to primarily with 'low-rent housing'. By the end of 2006, already established of the low-rent housing system in 512 cities, it is reached 77.9% of the total cities in China and reached 100% in end of 2008 (MOC, 2008).

Third is Unit collect money build house system

In accordance with state council 2007, No.24 document requirement: the Funds of building unit, limited to the independent Industrial and mining enterprises and overcrowded housing enterprises which far from Urban area, and also have to accord with the premise of city planning, an approval by the government of the city, and using self-owned land implementation.

Fourth is Residents fund-raising collaboration builds a house system

Beginning of 21, the price of commercial housing growing rapidly, the ordinary working-class couldn't afford a house, so the indigene organized fund-raising collaboration builds a house by them.

Appendix G: Findings from Householder Interviews

Case study 1) Historic Chinese -- (HuaihaiZhonglu Sub-district)

Key Households	PART 1 ABOUT YOU				PART 2 WHERE YOU LIVE							PART 3 NATURE AND USE OF GREEN SPACES											PART 4 THE QUALITY OF GREEN SPACES					Key Households
					What you like about the space			What you dislike about the space				Understand of Nature			Use of Green spaces					It is important have GS					Provide enough GS				
	Job	Age	Who live with	How long live(year)	Outdoor	Neighbourhood	District	Outdoor	Neighbourhood	District	Quality of life	Nature is	what kind	How travel	Most use	How often	What do you do	Why not use	use of GS	Private	Pulic	Improved GS	Good quality of GS	Residents Area	Local authorities	Changed of Housing or GS	Design of where you live	
HL 01	Retired	60 UP	Couple	40	Quit like	Quit like	Very like	Pool provision of public open space	The environment (houses, pavements, GS etc) in poor condition	The environment (houses, pavements, GS etc) and local facilities and services	Improve the environment(GS, house,pavements etc) and local facilities and services	Air, food, everyday life	Air,everyday around	Walk	Fuxing park	At least once a week	Dancing	Weather not well/Busy	Not busy/far and with nice weather	Very important	Very important	Improve the GS in Old area	Good provision of GS, Less people, Well-Management/Maintained public spaces	No, the space is limited	Yes,as Taiping qiao park	Yes, was one household for one semi-detached house,but now with 3or4 households, before was Middle-class people but now more people from different level	Own detached house and private gardens	HL 01
HL 02	Retired	60 UP	Couple and Child	60	Not very like	Not very like	Very like	The local facilities and services in poor condition	GS in poor condition	High population density and high volume of road traffic	Remove the old house area and rebuild new residential area	Air	Parks, Trees,grassland ,rivers ect.	Walk	Xin tiandi GS	Eeveryday/Most day	Exercise(walking/runing)	Weather not well	Not busy/far and with nice weather	Important	Very important	Improve the GS in Old area	As Xin tiandi GS	No, the space is limited	yes, some but not enough	Yes, was changed the surrounds area but not changed this HL area	Own detached house and private gardens	HL 02
HL 03	Retired	60 UP	Couple	40	Quit like	Quit like	Very like	Lots of people come from countryside and bad habits	The environment (houses, pavements, GS etc) in poor condition	High population density and poor contition in house	Improve both of physical and mental life	Air,water,the environment	Parks, Trees,grassland ,rivers ect.	Walk	Fuxing park	Eeveryday/Most day	Exercise(walking/runing)	None	Not busy/far and with nice weather	Not very important	Important	Improve the GS in Old area	More "Naturally" GS/ Not damage by human,and Facilities for old people	No, the space is limited	yes, some but not enough	Yes, was one household for one semi-detached house,but now with 3or4 households, before was Middle-class people but now more people from different level	Own detached house and private gardens	HL 03
HL 04	Employed	30 UP	Couple and Child	20	Quit like	Quit like	Very like	The local facilities and services in poor condition	Lots of people come from countryside and bad habits	High population density and poor contition in GS	Improving quality of households	Not damage by the human	Don't know	Walk	Taiping qiao park	During weekends	Play Chess/ Cards, Meeting Friends	Busy	Not busy/far and with nice weather	Important	Very important	Improve the GS in Old area	Good provision of GS and public sports facilities (e.g. leisure centre)	No, the space was limited	yes, some but not enough	Yes, was improve the base installation of the old house but the public space still limited	Good provisoin of GS,fresh air, waterspaces	HL 04
HL 05	Employed	50 UP	Couple	Up to 10	Not very like	not at all like	Very like	The environment (houses, pavements, GS etc) in poor condition	Pool provision of public open space	High population density	Remove the old house area and rebuild new residential area	Not damage by the human	No 'nature' surrounds in the city	Walk	Yanzhong park	Pass by/free time	Relax/Enjoy Sunshine	Busy	Not busy/far and with nice weather	Important	Important	Improve the GS in Old area	Good provision of GS, Well-Management/Maintained public spaces	No, the space is limited	yes, some but not enough	Yes, was one household for one semi-detached house,but now with 3or4 households, before was Middle-class people but now more people from different level	Own detached house and private gardens	HL 05
HL 06	Employed	30 UP	Parents and Couple	1-5years	Very like	Not very like	Very like	Rubbish or litter lying around and GS in poor condition	GS in poor condition	High population density and poor contition in GS	Provide a liveable habitat for people	Air, water, food safe,no pollution,etc.	Air,water,etc.	Walk	Fuxing park	At least once a week	Relax/Enjoy Sunshine	Weather not well/Busy/To o far	Provision of sport/recreational facilities	Not very important	Very important	Improve the GS in Old area	Good provision of GS, Well-Management/Maintained public spaces, Provision of recreational/sports facilities for different ages	No, the space is limited	yes, some but not enough	Yes, was improve the base installation of the old house but the public space still limited	Enclosed spaces, good provision of GS and facilities, and Well-Management/Maintained public spaces	HL 06
HL 07	Retired	80 UP	Couple	60	Very like	Very like	Very like	The environment (houses, pavements, GS etc) in poor condition	The local facilities and services in poor condition	Pool provision of public open space	Good provision of public open space	Greenspace in city,e.g. Parks	Parks, Trees,grassland ,rivers ect.	Walk	Fuxing park	Eeveryday/Most day	Relax/Enjoy Sunshine	Weather not well	Not busy/far and with nice weather	Important	Very important	Improve the GS in Old area	AS Xin tiandi GS/Yanzhong Park	No, the space is limited	yes, some but not enough	The public space was limited, no car can through this area	Good provision of recreational/sports facilities	HL 07
HL 08	Retired	60 UP	Parents and Couple	Up to 10	Quit like	Quit like	Very like	GS in poor condition	The local facilities and services in poor condition	The local facilities and services in poor condition(Old area)	Improve the environment(GS, house,pavements etc) and local facilities and services	Wild-nature, e.g.mountains,river,forest etc.	Less 'nature' surrounds in the city	Walk	Taiping qiao park	Eeveryday/Most day	Exercise(walking/runing)	Busy	Not busy/far and with nice weather	Important	Very important	Improve the GS in Old area	Good provision of GS and public sports facilities (e.g. leisure centre)	No, the space is limited	yes, some but not enough	Yes, was one household for one semi-detached house,but now with 3or4 households, before was Middle-class people but now more people from different level	Own detached house and private gardens	HL 08
HL 09	Retired	60 UP	Parents and Couple	1-5years	Quit like	Quit like	Very like	GS in poor condition	GS in poor condition	The local facilities and services in poor condition(Old area)	Improve the environment(GS, house,pavements etc) and local facilities and services	Wild-nature, e.g.mountains,river,forest etc.	No 'nature' surrounds in the city	Walk	Taiping qiao park	Eeveryday/Most day	Exercise(walking/runing)	Busy/Too far	Not busy/far and with nice weather	Important	Very important	Improve the GS in Old area	More "Artistical" not just simple trees	No, the space is limited	yes, some but not enough	Yes, was one household for one semi-detached house,but now with 3or4 households, before was Middle-class people but now more people from different level	Own detached house and private gardens	HL 09
HL 10	Retired	60 UP	Parents and Couple	26	Very like	Very like	Very like	Pool provision of public open space	Rubbish or litter lying around and GS in poor condition	Don't know	Good provision of GS	Trees, flowers,grassland etc.	GS	Walk	Fuxing park	Eeveryday/Most day	Exercise(walking/runing)	Busy/Too far	Not busy/far and with nice weather	Important	Important	Don't know	Good qrovision of GS, Well-Management/Maintained public spaces	No, the space is limited	yes, some but not enough	Yes, feeling better than before	Own detached house and private gardens	HL 10
HL 11	Employed	LESS 30	Couple and Child	5-10years	Very like	Quit like	Very like	Air pollution	Pool provision of public open space	High population density	Freedom life	Greenspace in city,e.g. Parks	Parks, Trees,grassland ,rivers ect.	Walk	Yanzhong park	At least once a week	Taking children to play	Busy	Not busy/far and with nice weather	Very important	Very important	Good provision of more public open space	Good qrovision of GS and Waterscape	Yes	yes, some but not enough	Yes, was improve the base installation of the old house but the public space still limited and Air pollution high than before	Enclosed spaces, good provision of GS and facilities, and Well-Management/Maintained public spaces	HL 11
HL 12	Employed	30 UP	Parents,Couple and Child	Up to 10	Quit like	Quit like	Very like	Air pollution	The environment (houses, pavements, GS etc) in poor condition	High population density and high air pollution	Feeling safe in a neighbourhoood and Ecological environment	Living environment of human and co-existence with nature	Less 'nature' surrounds in the city	Walk	Fuxing park	Eeveryday/Most day	Exercise(walking/runing)	Busy	Not busy/far and with nice weather	Not very important	Very important	Improve the GS in Old area	Good provision of GS, Well-Management/Maintained public spaces	No, the space is limited	yes, some but not enough	Yes, was changed the surrounds area but not changed this HL area	Good provisoin of GS,fresh air, waterspaces	HL 12

Case study 2) Colonial housing – including garden villas and town houses garden apartments (Ruijinlu Sub-district)

CH 01	Employed	LESS 30	with Parents	Up to 10	Not very like	Not very like	Very like	The environment (houses, pavements, GS etc) in poor condition	Not well-maintained public spaces	The local facilities and services in poor condition (Old area)	Health lifestyle	Wild-nature, e.g.mountains,river,forest etc.	No 'nature' surrounds in the city	Walk	Fuxing park	Pass by/free time	Relax/Enjoy Sunshine	Busy	Not busy/with friends	Important	Fairly important	Good provision of public open space in residents area	Good provision of GS, Well-Management/Maintained public spaces, Provision of recreational/sports facilities for different ages,and feeling safe	No, the space is limited	yes, some but the open space is limited	Yes, was changed the surrounds area and more people than before	Good provision of recreational/sports facilities	CH 01
CH 02	Employed	40 UP	Parents and Couple	Up to 10	Quit like	Quit like	Quit like	Pool provision of public open space	Pool provision of public open space	House in poor condition (Old area)	Good provision of house	Trees, flowers,grassland etc.	Less 'nature' surrounds in the city	Walk	Fuxing park	At least once a week	Relax/Enjoy Sunshine	Weather not well/Busy	Not busy/far and with nice weather	Important	Important	Improve the GS in Old area	Good provision of GS, Well-Management/Maintained public spaces	No	Yes	Not many changed	Good provision of recreational/sports facilities and waterspaces and private garden	CH 02
CH 03	Employed	LESS 30	with Parents	5-10years	Very like	Quit like	Very like	Don't know	Don't know	Don't know	relaxed and un-pressure	air,water,the environment	Less 'nature' surrounds in the city	Walk	Fuxing park	At least once a month	Relax/Enjoy Sunshine	Weather not well/Busy	Not busy/far and with nice weather	Very important	Important	Improve the GS in Old area	Good provision of GS, Well-Management/Maintained public spaces	No	yes, some but not enough	Not many changed	Good provision of recreational/sports facilities and waterspaces and private garden,swimming poor etc.	CH 03
CH 04	Employed	30 UP	Couple and Child	5-10years	Quit like	Quit like	Very like	Lots of people come from countryside and bad habits	Pool provision of public open space	High population density and high volume of road traffic	Improve the environment(GS, house,pavements etc) and local facilities and services	Wild-nature, e.g.mountains,river,forest etc.	Less 'nature' surrounds in the city	Walk	Fuxing park	Pass by/free time	Relax/Enjoy Sunshine	Busy	Not busy/far and with nice weather	Important	Very important	Improve the GS in Old area	As Yanzhong park	No, the space is limited	yes, some but not well-management/maintained public spaces	Yes, was changed the surrounds area but the CH not changed	Own detached house and private gardens	CH 04
CH 05	Retired	60 UP	with Parents	47	Very like	Very like	Very like	The environment (houses, pavements, GS etc) in poor condition	The local facilities and services in poor condition(Old area)	Don't know	Just like now (old people feel)	Air, water, food safe,no pollution,etc.	Air,water,etc.	Walk	Fuxing park	At least once a week	Taking children to play	Weather not well	No Air pollution	Very important	Very important	Improve the GS in Old area	Good provision of GS, Well-Management/Maintained public spaces	No,not enough	yes, some but not enough	Yes, was improve the base installation of the old house but the public space still limited	Own detached house and private gardens	CH 05
CH 06	Employed	50 UP	Couple and Child	Up to 10	Quit like	Not very like	Very like	Pool provision of public open space	House in poor condition (more than 80 years)	High population density	Like rebuild new residential area	Not damage by the human	Less 'nature' surrounds in the city	Walk	Fuxing park	Pass by/free time	Relax/Enjoy Sunshine	Busy	Not busy/far and with nice weather	Important	Important	Improve the GS in Old area	Good provision of GS, Well-Management/Maintained public spaces	No,not enough	yes, some but not enough	Yes, was changed the surrounds area but the CH not changed	Own detached house and private gardens	CH 06
CH 07	Employed	50 UP	Couple	Up to 10	Quit like	not very like	Very like	Pool provision of public open space	House in poor condition (more than 80 years)	High population density	Like rebuild new residential area	Not damage by the human	Less 'nature' surrounds in the city	Walk	Yanzhong park	At least once a month	Exercise(walking/runing)	Busy	Not busy/far and with nice weather	Important	Important	Improve the GS in Old area	Good provision of GS, Well-Management/Maintained public spaces	No,not enough	yes, some but not enough	Yes, was changed the surrounds area and more people than before	Own detached house and private gardens	CH 07
CH 08	Employed	50 UP	Parents and Couple	26	Very like	Quit like	Very like	Good provision of GS but the local services and facilities in poor condition	Pool provision of public open space(too many cars parking), not well-maintained	High population density and high volume of road traffic	Freedom life	Air	GS	Walk	Cultural Square	Eeveryday/Most day	Exercise(walking/runing)	Too many people there	Less People/More GS	Important	Important	Don't know	Good provision of GS, Well-Management/Maintained public spaces	Yes, but not well-management/maintained	yes, some but not enough	Yes, was changed the surrounds area but the CH not changed	Own detached house and private gardens	CH 08
CH 09	Employed	40 UP	Parents,Single and Child	Up to 10	Quit like	Very like	Very like	Air pollution	Air pollution	High population density and high air pollution	Feeling safe in a neighbourhoood and Ecological environment	Living environment of human and co-existence with nature	Less 'nature' surrounds in the city	Walk	Fuxing park	Eeveryday/Most day	Exercise(walking/runing)	Busy	Not busy/far and with nice weather	Not very important	Important	Improve the GS in Old area	Good provision of GS, Well-Management/Maintained public spaces	No,not enough	yes, some but not enough	Yes, was changed the surrounds area but the CH not changed	Own detached house and private gardens	CH 09
CH 10	Retired	70 UP	Single	56	Not very like	Quit like	Very like	Not well-maintained public spaces	GS in poor condition	High population density and high air pollution	Good economic condition	Greemspace in city,e.g. Parks	Parks, Trees,grassland ,rivers ect.	Walk	Cultural Square	Eeveryday/Most day	Relax/Enjoy Sunshine	Weather not well	Not busy/far and with nice weather	Important	Very important	Improve the GS in Old area	Good provision of GS, Well-Management/Maintained public spaces	Yes, but not well-management/maintained	yes, some but not enough	Yes, was changed the surrounds area but the CH not changed	Good provision of GS,recreational/sports facilities	CH 10
CH 11	Retired	50 UP	Couple and Child	20	Not very like	Quit like	Very like	Rubbish or litter lying around and Not well-maintained public spaces	Not well-maintained public spaces	Don't know	Well-manintained public open spaces (e.g. GS)	Greemspace in city,e.g. Parks	GS	Walk	Cultural Square	Eeveryday/Most day	Exercise(walking/runing)	Busy/Too far	Not busy/far and with nice weather	Important	Very important	Improve the GS in Old area	Well-Management/Maintained public spaces	Yes, but not well-management/maintained	yes, some but not enough	Yes, was changed the surrounds area but the CH not changed	Enclosed spaces, good provision of GS and facilities, and Well-Management/Maintained public spaces	CH 11
CH 12	Retired	80 UP	Couple and Child	60	Very like	Quit like	Very like	Pool provision of public open space(too many cars parking)	Pool provision of public open space	Don't know	Stable life	Air, GS	Parks, Trees,grassland ,rivers ect.	Walk	Cultural Square	Eeveryday/Most day	Relax/Enjoy Sunshine	Too far	Not busy/far and with nice weather	Very important	Very important	Improve the GS in Old area	Good provision of GS, as Taiping qiao park	No	yes, some but not enough	Yes, was improve the base installation of the old house	Own detached house and private gardens	CH 12

Case study 3) Traditional working class housing (Yuyuan Sub-district)

ID	Status	Age	Household	Years	Like1	Like2	Like3	Env desc	Open space	Local facilities	Remove/Improve	Living env	Nature	Mode	Park	Frequency	Activity	Weather	Condition	Imp1	Imp2	Improve	Desire	Space enough	Enough?	Changed	Ideal	ID
W 01	Retired	60 UP	Single	60	Not very like	not at all like	Very like	The environment (houses, pavements, GS etc) in poor condition	Not provision of public open space	The local facilities and services in poor condition(Old area)	Remove the old house area and rebuild new residential area	Living environment of human and co-existence with nature	Parks, Trees,grassland ,rivers ect.	Walk	Gucheng park	Eeveryday/Most day	Relax/Enjoy Sunshine	Weather not well	Not busy/far and with nice weather	very important	Very important	Improve the GS in Old area	like the new parks, as Yanzhong park,Gucheng park	No	yes, some but not enough	Yes, less open spaces and more buildings	Own detached house and private gardens	W 01
W 02	Employed	50 UP	Couple and Child	20	Not very like	Quit like	Quit like	Don't know	The environment (houses, pavements, GS etc) in poor condition	The local facilities and services in poor condition(Old area)	Remove the old house area and rebuild New residential area	Don't Know	Air,water,etc.	Walk	Gucheng park	Eeveryday/Most day	Relax/Enjoy Sunshine	Busy/Too far	Not busy/far and with nice weather	Very important	Fairly important	Don't know	Quiet environment and Relax	No, the space is limited	No	Don't know, I didn't live here when I was Child	Good provision of GS and More "Naturally"	W 02
W 03	Employed	LESS 30	with Parents	Up to 10	Very like	Not very like	Quit like	Rubbish or litter lying around and Not well-maintained public spaces,No GS	Not provision of public open space	High population density and high volume of road traffic	Improve the environment(GS, house,pavements etc) and local facilities and services	Wild-nature, e.g.mountains,river,forest etc.	No 'nature' surrounds in the city	Walk	Gucheng park	Pass by/free time	Relax/Enjoy Sunshine	Weather not well/Busy	Not busy/far and with nice weather	Important	Very important	Good provision of public open space in residents area	Good provision of GS, Well-Management/Maintained public spaces, Provision of recreational/sports facilities for different ages,and feeling safe	No, the space is limited	Yes, fairly enough	Yes, less open spaces and more buildings	Good provision of GS,recreational/sports facilities, private gardens	W 03
W 04	Employed	40 UP	Couple and Child	1-5years	Not very like	Quit like	Very like	Rubbish or litter lying around and Not well-maintained public spaces	Not provision of public open space	High population density	Improve both of physical and mental life	Not damage by the human	Less 'nature' surrounds in the city	Walk	Gucheng park	Pass by/free time	Taking children to play	Weather not well/Busy	Not busy/far and with nice weather	Very important	Fairly important	Don't know	Good provision of GS, Well-Management/Maintained public spaces, Provision of recreational/sports facilities for different ages,and feeling safe,rivers/waterspaces	No, the space is limited	Yes, as the park is provide good quality GS by local authorities	Yes, less open spaces and more buildings, and we can see the blue sky and no air poultion	Own detached house and private gardens	W 04
W 05	Employed	40 UP	Couple and Child	1-5years	Not very like	Not very like	Quit like	Don't know	Don't know	Don't know	Don't know	Don't Know	Don't know	Walk	Gucheng park	At least once a week	Taking children to play	Busy	Not busy/far and with nice weather	Very important	Very important	Don't know	As Gucheng park but was no facilities for children in that park	No, the space is limited	yes, some but not enough	Not many changed	Own detached house and private gardens	W 05
W 06	Employed	30 UP	Couple and Child	Up to 10	Quit like	Not very like	Very like	Don't know	Don't know	Don't know	Don't know	Air	Air,water,etc.	Walk	Gucheng park	At least once a week	Relax/Enjoy Sunshine	Busy	Not busy/far and with nice weather	Very important	Important	Improve the GS in Old area	Consider the weather problem and have space for Sun block during the hot days	No, the space is limited	yes, some but not enough	The house has not changed but remove some old houses area rebuild a Gucheng park	Own detached house and private gardens	W 06
W 07	Employed	30 UP	with Parents	Up to 10	Not very like	Quit like	Very like	Rubbish or litter lying around and No GS	Not provision of public open space	The environment (houses, pavements, GS etc) in poor condition (Old area)	No rubbish or litter lying around	Wild-nature, e.g.mountains,river,forest etc.	Air,water,etc.	Walk	Gucheng park	At least once a week	Relax/Enjoy Sunshine	Busy	Not busy/far and with nice weather	Very important	Very important	Don't know	Good provision of GS, Well-Management/Maintained public spaces	No, the space is limited	yes, some but not enough	The house has not changed but remove some old houses area rebuild a Gucheng park	Own detached house and private gardens	W 07
W 08	Employed	40 UP	Parents and Couple	25	Not at all like	Not very like	Quit like	Rubbish or litter lying around	The environment (houses, pavements, GS etc) in poor condition	Don't know	Improve the environment(GS, house,pavements etc) and local facilities and services	Wild-nature, e.g.mountains,river,forest etc.	Parks, Trees,grassland ,rivers ect.	Walk	Gucheng park	At least once a week	Exercise(walking/runing)	Busy	Not busy/far and with nice weather	Very important	Very important	Don't know	Good provision of GS, Well-Management/Maintained public spaces	No, the space is limited	yes, some but not enough	Not many changed,but more rubbish or litter lying around	Own detached house and private gardens/roof gardens	W 08
W 09	Retired	60 UP	Parents,Couple and Child	50	Not very like	not at all like	Quit like	Rubbish or litter lying around	Different people come from different pleace	High population density	Stable life	Greemspace in city,e.g. Parks	Parks, Trees,grassland ,rivers ect.	Walk	Gucheng park	Eeveryday/Most day	Exercise(walking/runing)	Weather not well	Not busy/far and with nice weather	Important	Very important	Improve the GS in Old area	As Gucheng park	No, the space is limited	No	Not many changed,but more rubbish or litter lying around	Good provision of public open spaces and private gardens	W 09
W 10	Employed	50 UP	with Parents	30	Not at all like	not at all like	Quit like	Rubbish or litter lying around	The environment (houses, pavements, GS etc) in poor condition	High population density	Happy life	Don't Know	No 'nature' surrounds in the city	Walk	Gucheng park	At least once a week	Relax/Enjoy Sunshine	Lazy/Don't want to	Not busy/far and with nice weather	Not very important	Very important	Don't know	Good provision of GS and public sports facilities (e.g. leisure centre, for young people)	No	yes, some but not enough	Not many changed,but more rubbish or litter lying around and house getting more destroy	Own detached house and private gardens, waterspace, ago-old trees etc.	W 10
W 11	Employed	50 UP	Parents,Couple and Child	40	Not at all like	not at all like	Very like	The environment (houses, pavements, GS etc) in poor condition	Rubbish or litter lying around	The environment (houses, pavements, GS etc) in poor condition (Old area)	Remove the old house area and rebuild new residential area	Wild-nature, e.g.mountains,river,forest etc.	No 'nature' surrounds in the city	Walk	Gucheng park	Pass by/free time	Relax/Enjoy Sunshine	Busy	Not busy/far and with nice weather	Important	Important	Improve the GS in Old area	Good provision of GS and recreational/sports facilities for old people	No, the space is limited	No	Not many changed,but more rubbish or litter lying around	Own detached house and private gardens	W 11
W 12	Employed	50 UP	Couple and Child	Up to 10	Not very like	Not very like	Very like	Don't know(Who come from contryside)	Don't know	Don't know	Health lifestyle	Don't Know	No 'nature' surrounds in the city	Walk	Gucheng park	At least once a month	Taking children to play	Busy	Not busy/far and with nice weather	Important	Important	Don't know	Good provision of GS and recreational/sports facilities for Childern people	No	yes, some but not enough	Don't know, I didn't live here when I was Child	Good provisoin of GS, have myself own house	W 12

Case study 4) State-built housing – (Bansong Yuan Sub-district)

ID	Employ	Age	Household	Years	Like1	Like2	Like3	Feeling	Environment	Density	Good provision	Nature	Parks	Travel	Park	Frequency	Activity	Busy	Facility	Imp1	Imp2	Improve	Good provision GS	Space	Yes/No	Change	Aspiration	ID
S 01	Employed	30 UP	Couple and Child	5-10years	Quit like	Quit like	Very like	Feeling not bad	The environment (houses, pavements, GS etc) in poor condition	High population density	Good provision of house, community centre, and convenicnce traffic	Trees, flowers,grassland etc.	Parks, Trees,grassland ,rivers ect.	Walk	Penglai Park	At least once a week	Relax/Enjoy Sunshine	Busy	Not busy/far and with nice weather	Important	Very important	Improve the GS in Old area	Good provision of GS and recreational/sports facilities	It's ok	yes, some but not enough	Not many changed,but more Public GS and the Air pollution higher than before	Good provision of GS, sports facilities and community in a neighbourhood	S 01
S 02	Employed	LESS 30	with Parents	Up to 10	Quit like	Quit like	Very like	Feeling not bad	House in poor condition (more than 40 years)	Don't know	Food safe and air quality in good condition	Air, water, food safe,no pollution,etc.	Parks, Trees,grassland ,rivers ect.	Walk	Zhongshan Park	At least once a week	Play Chess/ Cards, Meeting Friends	Busy	Not busy/far and with nice weather	Fairly important	Fairly important	Don't know	Good provision of GS and recreational/sports facilities for people	It's ok	Yes	Not many changed,but more Public GS and the Air pollution higher than before	Good provision of GS and public sports facilities (e.g. leisure centre, for young people)	S 02
S 03	Employed	40 UP	Couple and Child	5-10years	Quit like	Don't know	Very like	Not provision of public open space	Don't know	Don't know	Good provision of community in a neighbourhood	Trees, flowers,grassland etc.	Parks, Trees,grassland ,rivers ect.	Walk	Penglai Park	eeveryday/Most day	Exercise(walking/runing)	Busy/Too far	Not busy/far and with nice weather	Very important	Very important	Don't know	Good provision of GS	No, the space is limited	yes, some but not enough	Not many changed,but more Public GS	Good provision of GS and public sports facilities (e.g. leisure centre, for young people)	S 03
S 04	Retired	60 UP	Couple	30	Not very like	Quit like	Very like	Not provision of public open space	Lots of people and noise pollution	High population density	Good provision facilities for old people	Greemspace in city,e.g. Parks	Parks, Trees,grassland ,rivers ect.	Walk	Penglai Park	Eeveryday/Most day	Exercise(walking/runing)	Too far	Not busy/far and with nice weather	Important	Important	Don't know	Good provision of GS and less people	It's ok	Yes, as the park is provide good quality GS by local authorities	Not many changed,but more Public GS and more clearn in open spaces	Own detached house and private gardens	S 04
S 05	Retired	60 UP	Couple	Up to 10	Quit like	Quit like	Not very like	Not provision of public open space	Rubbish or litter lying around	High population density	Feeling safe in a neighbourhood and Ecological environment	Wild-nature, e.g.mountains,river,forest etc.	Parks, Trees,grassland ,rivers ect.	Walk	Penglai Park	Eeveryday/Most day	Being in a natural environment	Weather not well	Provision of sport/recreational facilities	Important	Important	Good provision of more public open space	More "Naturally" GS, provision of waterspace	No	Don't know	Yes, more natural enivronment was damage by human and the Air pollution higher than before	Good provision of GS and More "Naturally"	S 05
S 06	Retired	60 UP	Couple	5-10years	Not very like	Quit like	Quit like	Not provision of public open space and GS	No sense of community with neighbourhood	High population density	Health lifestyle	Air	Less 'nature' surrounds in the city	Walk	Penglai Park	At least once a week	Relax/Enjoy Sunshine	Poor provision of recreational facilities	Not busy/far and with nice weather	Very important	Very important	Don't know	Good provision of GS, Well-Management/Maintained public spaces	No	Yes, as the park is provide good quality GS by local authorities	Yes, the living area more bigger than before and more good provision of facilities for people	Own detached house and private gardens	S 06
S 07	Employed	50 UP	Couple and Child	20	Quit like	Quit like	Quit like	Rubbish or litter lying around and No GS	The environment (houses, pavements, GS etc) in poor condition	High population density	Well-manintained public open spaces (e.g. GS)	Greemspace in city,e.g. Parks	GS	Walk	Penglai Park	Eeveryday/Most day	Exercise(walking/runing)	Busy	Not busy/far and with nice weather	Important	Important	Good provision of more public open space	Good provision of GS and less people	No, the space is limited	Don't know	Yes, more natural enivronment was damage by human and the Air pollution higher than before	Own detached house and private gardens with whole family, and good commumity with neighbourhood	S 07
S 08	Retired	60 UP	Parents and Couple	20	Not very like	Not very like	Not very like	Pool provision of public open space(too many cars parking)	Rubbish or litter lying around	High population density and poor contition in GS	Well-manintained public open spaces (e.g. GS)	Greemspace in city,e.g. Parks	Less 'nature' surrounds in the city	Walk	Penglai Park	At least once a week	Relax/Enjoy Sunshine	Busy	Provision of sport/recreational facilities	Very important	Very important	Don't know	Good provision of GS, Well-Management/Maintained public spaces	No, not enough	yes, some but not enough	Yes, more natural enivronment was damage by human and the Air pollution higher than before	Own detached house and private gardens with whole family, and good provision of facilities in neighbourhood	S 08
S 09	Retired	60 UP	Single	10	Not at all like	Not very like	Don't know	GS in poor condition	Not provision of public open space	Don't know	Provision of recreational facilities e.g. leisure centre for dancing	Wild-nature, e.g.mountains,river,forest etc.	Less 'nature' surrounds in the city	Bicycle	Penglai Park	At least once a week	Dancing	Busy	Not busy/far and with nice weather	Important	Important	Improve the GS in Old area	Good provision of GS and recreational/sports facilities for people	No	Don't know	Yes, more high buildings	Good provision of GS and public sports facilities (e.g. leisure centre)	S 09
S 10	Retired	60 UP	Couple	20	Not very like	not at all like	Quit like	Rubbish or litter lying around and Not well-maintained public spaces	Pool provision of public open space(too many cars parking)	High population density	Improve the environment(GS, house,pavements etc) and local facilities and services	Wild-nature, e.g.mountains,river,forest etc.	Don't know	Walk	Penglai Park	Eeveryday/Most day	Relax/Enjoy Sunshine	Busy	Not busy/far and with nice weather	Very important	Very important	Don't know	Good provision of GS, Well-Management/Maintained public spaces	No, the space is limited	Don't know	Yes, the living area more bigger than before and more good provision of facilities for people	Good provision of GS and recreational/sports facilities for different ages	S 10
S 11	Employed	50 UP	Single	1-5years	Not at all like	Not very like	Not at all like	GS in poor condition	Not provision of public open space	High population density and high volume of road traffic	Remove the old house area and rebuild new residential area	Living environment of human and co-existence with nature	Parks, Trees,grassland ,rivers ect.	Walk	Penglai Park	At least once a month	Relax/Enjoy Sunshine	Busy	Not busy/with friends	Important	Very important	Improve the GS in Old area	Good provision of GS and less people	No	No	Yes, more high buildings, more park and more people removed	Good provision of GS and recreational/sports facilities for childen	S 11
S 12	Employed	30 UP	Single	1-5years	Not very like	Not very like	Quit like	The environment (houses, pavements, GS etc) in poor condition	Pool provision of public open space(too many cars parking)	High population density	Improve the environment(GS, house,pavements etc) and local facilities and services	Don't know	Parks, Trees,grassland ,rivers ect.	Walk	Penglai Park	At least once a month	Exercise(walking/runing)	Busy	Less People/More GS	Important	Very important	Improve the GS in Old area	More "humanity" and "cultural" GS	No	Yes	Yes, more natural enivronment was damage by human and the Air pollution higher than before	Good provision of GS and recreational/sports facilities for childen	S 12

Case study 5) High-rise private housing (gated communities) (Nanjing Donglu Sub-district)

ID																														ID
H 01	Employed	40 UP	Parents,Couple and Child		5-10years	Quit like	Very like	Quit like	Rubbish or litter lying around and Not well-maintained public spaces	Not well-maintained public spaces	High population density and high volume of road traffic	Improve the environment(GS, house,pavements etc) and local facilities and services	Wild-nature, e.g.mountains,river,forest etc.	No 'nature' surrounds in the city	Bicycle	People's Park	At least once a month	Exercise(walking/runing)	Too many people there	Not busy/far and with nice weather	Fairly important	Very important	Improve the GS in Old area	More designable and reasonalble, and less people	Yes, fairly enough	Yes	Yes, the house and GS feel better than before	Own detached house and private gardens	H 01
H 02	Employed	30 UP	with Parents		1-5years	Quit like	Very like	Very like	Rubbish or litter lying around and Not well-maintained public spaces	Lack of car parking	High population density and high volume of road traffic	Improve the environment(GS, house,pavements etc) and local facilities and services	Wild-nature, e.g.mountains,river,forest etc.	No 'nature' surrounds in the city	Bicycle	People's Park	Pass by/free time		Busy	Not busy/far and with nice weather	Fairly important	Fairly important	Don't know	More "healthy", Good provision of GS and more species of plants,	Yes, fairly enough	Yes	Yes, the house and GS feel better than before	Own detached house and private gardens	H 02
H 03	Employed	30 UP	Couple		5-10years	Quit like	Very like	Quit like	Not well-maintained public spaces	Not well-maintained public spaces	High population density	Improve the environment(GS, house,pavements etc) and local facilities and services	Living environment of human and co-existence with nature	No 'nature' surrounds in the city	Walk	Yanzhong park	At least once a week	Exercise(walking/runing)	Too many people there	Not busy/far and with nice weather	Fairly important	Important	Good provision of more public open space	Good provision of GS, Well-Management/Maintained public spaces	Yes, fairly enough	yes, some but not enough	Yes, the house and GS feel better than before but people qulity down, e.g. more rubbish or litter lying around	Own detached house and private gardens with whole family, and good commumity with neighbourhood	H 03
H 04	Employed	50 UP	with Parents		5-10years	Quit like	Quit like	Quit like	Not well-maintained public spaces	Not well-maintained public spaces	High population density	No rubbish or litter lying around	Trees, flowers,grassland etc.	Parks,Trees,grassland,rivers ect.	Walk	People's Park	At least once a month	Exercise(walking/runing)	Busy/Too far	Less People/More GS	Very important	Very important	Improve the GS in Old area	More "Naturally" GS, provision of waterspace	Yes, fairly enough	yes, some but not enough	Yes, more natural envirnment was damage by human and the Air pollution higher than before	Own detached house and private gardens, waterspace, ago-old trees etc.	H 04
H 05	Retired	60 UP	Parents,Couple and Child		5-10years	Quit like	Quit like	Very like	Not well-maintained public spaces	Not well-maintained public spaces	High population density and high air pollution	Just like now (old people feel)	Don't know	Parks,Trees,grassland,rivers ect.	Bicycle	Yanzhong park	At least once a week	Exercise(walking/runing)	Busy/Too far	Not busy/far and with nice weather	Fairly important	Very important	Improve trffic	As Yanzhong park	Don't kow	yes, some but not enough	Yes, more public GS	As now where I live	H 05
H 06	Employed	50 UP	Couple and Child		5-10years	Quit like	Quit like	Very like	Lack of car parking	Rubbish or litter lying around and Not well-maintained public spaces	High population density and high volume of road traffic	Good economic condition	Living environment of human and co-existence with nature	GS	None	None	Never	None	Busy/Too far	None	Not very important	Not very important	Improve trffic	Good provision of GS and Consider the car parking problem	No, not enough	yes, some but not enough	Yes, the house and GS feel better than before	Own detached house and private gardens	H 06
H 07	Employed	40 UP	Couple and Child		5-10years	Quit like	Very like	Very like	Lack of car parking	Lack of car parking	High population density and high air pollution	Provision of recreational facilities and hospital, shop etc.	Air,water,the environment	Air	Public transport	Changfeng Park	At least once a year	Being in a natural environment	Busy/Too far	Not busy/far and with nice weather	Very important	Important	Improve the GS in Old area	Good provision of GS, Less people, Well-Management/Maintained public spaces	No, not enough	yes, some but not enough	Yes, the house and GS feel better than before	Good provision of GS and recreational/sports facilities for different ages	H 07
H 08	Retired	60 UP	Parents,Couple and Child		5-10years	Very like	Very like	Very like	Not well-maintained public spaces	Not well-maintained public spaces	High population density	Well-manintained public spaces (e.g. GS)	Greemspace in city,e.g. Parks	GS	Public transport	Yanzhong park	Pass by/free time	Relax/Enjoy Sunshine	Busy/Too far	Not busy/far and with nice weather	Very important	Important	Good provision of more public open space	Good provision of GS, Well-Management/Maintained public spaces	Yes, fairly enough	Yes, as the park is provide good quality GS by local authorities	Yes, the house and GS feel better than before	Good provision of recreational/sports facilities and waterspaces and private garden,swimming poor etc.	H 08
H 09	Employed	30 UP	Couple and Child		5-10years	Quit like	Very like	Very like	Don't konw	Don't know	High population density	Good provision of public open spaces	Wild-nature, e.g.mountains,river,forest etc.	No 'nature' surrounds in the city	Public transport	People's Park	At least once a year	Relax/Enjoy Sunshine	Busy/Too far	Not busy/far and with nice weather	Very important	Very important	Improve the GS in Old area	As Yanzhong park	Yes, fairly enough	yes, some but not enough	Yes, more public GS	Own detached house and private gardens	H 09
H 10	Employed	LESS 30	with Parents		1-5years	Quit like	Quit like	Very like	Lots of people and noise pollution	No sense of community with neighbourhood	High population density	Have time to go outskirts of a city during the weekend	Living environment of human and co-existence with nature	Parks,Trees,grassland,rivers ect.	Walk	People's Park	At least once a month	Relax/Enjoy Sunshine	Lazy/Don't want	Not busy/with friends	Very important	Very important	Don't know	Good provision of GS, Well-Management/Maintained public spaces	Yes	Yes, as the park is provide good quality GS by local authorities	Yes, more high buildings, more park and more people removed	Own detached house and private gardens with whole family, and good provision of facilities in neighbourhood	H 10
H 11	Employed	LESS 30	with Parents		5-10years	Quit like	Very like	Very like	Not well-maintained public spaces	Not well-maintained public spaces	High population density and high air pollution	Improve both of physical and mental life, and Good provision of GS	Wild-nature, e.g.mountains,river,forest etc.	No 'nature' surrounds in the city	Walk	People's Park	At least once a week	Taking children to play	Busy/Too far	Provision of sport/recreational facilities	Important	Very important	Good provision of more public open space	As Yanzhong park and People's park	Yes	Yes	Yes, the house types and GS was changed	Good provision of recreational/sports facilities and waterspaces and private garden,swimming poor etc.	H 11
H 12	Employed	30 UP	Parents,Couple and Child		1-5years	Very like	Quit like	Very like	Lots of people and noise pollution	Not well-maintained public spaces	High population density	Quiet environment,health life	Greemspace in city,e.g. Parks	Parks,Trees,grassland,rivers ect.	Walk	People's Park	Pass by/free time	Relax/Enjoy Sunshine	Busy/Too far	Provision of sport/recreational facilities	Important	Very important	Don't know	More "functionally" and Provision of sports/recreational facilities for different ages	Yes	No	Yes, the house and GS feel better than before	Own detached house and private gardens with whole family, and good provision of facilities in neighbourhood	H 12