



**KTH Architecture and
the Built Environment**

Planning Practices of Greening

Challenges for Public Urban Green Space

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Planning Practices of Greening Challenges for Public Urban Green Space

Abstract:

Public urban green spaces are crucial parts of cities due to the many connections existing between urban greenery and well-being. Additionally, public urban green space represents a wide range of spatial concepts, such as parks, urban forests, commons, in-between-spaces, and gardens. This study explores challenges for contemporary public urban green space in an increasingly urban world, with high demands on urban growth, and simultaneously the need for more sustainable societies and cities. Dense urban forms have reached hegemonic status in regard to sustainability, which places great pressure on land resources in cities. At the same time, urban planning approaches within the sustainability framework highlight the importance of provision and access to urban green space associated with multiple benefits and values. Central positions in this thesis are the focus on well-being in connection to urban green space, as well as the public importance of these spaces. Acknowledging this complexity could support a more integrated approach to the planning and design of public urban green space. Therefore, this thesis aims to problematize the complex reality for contemporary public urban green space from an urban planning perspective in times of urban densification strategies, global competitiveness between cities, and trends of 're-naturing'. Questions asked in this study include: *What challenges for public urban green space can be identified in contemporary high profile urban green projects? How can the variety of concepts and classifications of public urban green space be understood and what are the implications thereof?*

The scope of this thesis is based on four high profile case studies. The Green Walkable City in Stockholm and The Green Living Spaces in Birmingham constitute planning strategies with a holistic approach to urban green space, including a strong focus on well-being. Simultaneously, both plans are connected to debates on the role of urban green space. In Stockholm, urban growth and new development of green space is justified by an increased quality of green space – a position criticized as leading to the 'parkification' of nature. In Birmingham, the goal to become the UK's first Biophilic City is seen both as a strength to position urban green space policies initially, as well as positioning Birmingham on a global arena of sustainable cities. Moreover, the biophilia concept is seen as confusing, both among the general public and within the planning organizations. The High Line in New

York and Parklets in San Francisco represent urban green space concepts, influential both at the local level and in the larger urban planning debate. The High Line is connected to a global trend of elevated parks and the (re)use of abandoned infrastructure to provide new green space. The case is analysed as a public space and influential landscape urbanism project, as well as in relation to ecological gentrification due to the massive transformation of its vicinity. Parklets, semi-temporal mini-parks, are analysed as formalizations of tactical urbanism and through conceptualizations of publicness, as well as regarding ecological functionality and narratives of parks and nature. The cases show how nature and urban green spaces are material and discursive manifestations of urban planning processes. The results point to a need to acknowledge the complexity inherent to urban green space provision, design, and management. Furthermore, the cases reveal that these high profile urban green space plans and projects are closely connected to global urban planning issues, such as gentrification processes, branding and positioning, and the involvement of private and voluntary actors in the provision and management of public space, as well as urban densification strategies.

This study contributes to the urban planning literature with insights of direct connections between narratives of nature, materialized urban green space projects, and conceptualizations of functionality of nature in urban planning projects. From the post-industrial, pristine flirting, crafted wilderness of The High Line; the symbolic, but cosmetic, scrambling with planters and narratives of parks of parklets; the dualistic argumentations of natural values connected to quality over quantity of nature in a densifying and growing Stockholm; to the pragmatic, yet emotional and ambitious, conceptualizations of human nature in biophilic urbanism and green space planning in Birmingham. Gentrification, publicness, and production of public space and densification strategies are core themes in urban studies – and as this study shows, public urban green space can play an active role in these processes.

Keywords: public urban green space; public space; ecological gentrification; green city branding; urban densification; green cities; biophilic cities.

Gröna planeringspraktiker

Utmaningar för det gröna offentliga rummet

Sammanfattning:

Offentliga grönområden är viktiga delar av städer då de på många sätt bidrar till välbefinnande, och de representerar en mängd rumsliga begrepp såsom parker, allmänningar, impediment och trädgårdar. Denna avhandling undersöker vilka utmaningar städers offentliga grönområden står inför i en allt mer urban värld med höga krav på stadstillväxt och exploatering och samtidigt ett stort behov av hållbar omställning. Den täta staden har fått stor uppmärksamhet som svar på hur den hållbara staden ska utformas, vilket sätter press på markanvändningen i städer. Samtidigt betonas tillgången till grönområden och de många fördelar det gröna bidrar med inom hållbar stadsplanering. Detta visar komplexiteten kring gröstrukturplanering och hur grönområden benämns och klassificeras med olika analytiska och politiska synsätt. I denna studie är välbefinnande och vikten av offentligt tillgängliga grönområden centrala teman och genom att stärka förståelsen för urbana grönområdens komplexitet kan integrerade arbetssätt kring utformning av gröstrukturstrategier stärkas. Därför syftar denna avhandling till att problematisera den komplexa verkligheten för offentliga urbana grönområden från ett stadsplaneringsperspektiv i en tid som karaktäriseras av förtätning, global konkurrens mellan städer och ideal att göra städer allt grönare. Frågor som ställs är: *Vilka utmaningar står gröna offentliga rum inför? Hur kan mångfalden av begrepp och klassificeringar av det gröna förstås och vilka implikationer kan de ha?*

Avhandlingen är baserad på fyra fallstudier av uppmärksammade grönparkeringsprojekt. Den gröna promenadstaden i Stockholm och The Green Living Spaces i Birmingham utgör strategiska gröstrukturplaner med ett starkt fokus på välbefinnande. Samtidigt speglar båda planerna kontroverser kring betydelsen av urbana grönområden. I Stockholm motiveras ny bebyggelse på grönområden utifrån ett synsätt där grönområdets kvalitet anses viktigare än kvantitet. Detta har kritiserats för att bidra till en "parkifiering" av naturen. I Birmingham har strategin att bli Storbritanniens första 'Biophiliska stad' både setts som en styrka för att positionera urbana grönområden i den lokala politiken, samt stärka Birminghams ställning på en global arena av hållbara städer. Fallstudien visar även att biophilia anses vara ett förvirrande och otydligt koncept både bland allmänhet och planerare. The High Line i New York och parklets i San Francisco är innovativa projekt för att skapa nya grönområden i redan

väldigt täta städer, men projektens mediala genomslag har gjort att de inte bara påverkar den lokala miljön utan även andra platser i världen som inspirerats av projekten. The High Line har inlett en världsomspännande trend att bygga parker ovanför gatunivån och att (åter)använda övergiven infrastruktur för att tillhandahålla nya grönområden. Fallet analyseras som ett inflytelserikt landskapsurbanistiskt projekt, och de stora förändringar som skett i parkens närhet kopplas till s.k. ekologisk gentrifiering. Parklets är semi-temporära miniparker som analyseras i relation till deras offentlighet samt ekologiska funktionalitet. Trots att de marknadsförs som parker har de väldigt lite vegetation, därmed är deras ekologiska funktionalitet låg – samtidigt som den symboliska transformationen från parkeringsplats till park bidrar positivt till stadsrummet. De fyra fallstudierna visar sammantaget att urbana grönområden utgör materiella och diskursiva manifestationer av stadsplaneringsprocesser. Resultatet visar att det finns ett behov av att öka förståelsen av komplexiteten hos grönområden i städer och deras kopplingar till globala stadsbyggnadsfrågor såsom förtätningssideal, gentrifiering, platsmarknadsföring och samverkan mellan offentliga och privata aktörer.

Denna avhandling bidrar med kunskap om hur det gröna i staden både direkt och indirekt påverkar stadsplaneringen genom sin materialitet och sina funktioner. Från det postindustriella flörtandet med den 'örörda naturen' som the High Line representerar, den symboliska men kosmetiska grönskan som parklets bidrar med, den dualistiska argumentationen för grönkvalitet istället för grönkvantitet som presenteras som lösning för ett tätt och växande Stockholm, till den pragmatiska och samtidigt emotionella synen på samspelet mellan människa och natur inom biophilisk stadsutformning i Birminghams grönstrukturplanering. Gentrifiering, platsmarknadsföring, tillgång till offentliga stadsrum och förtätning är centrala teman inom stadsplaneringsforskningen - och som föreliggande avhandling visar kan offentliga urbana grönområden spela en aktiv roll i dessa processer.

Preface and Acknowledgements

For me, growing up in Stockholm, water and greenery has always been present. From climbing Weeping Willows along the shores of Reimersholme, to exploring the woods of Långholmen, enjoying the view from Skinnarviksbergen and swimming in lake Mälaren. Living in a city full of nature, and cherishing the many roles and functions different urban green spaces can have has always been important to me, with this dissertation I wish to contribute to the discussion of the role of the green in urban planning.

My path to a PhD education in planning and decision analysis has not been strait, but my main interest and driving force has always been the same. How can a more sustainable city be imagined? From going to music school and dreaming about becoming a marine biologist or actress to studying human geography, civil engineering, architecture and a strong interest in landscape architecture, I found my niche in the *Urban Form and Human Behavior* research group. Interest in the built environment, planning processes, power dynamics and design ideals rooted in an interest in everyday life and human experiences created a platform to investigate some of the urban spaces most valuable to me; the public park, commons, gardens, in-between-spaces, the green spaces that invites us and are equally natural and urban. Environmental issues and sustainability are close to my heart and while it might sound obvious that a city can be both sustainable and green, I have been intrigued by the paradoxes and challenges involved. *Where is the place for green space in the dense city? How are aspects of ecological functionality and social justice intertwined? How is entrepreneurial urban governance connected to public urban green space? And what do we mean with the very word green?*

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Stockholm, maj 2016
Hélène Littke

Content

1	Introduction.....	1
2	Identifying the Research Problem.....	5
2.1	Research Aim and Research Questions	6
2.2	Central Concepts	8
2.3	Delimitations and Limitations	11
2.4	Contextualization of the Study	12
3	Summary of the Papers.....	15
3.1	Paper I.....	16
3.2	Paper II.....	16
3.3	Paper III	17
3.4	Paper IV	18
4	Background	21
4.1	Perspectives: From Nature to Park to Urban Green Space.....	21
4.2	Urban Green Space and Well-Being.....	24
5	Research Design and Methodology	29
5.1	Systems of Inquiry	30
5.1.1	Reflections on Complexity	31
5.2	Establishing the Theoretical Framework.....	32
5.3	Strategies - Case Study Methodology	33
5.3.1	Practical Application of Case Study Methodology	34
5.3.2	Case Selection	36
5.4	Methods for Data Collection	38
5.4.1	Empirical Conduct	38
6	Theoretical Framework	43
6.1	Spatial Properties of Urban Green Space	44
6.1.1	Public and Private	45
6.2	Urban Densification and Urban Green Space	48
6.3	Ecological Gentrification.....	51
6.4	Green City Branding.....	54
6.5	Application of the Theoretical Framework.....	57

7	Discussion and Conclusions	61
7.1	Main Findings	61
7.2	Discussion.....	62
7.2.1	Discussing Challenges for Public Urban Green Space	64
7.2.2	Analysing Classifications of Public Urban Green Space	68
7.3	Conclusions.....	71
7.4	Contributions and Concluding Remarks.....	75
7.5	Looking Ahead.....	76
8	References	79

1 Introduction

“I was asked to attend the Sustainability Fair in London called Eco-built, (...) and I ended up sharing a platform with Tim Beatley who had come to talk about biophilic cities and I got talking to Tim. The University of Birmingham had found out about Tim’s work and had invited him for a day to stay in Birmingham and by the time we finished talking explaining to him what we wanted to do here in Birmingham with all these plans and ideas he said, ‘well, it would be very neat if the Biophilic Cities network could invite Birmingham to join’. And the council responded very positive, that’s how it all came about - almost by chance.”

Nick Grayson, 2015
Birmingham’s Climate Change and Sustainability manager

“There were maybe twenty people at the meeting. It began with a presentation by someone from the Regional Plan Association, which had been commissioned by CSX to do a study of the possible uses for the High Line (...) A guy named Doug Sarini spoke, representing a group of property owners in Chelsea who had been working for fifteen years to tear it down. He said it was a blight in the neighbourhood. It was going to fall down any day. It was holding up the economic development of the area. It was dangerous. It was dark underneath. A whole litany of arguments, and really vehement. I was surprised at how strongly these people felt.”

Robert Hammond, 2011
Founder of the Friends of the High Line

All stories have a starting point. In Stockholm, consideration of a new comprehensive plan was replete with concerns, suggestions, and discussions regarding questions of nature and green space strategies. This process led to the city concluding that a new strategic document for Stockholm’s green space planning had to be created. Thus, The Green Walkable City program came to life as an extension of the Walkable City Stockholm plan. In London, Birmingham’s Climate Change and Sustainability manager found himself sharing a session with Professor Timothy Beatley at the Eco Built Sustainability Fair. Beatley, being the main proponent of the biophilic urbanism approach and the city of Birmingham working to become a leading green city and improving the city brand, public health and its green spaces, found in each other partners to promote the biophilic city approach. In 1999, at a community board meeting in Chelsea, Joshua David and Robert Hammond met and agreed to disagree with the property owners dominating the meeting in their wish to tear down the abandoned elevated

rail going through the Meatpacking and Chelsea districts – a meeting that, in the end, led to the creation of The High Line, a 22-block long park in 2012 designated as the world’s 10 most popular landmark. Moreover, on the 16th of November, 2005, the art-design-activist organization Rebar paid a parking meter in central San Francisco for two hours and placed a bench, a tree, and some sod on the street. This mini-park, the first ‘parklet’, was created to generate a critical debate about the quality and need for public space, and is today a concept that has spread worldwide, with implications for public urban green space far away from downtown San Francisco.

At the same time, all stories have a background. Contextualized in a time when cities worldwide are striving to be more sustainable, focus on greening is connected to aspects of climate change mitigation, creation of attractive and competitive environments, and the well-being of urban residents. Being green and working with green policies are on the top of the agenda, but concepts, such as sustainability, greening and even nature are inherently complex, containing multiple connotations and are politicized based on local requirements, political strategies, and interpreted based on one’s analytical point of view. Planning practices of greening are thus related to the procedural and substantial provision, design, and management of urban green space. While vegetation on private green spaces contributes to cities green networks and multiple ecosystem services, this study’s urban planning perspective emphasizes the importance of the public urban green space. At the urban scale, high quality urban environments and access to both physical places and planning processes must be accessible and inclusive for all urban residents.

While public urban green space is increasingly seen as an essential urban environment, the relationship between the city and nature as represented by urban green space has a long tradition of conflictual and contradictory conceptualizations. Take the concept of nature as a start, being immensely complex and elusive. It can describe something that we are, something that we see, or something that we might visit on the weekends. It is culturally and contextually shifting. It can be a mix of living and non-living elements, humans, animals, and plants. Ontological divides and dichotomies between humans and non-humans, urban and rural, nature and culture, and urban and nature are deeply rooted in Western society, and the effects of this can be seen in urban planning and design policies. Ebenezer Howard’s Garden City and Le Corbusier’s Towers in Parks are design-wise fundamentally different, but both aim to find the ‘right’ mix of urbanity, on the one hand, and nature, on the other (Fishman, 1982). In 1969, Ian McHarg argued for bringing nature and environmental issues into the urbanization process in

Design with Nature. So, while urban green space as parks, urban forests, commons, and gardens is a crucial part of cities, the relationships between the city and nature are often portrayed in conflicting, dichotomous ways (Plumwood, 1993; Frey, 2000; Jorgensen, 2005; Tjallingii, 2005; Corner, 2006; Heynen et al., 2006; Swyngedouw & Kaika, 2008; Melosi, 2010; Borgström, 2011; Erixon et al., 2013). Meanwhile, many connections exist between urban green space and well-being (e.g., Kaplan, 1983; Kaplan et al., 1998; MEA, 2005; Mayer et al., 2008; Haq, 2011; Dempsey & Burton, 2012), and these are, in turn, connected to spatial and material properties, making them important considerations for urban planning. The closer to urban green space people live, the more they use it and receive benefits from it (Schipperijn et al., 2010 in Dempsey and Burton 2012). Urban green space can increase the sense of place and the local identity (Whyte, 1980; Gehl, 2001; Konijnendijk, 2008). It can also contribute positively to civic pride, a sense of community, and a sense of place (Dunnet, et al., 2002; Arnberger & Eder, 2012; McIndoe et al., 2014). Studies have shown stronger ties to neighbours among individuals living in inner-city apartment buildings with well-used, urban, green spaces (Kuo et al., 1998a; Kweon et al., 1998), a greater sense of safety and adjustments (Kuo et al., 1998b), and higher attractiveness and prices of houses (Luttik, 2000; Wolf, 1998, 2004). A study by Sullivan et al. (2004) identified vegetation as a key component in creating neighbourhood vitality. Where there are trees and urban green spaces, a higher concentration of uses can be found, which enhances social control, promotes informal contact among neighbours, increases community feeling by fostering ties, and has the potential to reduce crime (Kuo et al., 2001a, b). As urban nature provides important well-being benefits, it is a valuable municipal resource crucial for the development of sustainable cities (Cheisura, 2004). While discussing the importance of urban green space and well-being, one must understand the complexity of public space. Even though trees and plants on private properties contribute to ecosystem services and the visual appearance of cities, it is the accessible, public green spaces that ensure that the benefits associated with urban green space can be achieved for all urban residents.

From an urban planning point of departure, this study addresses planning practices of greening to illuminate the complex reality for contemporary public urban green space. In an increasingly urban world, there are high demands on urban growth, and simultaneously the need for more sustainable societies and cities. Dense urban forms have reached hegemonic status in regard to sustainability, which puts pressure on land resources in cities. However, urban planning and design approaches within the sustainability framework also stress the importance of provision and access to urban green

space associated with multiple benefits and values for cities, ranging from climate mitigation to social ties, and beautification of the cityscape. Comprehending high quality urban environments as the objective of urban planning, well-being aspects of urban green space are highlighted together with their spatial and material properties to strengthen their position within an urban planning framework. Nature and urban green space are contested concepts with multiple, context-dependent meanings, including environmental policies, as well as biophysical forms of greenery. Acknowledging this complexity could therefore support a more integrated approach to the planning and design of urban green space, and problematizing current practices is here understood as an essential step to promote and strengthen public urban green spaces.

In the quotes above, the starting points for two of the cases investigated in this study are described – underscoring the importance of chance and how imaginaries of what something is and what it could be influences processes and projects. Best practices, role models, and innovations once started as an idea or a vision. Contemporary competitiveness between cities to attract and retain people, businesses, and investments has resulted in a focus on local identity and, at the same time, close observation of what other cities are doing. High profile projects, cooperation, and networks therefore enable projects to influence not only their own locality, but others as well. By investigating and problematizing these, a narrative is built up connecting the local to the global, the universal and the particular. So, while the city of Birmingham came across the concepts of biophilia and biophilic urbanism almost by chance – the actual implementation in planning policy contributes to the conceptualization of the approach. Moreover, even if Robert Hammond was surprised by the sentiment in the community meeting regarding what would become The High Line – the project has continued to arouse emotions. Blaming the structure for holding up the economic development of the area is almost comical in retrospect – as increased property values and tax revenues have been central both for the promotion and critique of the project.

This study is a story of four independent urban green space plans and projects. It is also a story about the complex reality for public urban green space in cities simultaneously focusing on densification, greening, sustainability, branding, struggling with decreasing public funds, negotiating publicness, and recognizing the importance of urban green space for the well-being of urban residents.

2 Identifying the Research Problem

In an increasingly urbanized world, human well-being and sustainable urban environments are key issues in contemporary urban planning. Public urban green space is a crucial part of achieving these goals. At the same time, densification and infill policies might lead to conflicts of interest over space for urban green and evolving management and ownership structures of public and semi-public spaces involving provision and access to public urban green space.

Urban green space is widely acknowledged for its values and benefits. However, within the theory and practice of urban planning, these discussions about how different perspectives on what nature and green are and which functions, values, and benefits are associated with them needs strengthening. A European study concludes that only a few cities have a sound evidence base for green structure planning (Pauleit, & Kaliszuk, 2005). In addition, better awareness of green structure in planning is needed to guarantee well-being for urban residents (Lindholm, 2005), and the value of urban green spaces is often overlooked in urban planning (Langemeyer, 2015). Furthermore, since urban green space embodies ‘multifunctional, interdisciplinary, multilevel and multiperspective issues’ better understanding of these issues, more inclusive perspectives, and improved communication are required (Lindholm, 2005, 315). According to the Commission for Architecture and the Built Environment in the UK, changing demands and pressures on urban green space, as well as failing to understand the nature and purpose of urban green space, make it difficult to deliver values (CABE, 2004). The main challenges for urban green space are identified to be low priority among local governments, low status, and diffused roles and responsibilities and funding, especially long-term commitments and volunteers. The Commission’s report further states that “*good management of green space depends on a correct understanding of the nature and needs of different types of green spaces, and that one-size-fits-all, standardize approaches will rarely be appropriate*” (CABE, 2004, 18). Simultaneously, Liu et al. (2007) proposes that “*green-planning is gaining importance as the public’s demand for green space is becoming stronger in terms of aesthetic enjoyment, recreation, and access to clean air or quiet environments*” (in Cilliers et al., 2015, 352). Moreover, Kaltenborn and Bjerke state that “*expanding the perspective from considerations of the functional capabilities of the landscape to values and sociocultural meanings is probably one of the paramount challenges of future land use planning*” (2002, 3). Based on this identified research gap, this study

acknowledge the need to investigate how the relationship between, and conceptualization of, urban green space are affecting urban planning. A multitude of research findings from various fields, including environmental psychology, landscape architecture, urban planning, urban design, urban political ecology, and urban forestry point to the numerous benefits and values connected with green structures and elements in the urban environment. The material and discursive production of urban nature(s) and urban green space is embedded in social, political and cultural processes, and “*re-naturing urban theory is (...) vital to urban analysis*” (Heynen et al., 2006, 2). Public urban green spaces, such as parks, commons, tree-lined streets, and gardens are therefore important urban elements for the delivery of well-being benefits and values connected to green space – and an urban planning perspective enables the investigation of publicness, spatial and material properties, as well as the contextual and procedural aspects of public urban green space.

2.1 Research Aim and Research Questions

Based on the research problem formulation above the **aim** of this study is to problematize the complex reality for contemporary public urban green space from an urban planning perspective in times of urban densification strategies, global competitiveness between cities and trends of ‘re-naturing’, while acknowledging the many connections between urban green space and well-being.

The research is guided by two questions:

1. *What challenges for public urban green space can be identified in contemporary high profile urban green projects?*
2. *How can the variety of concepts and classifications of public urban green space be understood and what are the implications thereof?*

This is achieved by assessing four diverse, but interlinked, cases of urban green space. Each case is presented in a research paper with its own aim and research questions. Together, the cases create a narrative exploring conceptualizations of urban green space, spatial, and material properties of urban green space benefits, connections between urban green space planning and well-being, as well as conflicts, opportunities, obstacles, and benefits thereof. The four cases interlink several scales, the local and the global, the streetscape, the park, the neighbourhood, and the city. Papers I and II look at urban green space planning documents, and Papers III and IV concern urban green space concepts that have been influential both in their own locality, as

well as being exported and promoted in other localities. Paper I focuses on the role of nature and urban green space in a densifying, growing city and conceptualizations of social and psychological benefits of urban green space to promote well-being by examining The Green Walkable City Plan in Stockholm, Sweden. Paper II discusses the introduction of the biophilia concept in urban green space planning through The Green Living Spaces Plan in Birmingham, UK. In Paper III, The High Line in New York is addressed as public space, a prime example of Landscape Urbanism, and in connection to ecological gentrification. Paper IV assesses the Pavements to Parks program and parklets in San Francisco in a framework of conceptualizations of publicness and ecological functionality.

The aims of each paper are summarized below in Table 1. As the papers cover distinctive cases, each case has research questions developed for the case-specific characteristics, while the aims are more broadly formulated to connect both to local consequences and at the same time connect to theory. The aim and research question of the study is thus to be seen as an umbrella for the cases – while the discussions and conclusions of each paper contribute to the more general discussion of the cover essay. Each case tells a story of its own, and the combined findings are utilized to discuss the aim and research questions for the entire study.

Table 1. Relational and hierarchal structure of the aims of the overall study and the four papers.

Ph.D. Project Aim and Research Questions			
Individual Aims for Paper I-IV			
The aim of Paper I is to discuss the value and benefits of urban green space with a focus on the well-being of urban inhabitants. Additionally, the major conflicting areas in contemporary urban green space planning in Stockholm are identified.	The aim of Paper II is to critically discuss Biophilic Urbanism for its potential as an urban strategy focusing on the case study of Birmingham	The aim of Paper III is to discuss the effects of the High Line on local and global scales: as a public space, as a park, as a main driver in urban development, and how the project's massive attention has influenced other places.	The aim of Paper IV is to discuss how parklets are challenging the role of public space and urban nature, and affecting cities around the world.
Main conceptual contributions from each paper			
Discussions of arguments and challenges for urban green space as well as variety of concepts .	Focus on use of concepts as well as policy integration .	Consequences of complex and conflictual roles of urban green space.	Conceptualizations of publicness and symbolic as well as ecological functionality .

2.2 Central Concepts

Public urban green space comprises parks, urban forests, commons, in-between-spaces and gardens, and is a central concept in this study. While the park, as a concept, has its own history and connotations, the public urban green space concept has been chosen as ‘more than parks’. Being deliberately broad and multi-faceted, the position within the urban setting and highlighting the publicness aspects of these spaces, the *greening* component is central, but at the same time, evasive. The word ‘green’ in connection to cities is vague, since it can refer both to environmental policy and biophysical forms. Moreover, even biophysical forms are not necessarily green, e.g., seasons and local climate variations mean that the green is white, brown, red, and all other colours imaginable. Meanwhile, green is used both in planning practice and theory to describe urban environments that, in everyday language, are classified as ‘nature’ in cities. Parks are a prominent part of public urban green space, but this wider term also encompasses public perceptions and influence in city-wide urban green space planning. Planning practices aiming to ‘green’ cities are connected to a wide range of policies from the creation of new green space to making strategic policies for existing and future green space, as well as branding and redefining the form and function of urban public green space.

In urban green planning, many different concepts and terms are used to discuss urban green space planning, and a Swedish study shows that this diversity is often not explicitly discussed or motivated (Lövré, 2003). Instead, the choices of terms are based on a specific point of view or analysis. Relational, functional, and cultural aspects are embedded for a specific place to be labelled a green belt, a recreational area, or a park (Lövré, 2003). Furthermore, green space, public space, and open space can be used simultaneously to describe a place partly covered by vegetation (Cilliers et al., 2015). However, while green spaces are the result of planning, open space is defined by the lack of it (Cilliers & Timmermans, 2013). Urban green spaces are characterised by being multi-functional, which according to Lövré (2003), might be a reason that they are so difficult to define and label. The history of the place in question will also influence how it is perceived, e.g., urban green space refers to a range of places from a traditional landscaped park to space left over, ‘non-built’, waste land.

Within the extant literature, there are many, often very broad, definitions of urban green space. Haq (2011) draws from Tuzin et al. (2002), and states that:

“the definition of urban green spaces which is agreed on by ecologists, economists, social scientists and planners is public and private open spaces in urban areas, primarily covered by vegetation, which are directly (e.g., active or passive recreation) or indirectly (e.g., positive influence on the urban environment) available for the users” (Tuzin et al., 2002 in Haq, 2011, 601).

This definition is also used in a recent doctoral thesis from the Swedish University of Agricultural Sciences (Qiu, 2014). While some studies lack explicit definitions of urban green space, even though the concept is used in the title (e.g., Niemelä et al., 2010; Zhou & Wang, 2011; Arnberger, 2012), other definitions include *“urban green spaces – that is forests, trees, parks, allotments or cemeteries”* (Breuste et al., 2013, 89), or as consisting of *“green wedges, greenways and green extensions that incorporate urban green areas at the landscape scale”* (Jim & Chen, 2003, 95). According to Balram and Dragičević *“urban green spaces are considered as urban areas now covered with vegetation, natural or maintained, public or private, as opposed to areas that are paved or have buildings on them. Community parks, forested lands, and woodlots are examples of green spaces that occur in the urban milieu”* (2005, 149). An even wider scope is presented by Van Herzele and Wiedemann as *“urban green spaces are seen in a wide scope and include all the open areas, which can be perceived by citizens as contributors to their quality of life”* (2003, 110) or as the last remaining pieces of ‘nature’ in the city (Beatley, 2000 in Kong & Nakagoshi, 2006, 148). Peschardt et al. (2012) define these spaces as bounded with at least some vegetation, and Grahn and Stigsdotter define urban open green spaces as *“all types of green outdoor environments in the town or city”* (2003, 6). In conclusion, the setting within urban boundaries and the existence of some vegetation constitute the unifying characteristics of these spaces.

As seen in the definitions presented above, urban green space can both be on private and public land. In this study, the concept of public urban green space is used to highlight the conceptual boundaries concentrating on the public aspects of these spaces.

Urban planning, as a discipline, consists of theories and practices from a wide range of fields (Allmendiger, 2002), and these many different definitions of planning reflect the multitude of theories and ideologies concerned (Næss & Saglie, 2000). Seen as a connection between theory and action, Næss and Saglie (2000) discuss planning as future-oriented and informing decision-making and implementation, both concerned with

substantial functions, locations, connections, and other factors regarding the design of the physical environment, as well as procedure, i.e., organization of processes, roles, types of knowledge, and instruments for implementation. In this study, *urban planning* is seen as an inherently interdisciplinary field stretching over several spatial scales, including policies on land use, built structures, and social, cultural, economic, and ecological concerns connected to spatial, material, and procedural processes of urban governance. *Urban green space planning* thus refers to urban planning procedures and policies related to the provision, design, and management of urban green space, here seen as areas within cities with actual biophysical forms.

As shown above, the core concepts in this study are broad, and sometimes difficult to define (see also the conceptual discussion of defining biophilic urbanism in Paper II). The implications of this will be addressed in Chapter 7.

It is critical to point out, while discussing the difficulty of defining concepts, such as urban green space, the related concepts that are not used in this study. For example, there is a commonly used, but contested, concept, *urban green infrastructure* (Lennon, 2015), that can be seen as a grey-to-green continuum (Mell, 2013). Mell (2010) defined it as “*the resilient landscapes that support ecological, economic, and human interests by maintaining the integrity of, and promoting landscape connectivity, whilst enhancing the quality of life, place and the environment across different landscape boundaries*” (Mell 2010, 255). Green infrastructure includes places and structures, such as ‘visual green’ as parks and plants, to sustainable infrastructure, such as cycle paths and energy-efficient buildings, as well as hybrid forms, such as sustainable urban drainage systems (SUDS) and green walls (Mell, 2013, 153). The synonym *green structure* was used in the European Co-operation in the field of Scientific and Technical Research’s Green Structure and Urban Planning report, defined as all green aspects of planning, including the physical structures from the network of green elements to infrastructure, i.e., much broader than just ‘visual’ green areas (Duhem, 2005). The concept is further discussed as:

“in a spatial perspective, green structure is more than the sum of green spaces. Speaking of green structure implies drawing attention to the spatial network that links open spaces, public and private gardens, public parks, sports fields, allotment gardens and recreation grounds within the city to the networks of woodlands and river floodplains in the surrounding countryside. Thus green structure highlights the role of greenways for walkers and cyclists and stresses

the importance of ecological corridors for wildlife” (Tjallingii, 2005, 16).

Another related concept is urban forestry, which is defined as “*the art, science and technology of managing trees and forest resources in and around urban community ecosystems for the physiological, sociological, economic, and aesthetic benefits trees provide society*” (Konijnendijk et al., 2006, 93), focusing on the three components, “*the structural (or vegetation) elements included; the locations considered on the continuum urban, suburban, peri-urban and rural; and the benefits generated by urban forestry*” (Randrup et al., 2005 in Konijnendijk et al., 2006).

2.3 Delimitations and Limitations

The research presented in this study has been conducted within the scope of a doctoral program in planning and decision analysis, with a specialization in urban and regional studies. While each case study has its own spatial, theoretical and conceptual boundaries, the overall study project has a broad scope and could easily be expanded in numerous areas. One important delimitation has been a focus on aspects of social processes, well-being, and social aspects in connection to urban green space. Social and well-being aspects of green space belong to the broader scope of ecosystem services (MEA, 2005). Even though a wide range of ecosystem services (including supportive, regulating, provisioning, and cultural) can be directly or indirectly connected to well-being, this study has focused on social and psychological benefits and values, and not the full scope of ecosystem services presented within the ecosystem service framework. This delimitation is chosen partly because this area has been identified to need strengthening, and also due to the limitation of the overarching research project (see below). At the same time, these aspects cannot be completely separated from the ecological, since ecological functionality is important for the delivery of ecosystem services (see Paper IV). While frameworks as ecosystem services and urban green infrastructure are useful to investigate the multi-functionality of urban green spaces (c.f. Langemeyer, 2015 and Gulsrud, 2015), the delimitations of this study were developed to approach the topic from a both substantial (i.e., spatial and material properties and discussions of urban form through discussions of densification strategies) and procedural (i.e., gentrification and branding) urban planning perspective. As considered in relation to the spatial properties of urban green space in Section 6.1., the public space function of urban green space is a core concern.

The most central delimitation is the choice of cases. The four cases are located in Western Europe and the U.S., respectively, and have framed the theoretical perspectives. Simultaneously, the cases are chosen due to their global importance as best practices embedded in international networks and urban planning paradigms. As case studies represent situated knowledge, any general claim is made in connection to the theoretical framework. However, the cases have been chosen to illuminate contemporary aspects of public urban green space through their high profile status.

While the delimitations are the deliberate limitations of the study, limitations are restrictions outside of the control of the researcher. In Paper I, the review of written public consultation responses prompts questions regarding who has the capacity and procedural knowledge to take part in the consultation process. Additionally, only the responses in the consultation, and not from the exhibition, have been analysed, as they overlapped. This is further elaborated in the data collection Section 5.4.1.1. and in Paper I. For Paper II, additional respondents that would have been interesting for the study include the CEO for the UK Business Council for Sustainable Development, who is cited in local media regarding the plan, but declined to be interviewed for the study. Moreover, the representative from Birmingham University in the reference group of the plan was on parental leave. Although the Director of Public Health in Birmingham did not respond to the request for an interview, through the reference group, a trainee was available for questions, who was jointly affiliated with Birmingham University. Relying partly on observations, Paper III analyses results from three observation events. Although more observations could have been included, this was not possible due to the location of the site in New York. In Paper IV, the initial idea to use further observations to map and count uses and users of the parklets could not be carried out due to the limited number of observations.

2.4 Contextualization of the Study

This research has been conducted within the division of Urban and Regional Studies, at the Department of Urban Planning and Environment. The department defines urban planning/societal planning as a dynamic interdisciplinary research field both in a Swedish and international context. With strong links to practice, the discipline is characterized as a coordinating function to synthesize and make applicable knowledge from many disciplines. Research carried out at the department includes urban design, legal and procedural processes, economic aspects, modelling and future studies, spatial analyses, as well as politics and power relations in

implementation and planning. The objective of urban planning as an academic discipline is identified as providing resources and tools to meet the challenges in contemporary social and urban development (SoM, 2014).

This study is also part of the Urban Form and Human Behavior research project – a project that aims to “*understand how urban experience is shaped by the urban form and the dynamic processes that compose our cities and place*” (cal.abe.kth.se, n.d.). While being an assemblage of specific research formulations, the collective approach is based on normative and explorative perspectives and qualitative investigations of perceptions, experiences, and narratives. Specifically, the relationships between the physical environment and human responses within the public realm are topics of focus (cal.abe.kth.se, n.d.).

3 Summary of the Papers

The scope of this study is based on the four case studies used to discuss public urban green space relating to urban planning policies and debates. Following a case study methodology identifying each case as high profile due to its practical and theoretical importance, the cases are argued to have implications and influence beyond their material and spatial boundaries. The cases show how nature and urban greenery constitute material and discursive manifestations of urban planning and design processes. Planning processes, political goals, and pragmatic responses to urban challenges contribute to a multitude of conceptualizations of urban green space and their role in our cities.

Paper I: Littke, H. (2015). Planning the Green Walkable City: Conceptualizing Values and Conflicts for Urban Green Space Strategies in Stockholm. *Sustainability*, 7(8), 11306-11320.

Paper II: Littke, H. (2016). Becoming Biophilic: Challenges and Opportunities for Biophilic Urbanism in Urban Planning Policy. *Smart and Sustainable Built Environment*, 5(1), 15-24¹.

Paper III: Littke, H., Locke, R., and Haas, T. (2015). Taking The High Line: Elevated Parks, Transforming Neighbourhoods, and The Ever-Changing Relationship Between the Urban and Nature. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 1-19.²

Paper IV: Littke, H. (2015). Revisiting the San Francisco Parklets: Problematizing Publicness, Parks, and Transferability. *Urban Forestry and Urban Greening* Vol. 15, pp. 165–173.

¹ Paper II was published in a special issue on Urban Nature for Resilient and Liveable Cities focusing on urban greening and biophilic urbanism agendas within the context of the 21st Century challenges and opportunities. Guest editors were Dr Cheryl Desha, Professor Timothy Beatley, and Dr Jennifer Finn.

² Comments on co-authored paper. For this paper, I came up with the original idea and wrote the introduction, methods and literature review, and we all worked with the discussions and conclusions. The first and third observation in November, 2012, and October, 2014, were carried out by me. The observation in April, 2013, was carried out by me, together with Ryan Locke.

3.1 Paper I

In Stockholm, the planning document *The Green Walkable City* (GWC) was developed to accompany the comprehensive plan from 2010 to act as a strategic backbone for urban green planning. In Paper I, this new plan is studied, and the aim is to discuss the value and benefits of urban green space with a focus on the well-being of urban inhabitants. Additionally, the major conflicting areas in contemporary urban green space planning in Stockholm are identified. Based on interviews and content analysis, this paper discusses the recent shift in attitudes towards the urban green space and focuses on new developments of greenfields justified by a focus on the quality, rather than the quantity, of urban green space. Conflicts identified in the analysis included a lack of definition and clarification, densification and urban growth, differentiation between park and nature, and the “parkification” of nature.

The main conclusions of the paper stress that GWC is an ambitious document with a strong focus on social and psychological values of urban green space with the potential to influence future planning in Stockholm. While providing a broad vision of the benefits of urban greenery, promoting urban densification and ecosystem services, and presenting a quality-over-quantity approach, the public consultation responses ask for definitions and details. Language and clarification of concepts play a core role in this urge to comprehend the new plan, as professional and non-professional language often differ. The concerns raised by individuals and NGOs would be better addressed in the document with examples and definitions in both spatial and conceptual forms. The analysis in this paper does not point to an absolute resistance to change, but rather a motivation to understand what this change involves. As a strategic policy document, the GWC cannot solve all of the problems facing the urban green space within Stockholm. However, being internationally renowned for sustainability and urban green space, Stockholm needs a proactive attitude towards builders and developers to safeguard this reputation.

3.2 Paper II

In the context of sustainable cities and an acknowledged need for holistic approaches to urban nature, green infrastructure and well-being, biophilic urbanism underscores the connection between humans and nature applied to urban conditions. In 2013, a global network of biophilic cities was created and the same year the city of Birmingham, UK, launched its green vision and planning document, Green Living Spaces, aiming to become the UK’s

first Biophilic City. In Paper II, the concept of biophilic urbanism as an urban strategy is discussed, focusing on the introduction and implementation of the concept in Birmingham green space planning.

Based on a case study analysis with data collected through document analysis and semi-structured interviews with key stakeholders in Birmingham, the paper concludes that biophilic urbanism has its strength as an approach to create common visions and understandings of the numerous benefits of nature in our cities. At the same time, the concept is complex. Not belonging to a general vocabulary, and being critically discussed in the scientific community for its origins, connotations and applicability, it still emphasizes critical connections between humans, cities, and nature. Health and well-being, beauty, and recreation are some of the essential functions of nature. By conceptualizing a holistic approach through biophilic urbanism, these values have the potential to be better included in urban planning and decision-making. Emotional, intuitive affection for nature is something many people can relate to, and biophilia provides a descriptive word for this feeling, adding emotions to the sometimes sterile and technical green and sustainable urbanism guidelines. Additionally, for Birmingham, the use of the biophilia concept is about creating a holistic vision, and including urban green space policy in local planning and decision-making, as well as positioning Birmingham as a leading green city. As an urban strategy biophilic urbanism thus works both internally and externally, challenging the separation of policy areas, and pointing out the benefits of a closer connection between nature, urban green space, and urban residents.

3.3 Paper III

Paper III focuses on The High Line in New York City, and discusses the effects of The High Line on local and global scales: as a public space, as a park, as a main driver in urban development, and how the project's massive attention has influenced other places. The project has impacted real estate values, and increasing tax revenues was one of the main arguments for the realization of the project. However, concerns are now raised regarding how this is affecting neighbourhoods.

Based on archival research and observations, this paper discusses the complex reality of contemporary provision of public space. The development of The High Line, its relationship to its surroundings, and the evolving trend of elevated parks are analysed in relation to the role of urban green space and impacts of Landscape Urbanism. The transformation of the vicinity of The High Line concerning real estate values, and changing

businesses and populations are connected to ecological gentrification. The case shows the impact of a major flagship project on the urban and social fabric of a city and the level of importance of the local context and community. Connectivity is stressed as a main issue in design and process between functions, activities, and people.

While the paper addresses the constantly changing view and function of urban parks, The High Line represents a new role for urban green space by utilizing abandoned infrastructure. Additionally, one of the funders of the project expresses that the relationship between the urban and nature is challenged by the design of the park. At the same time, the green functions are limited and fenced off, and nature places a decorative, observable role, one that eschews interaction. The research contribution of this paper is to reflect on a paradigmatic case that has had major impacts on practice and theory in urban planning and design. The High Line has created transformative changes on various levels. However, it has also introduced frictions and caused developments and consequences of gentrification processes, as well as raised questions of typology replicability, geo-transformative context, and the role of nature in the city.

3.4 Paper IV

In 2005, the art-design-activist organization, Rebar, paid a parking meter in central San Francisco for two hours and placed a bench, a tree, and some sod on the street. This park(ing) action that created the first parklet has since led to an official planning program in San Francisco and the annual global event Park(ing) Day, aimed at generating a critical debate on the quality of and need for public space. Parklets are a celebrated example of how a tactical urbanism intervention has been formalized, and are now planned in cities around the world. In Paper IV, the aim is to discuss how parklets are challenging the role of public space and urban nature, and affecting cities around the world, highlighting perceptions of publicness, functionality of urban nature and complexities with involving the private sector, voluntary groups, and individuals in park and public space provision and management.

Parklets and the overarching planning program, *From Pavements to Parks*, embody many of the challenging questions facing contemporary cities: financial difficulties, rapid urbanization, and densification strategies. Simultaneously, the ambiguousness of the name underscores the symbolic value of turning parking spaces into parks, i.e., ‘the grey to green’. The literal greening of the tactic and streetscape itself constitutes a valuable tool in creating a sustainable city. The conclusions show that the perceived

publicness of the parklets is influenced not only by ownership and legal agreements, but also by design, furnishing, and use. Despite San Francisco's aim to support a wide range of sponsors, most parklets are built and managed by cafés and restaurants, businesses directly profiting from adding a place to stay, sit, and consume adjacent to their location. Additionally, the symbolic shift from pavement to park, from grey to green, is embedded in ideas of sustainability and the need for urban nature and ecological functionality. However, the study reveals that the greenness of parklets is characterized by decorative, cosmetic features – neither contributing to climate mitigation nor providing multiple ecosystem services. Parklets are powerful symbols for rethinking the street but, when transferring the model to a new local context, the questions of publicness, roles and responsibilities, and functionality of urban nature remain.

4 Background

“Some people think of parks as being an escape from the city, but the High Line works because it never takes you away from New York. You are not in a botanical garden. You can hear horns honking. You can see traffic and taxis”

David and Hammond, 2011. In Littke et al., 2015

The relationship between the park and the city, the natural and the urban, is essential for perceptions and ideals for public urban green space. In the quote above, the founders of The High Line argue for a merged perspective, an experience combining nature and the city, a perspective central for the High Line project. While nature is a contested, conflictual and complex concept, it is also relatable and found in everyday life. With cities becoming the home environment of a vast majority of the global population, public urban green spaces are critical connections between the green and the grey, the built and the non-built. At the same time, parks and other public urban green spaces are human constructions that are planned, built, and managed. Relationships between the city and nature are directly influenced by constantly changing views of nature. From traditional romantic and aesthetical views to the contemporary functional and ecological, these discussions can be found in a wide range of literature. As a background for discussing contemporary public urban green space, this chapter offers a brief overview of perspectives of the complexity in the relation between urban and nature, expressed through approaches and ideas of urban green space. Moreover, connections between urban green space and well-being are discussed for their spatial and material planning implications.

4.1 Perspectives: From Nature to Park to Urban Green Space

In the preindustrial time, the city had a symbiotic relationship to the surrounding countryside, dependent on natural resources (Frey, 2000). While the modern city is equally dependent on external natural resources, these flows and networks have become intensely more complicated due to new modes of transportation and production. The history of contemporary urban green planning and the concept of urban green structures traces back to the public park movement in the 19th century as a reaction to urbanization, industrialization, and decreasing living standards in cities (Jorgensen, 2005). The public park movement posed well-being as a central concept, and urban parks were aligned with ideals of democracy and public

accessibility (Benton-Short & Short, 2013, 81). What is considered an urban park and what functions should be supplied by one has shifted dramatically over time, and is constantly changing and dependent on local context.

In the U.S., the first urban parks were unimproved commons at the edge of cities, which were developed into pastoral landscapes with a narrative of nature, as opposed to the urban park acting as a refuge from the city. At first, parks were enjoyed by the upper class, as the working class lived too far away and did not have the requisite time or access. At the end of the 19th century, parks underwent a social reform that changed the relation between park and nature, since parks aimed to be a public commons, and not a mere resemblance of pastoral landscapes (Cranz, 1997; Low et al., 2005). At this time, parks were considered the ‘lungs of the city’ (Thomson, 2010), a view that still exists today, but conceptualized within an ecosystem service framework.

In the mid-19th century, landscape architects Olmsted and Vaux won the public design competition to build Central Park New York City. Their submission was influenced by a naturalistic, pristine ideal of nature – at the same time, strongly connected to public ideas and well-being (Eisenman, 2013). Inspired by Olmsted, Ebenezer Howard developed the Garden City concept at the end of the 19th century as planned, self-contained communities surrounded by ‘greenbelts’, with designated areas for residents, industry, and agriculture (Fishman, 1982). The green belt idea introduced by Howard has had a substantial influence on the development of cities – thus shifting a recreational view of nature to become more functional, focusing on instrumental and operational values of nature. While many cities around the world established actual belts of greenery, a public transport oriented approach in cities, such as Stockholm and Copenhagen, instead created green ‘wedges’ or finger plans (Jorgensen, 2005). In the 1930’s, more focus was given to a wider, more inclusive set of recreational services, additionally broadening the definition of parks (Cranz, 1997), and a functionalistic and modernistic movement combined recreational and functionalistic perspective on nature’s role in cities. Le Corbusier’s Tower in Parks concept proposed a large-scale high-rise complex surrounded by parks and green space (Fishman, 1982). In Stockholm, the head gardener Holger Blom proposed a park ideal inspired by both Corbusier and Olmsted, creating a multi-functional public park sensitive to, and mimicking, local natural landscapes (Jorgensen, 2005).

In the 1960’s, a focus on recreational aspects of urban nature developed into a recognition that a wide range of places can be used for recreational uses,

not only parks (Cranz, 1997). In the 1980's and 1990's, ecology became a central concept for comprehending the role of nature – making greenery the antithesis of urbanity (Jorgensen, 2005). Meanwhile, conceptualizations of sustainability and sustainable development led to the creation of instrumental measures and concepts focusing on the role of the city to support ecology, such as Agenda 21. In 1984, Anne Whiston Spirn published *The Granite Garden* in which the central argument is that a better understanding of natural settings and processes is indispensable for urban planning and design. Whiston Spirn proposed guidelines and adaptation strategies for a holistic approach to the city in its setting - arguing that nature in cities is not mere parks and street trees, but also weeds in the cracks, air, water, geology waste management, as well as human and non-human life.

Contemporary views of nature in the urban realm build upon its naturalistic, aesthetic, recreational, functional, and ecological heritage. Urban greening has become a competitive strategy for cities in a global economy, e.g., green city branding (Gulsrud, 2015; McKendry & Janos, 2015), and a contemporary view also recognizes the need to reclaim places previously used in other ways for parks and wider public space uses (Cranz, 1997). In the post-industrial city, urban nature relationships are re-orientated as a reimagining of the city and productions of post-industrial landscapes (Benton-Short & Short, 2013). Urban green space planning today is connected to issues, such as environmental justice and ecological gentrification. Moreover, the functionality of the contemporary park is a result of social co-production, as social and cultural constructions are crucial in understanding relationships to, and functionalities of, parks (Low et al., 2005). The role of parks has evolved over time, and an aesthetic preference of the degree of naturalness has developed in relation to societal and political developments.

Contemporary discussions of urban green structures are based on the two conceptual roots; on the one hand seeing urban green space as a refuge, antithesis to the city or 'lungs of the city' and on the other as a public urban amenity. This division is largely a result from the different origins of urban green space as either planned and built park or unplanned, unbuilt left over or waste land (Tjallingii, 2005). Dichotomies, such as urban rural and nature culture, can be seen in the often dichotomized relationship between the city and nature (Plumwood, 1993; Frey, 2000; Tjallingii, 2005; Corner, 2006; Heynen et al., 2006; Swyngedouw & Kaika, 2008; Melosi, 2010; Borgström, 2011; Erixon et al., 2013). Urban ecologist Emma Marris takes on a pragmatic perspective, arguing that that any urban nature relationship is challenged by the fact that no nature is untouched by the influence of

humans. Settlements, agriculture, and management of natural areas might be the direct effects, but climate change and spreading of species affects our environment. Marris argues that “(...) *you cannot be attached to one particular snapshot. Part of the beauty of ecology is its change*” (Marris 2011, 36) and states that “*nature is almost everywhere. But wherever it is there is one thing nature is not: pristine*” (2011, 2). Anne Whiston Spirn (1984) argues in *The Granite Garden* that a better understanding of natural settings and processes is crucial for urban planning and design, as these will support and improve the city – thereby separating ‘natural’ from ‘urban’ functions. Erik Swyngedown (1996) proposes that society and nature are inseparable, and the city is a hybrid, stating that “*(b)oth society and nature are produced, hence malleable, transformable and transgressive*” (2009, 68). Low et al. (2005) in *Rethinking Urban Parks* asserts that social and cultural constructions are crucial in understanding the relationships to, and functionalities of, parks.

This short overview has shown that views of parks and urban green space have varied substantially over time. Urban nature, parks, and urban green space are part of a large nomenclature. In addition, visions of nature differ between professionals and the general public, which has the potential to create friction (Van den Born et al., 2001). It is the case that, even within planning authorities, a wide range of concepts is used (Lövrje, 2003). Visions of nature include values of nature, either expressed as instrumental or intrinsic values, images of nature as characteristics of what nature is and types of nature, and the character of the relationship between nature and humans. Furthermore, these visions are described in layers of abstraction levels, from a philosophical, epistemological to ontological, while a layperson’s perspective is often based on real world experiences and practices (Van den Born et al., 2001).

4.2 Urban Green Space and Well-Being

The connections between well-being and urban green space constitute a central theme in this study. Well-being is a broad concept, and is here seen as result of the social and psychological benefits of urban green space (e.g., Kaplan, 1983; MEA, 2005; Mayer et al., 2008; Dempsey and Burton, 2012), including aspects of crime and safety, as well as health, and represents a growing body of knowledge (Caspersen et al., 2006; Cilliers et al. 2015). Well-being, in this regard, is influenced by the use of the concept in the Millennium Ecosystem Assessment (2005), which has a broad approach to well-being that is, in turn, connected to the World Health Organisation’s definition of health as “*a state of complete physical, mental and social well-*

being and not merely the absence of disease or infirmity" (WHO, 1948). This definition stresses social and psychological aspects alongside physical well-being. Urban green space is connected to well-being in many ways, and green planning policies and projects are often justified for contributing a wide range of benefits and values.

Reviewing the literature identifies several studies that have shown that nature plays an important role in the vitality of urban neighbourhoods (Sullivan et al., 2004; Chiesura 2004; Malakoff 1995), and natural landscapes are preferred over hardscape settings (Kuo et al., 1998a). Greener neighbourhoods, especially when the green spaces are commonly accessible, encourage social bonding between neighbours and improve the social setting (Coley et al., 1997; Hartig et al., 2001; Brown et al., 2003; Manzo & Perkins 2006). Access to green spaces, both visually and physically, and possibilities for working in gardens, have shown great social benefits (Jamison, 2005; Alaimo et al., 2010). In studies looking more closely at the actual green spaces and comparing different kinds of green spaces, management has been identified as an important variable and well-managed vegetation promotes social ties within urban public housing (Kuo et al., 1998a). Time spent in outdoor common spaces around urban public housing is closely related to the the presence, number, and location of trees (Coley et al., 1997). In addition, more social activities were observed in public housing common spaces that had trees, pointing out the importance of full grown vegetation compared to lawns (Taylor et al., 1998). Social ties, neighbourhood vitality, and strong community relationships have positive effects on neighbourhoods by influencing people to be more interested in working together for the neighbourhood in question, providing cleaner and safer public spaces and informal social control that discourages crime and other undesirable behaviour (Sampson et al., 2002; Peters et al., 2009). The park as a public space is especially important for groups in society that are excluded from commercial activities, for example, children and pensioners. A study concentrating on older adults shows that those who have more exposure to public green spaces have a stronger sense of social attachment to their local neighbourhood (Kweon et al., 1998).

There are several studies showing positive effects on stress levels from experiences of nature (McGonagle et al., 1990; Lepore, 1997; Grahn and Stigsdotter, 2003 & 2010; Velarde et al., 2007; Bratman et al., 2012). Access and exposure to nature, such as trees, grass, and flowers can effectively reduce stress, especially when initial stress levels are high. There are even measureable recovery benefits from only seeing elements of nature (Ulrich, 1986; Kaplan & Kaplan, 1989; Ulrich et al., 1991; Ulrich &

Parsons, 1992). Psychological benefits are achieved by having nature in one's everyday life (McGonagle et al., 1990; Lepore, 1997). The longer the exposure to nature in urban settings, the stronger the positive restoration effect (Korpela, 2008). The cognitive benefits are derived as the restoration of mental fatigue contributes to improved work performance and satisfaction (Kaplan, 1995; Lorh et al., 1996; Chang & Chen, 2005), and urban nature as parks and incorporated into building design provides calming and inspiring environments that encourage learning, inquisitiveness, and alertness (Kaplan & Kaplan, 1989; Heerwagen & Oriens, 1993). Green spaces also provide places and opportunities for physical activity which, consequently, improve cognitive function, e.g., learning and memory (Pretty et al., 2006). Outdoor activities have been shown to help alleviate symptoms of Alzheimer's, dementia, stress, and depression (Chalfont & Rodiek, 2005; Rappe, 2005). Contact with nature also helps children to develop cognitive, emotional, and behavioural connections to their surroundings – both the social and physical environment. Studies also show that nature experiences are critical for encouraging imagination and creativity, social relationships and cognitive and intellectual development for children (Heerwagen & Oriens, 1993; Kahn & Kellert, 2002).

Conflicting public attitudes exist about urban greenery and crime and safety. Experiences of natural settings promote social ties and social control (see above), which may lead to less crime. At the same time, parks and trees in urban environments can be perceived as dangerous places, especially at night time, due to decreased visibility, providing cover for undesirable activities (Schroeder & Anderson, 1984; Talbot & Kaplan, 1984; Luymes & Tamminga, 1995; Coley et al., 1997; Kuo et al., 1998b; Maas et al., 2009). However, research shows that there are less minor crimes, e.g., graffiti, vandalism, and littering in spaces with natural elements than in comparable plant-less spaces (Brunson et al., 2001). Studies of residential neighbourhoods found that property crimes were less frequent when there were trees and more abundant vegetation around a house (Lorenzo & Wims, 2004; Donovan & Prestemon, 2012). Public housing buildings with greater amounts of vegetation had, in one study, 52% fewer total crimes, 48% fewer property crimes, and 56% fewer violent crimes than buildings with low amounts of vegetation (Kuo & Sullivan, 2001a). In a study focusing on public housing, residents with nearby trees and greenery reported 25% fewer acts of domestic aggression and violence (Kuo & Sullivan, 2001b).

Studies have shown that personal health and well-being benefits from contact with nature (Maller et al., 2005). The design of neighbourhoods influences the residents' physical activity, and people in communities with

access to green space generally enjoy better health (Frumkin, 2003; Hartig et al., 2003; Maas et al., 2006; Wolf, 2008). The closer the green spaces are, the more likely they are to be used (Harrison et al., 1995; Schipperijn et al., 2010 in Dempsey & Burton, 2012). In a study from Australia, it was shown that people who use parks and open spaces were three times more likely to achieve recommended levels of physical activity than those who did not – the study attributed nearby, well-managed, larger parks and open spaces for their activity (Giles-Corti et al., 2005). Tree-lined streets and lawns with trees promote physical activity for both children (Naderi & Kim, 2006) and the elderly (Takano et al., 2002).

These findings, taken together, point to several urban planning and design implications. Nature in everyday life and urban green space that is publicly accessible are crucial features to enable the potential shown by these findings. In addition, the spatial and material aspects of biophysical forms are highlighted. Several of the studies above refer to full grown trees and abundant vegetation, and these take time to grow.

5 Research Design and Methodology

The role of research design is to show the logical basis for the composition, aim and execution of the research project as a whole, connecting empirical data to research questions and conclusions (Gillham, 2000). Following Groat and Wang (2002), research design can be seen as layers of comprehending both the subject at hand and the basis for the research methodologies defined as the “*systematic inquiry directed towards the creation of knowledge*” (Snyder, 1984 in Groat & Wang, 2002, 7).

This approach has guided the research process with the conceptualization of embedded layers of understanding. The tactics and actual data collection methods are embedded in the research strategy which, in turn, is embedded in epistemological perspectives. The illustration in Figure 1 shows how these layers of understandings relate to each other. Tactics and methodological choices are always affected by one’s view on what knowledge and knowledge production really are. Here, Groat and Wang’s model is developed, adding the layer of the theoretical framework as simultaneous to the strategies and methodology illuminating the abductive approach of the study.

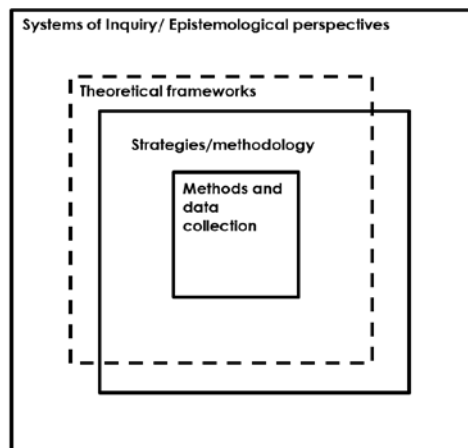


Figure 1. Adopted from Groat and Wang 2002,10.

Alveson and Sköldbberg (2009) address the overarching concerns regarding systems of inquiry and epistemological perspectives as metatheory, and argue for methodological approaches in which a constant reflection of the relationship between the researcher, the empirical data, and metatheory must be carried out.

5.1 Systems of Inquiry

Following a normative, yet pragmatic, conceptualization of urban planning as a discipline, this study understands urban planning as striving to create better cities through improved processes, theories, and practices. Thus, a central position is to focus on problems that matter to our urban lives and provide tangible solutions (Flyvbjerg, 2001). Therefore, this research contributes to the interdisciplinary field of liveable and sustainable cities by enabling discussions and problematization of practices of urban greening through green planning strategies and high profile projects. The methodological point of view for this study has been an explorative and abductive approach to comprehend how practices of urban greening are operationalized and interrelated to wider urban planning objectives. For discussions of urban form and densification strategies as well as values and benefits connected to urban green space, including ecosystem services, an important focus is the spatial and material properties – in turn to map, measure and quantify incentives, actions and effects. On the other hand, questions of perception, use and behaviour are connected to social and normative descriptions, approaches and theories.

The dual focus on society and procedural concerns, as well as the physical environment, makes a reflective approach crucial. This research draws both from normative theories and positive theories (Velasquez, 2007), as public urban green space is seen to contribute to well-being, as well as a critical perspective on the contextualization and potential consequences are addressed. Epistemologically, this research is based on a post-positivist perspective, acknowledging the importance of understanding and measuring well-being aspects connected to public urban green space, as well as critically understanding the complexity of contextualization and perception. Post-positivism is characterized as a belief system recognizing a real world, but underscores the limitations to truly perceive it and distrusts claims of absolute truths (Guba, 1990; Wildemuth, 1993). This way the perspective act as a bridge between positivist deals of objectivity and interpretive approaches for reality as subjective (Wildemuth, 1993) by diffusing a procedural and substantial division (Allmendiger 2002). Furthermore, the position rejects positivist ideals of objectiveness, and emphasizes embeddedness in social and historical contexts (Allmendiger, 2002). Based on critical realism ontology, post-positivism calls for critical approaches to knowledge and methodology, in which it emphasises multiple methods and triangulation, understanding knowledge production as always dependent on interactions between the knower and the known (Guba, 1990; Guba & Lincoln, 1994). Post-positivist perspectives on urban planning emphasize

the social and historical context, and Allmendiger (2002) further argues that planning in a post-positivist perspective is ‘characterized by fragmentation, plurality, subjectivity and interpretation’ (2002, 88). In this research, positive theories concerning well-being aspects of urban public green space are thus connected with normative theories of urban planning. Further, discussions of conceptualizations of publicness and multifaceted classifications of urban green space offer critical perspectives on how these can create parallel realities. While public urban green space is seen as an essential urban amenity and a solid research base is provided in which urban green space is connected to well-being – actual delivery of these benefits is dependent on procedural and physical structures. Simultaneously, it is important to highlight that system boundaries for approaches, such as ecosystem services, are also constructed and thus not independent of social and cultural processes.

5.1.1 Reflections on Complexity

Society and the social sciences are characterized by complexity, e.g., the more based on real life situations, the more complex it is. The reflexive approach to research discussed by Alvesson and Sköldbberg (2009) draws attention to the complex relationship between processes of knowledge production and the various contexts of such processes, as well as the involvement of the knowledge producer. Alvesson and Sköldbbergs’ (2009) main argument is that, as knowledge cannot be separated from the knower, realities and knowledge are always unstable and context-dependent. Because of the political-ideological character of social science, interpretation and reflection are crucial elements of any research endeavour. They further argue that it is not the choice of methods, but the capacity to reflect on ontology and epistemology, which are the determinants of good social science (Alvesson & Sköldbberg, 2009, 8).

The inherent complexity of society and the social sciences can be understood and regarded in many ways. Rittel and Webber (1973) argue that, since society is pluralistic, scientific social policy can never prove anything to be true or false, and the aim to, in some way, improve society planning is inherently political. Instead, the aim should be to understand values and examine solutions for their impact, i.e., moving from true and false to bad and good. Definitions of problems and questions thus become crucial, as understanding the goals and outcomes will, in turn, state the questions or, in the words of the authors, “*the information needed to understand the problem depends on one’s idea for solving it*” (Rittel & Weber 1973, 161). The idea that social science should not focus on easy

fixes, but instead understand complex problem solving, was put forward by Funtowitz and Ravetz (1993) as post normal science. For them, the involvement of views from scientific and especially non-scientific communities, an extended peer community, allows for a better understanding of complex uncertainties beyond the fact/value distinction, adding ethics as a variable. By allowing this uncertainty and pluralistic ways of problem solving, Funtowitz and Ravetz (1993) advocate for a freer approach to methodology, i.e., instead of taming nature with science, let nature bewilder scientific methodology. Ravetz (2006) develops the perspective arguing that, as society evolves, focusing on problem solving has shifted from system uncertainty to system complexity. In other words, the post-normal science approach was developed to handle technological risk, but could and should also focus on sustainability issues. Sustainability issues involve contradictions and systems of issues that need to be tackled both as technological/practical problems, as well as ethical and moral (Ravetz, 2006).

Viewing the world as complex and society as constantly evolving calls for revised methodological implications to any scientific approach. As science produces realities, as well as describes them based on pre-existing social and material realities, there is a need for heterogeneity and variation in method that favors flow over structure. Alvesson and Sköldbberg (2009) highlight the need for awareness of political and ideological perspectives in a reflective approach.

So, how can complexity and multiplicity be understood as assets instead of problems? Although Alvesson and Sköldbberg (2009) discuss the need for empirical data to open up discourses by generating arguments and inspire ideas, it is the reflection and interpretation that is the true indicator of the quality of the research. Practical and technological values are not sufficient – pluralistic, democratic, and ethical values must be equally important for the end result. New understandings of fragments of social reality are the goals of social research. To achieve this, however, one has to reflect not only on the material and the context, but also on perspectives, as interpretations also include expressions of perspectives. As Alveson and Sköldbberg contend, being strongly dogmatic about any position allows only limited space for reflection (2009).

5.2 Establishing the Theoretical Framework

The theoretical framework consists of three theoretical bodies: 1) urban densification strategies; 2) ecological gentrification; and 3) green city

branding. These are, in turn, embedded in a discussion of conceptualizations of publicness, since the spatial and material aspects of urban green space and its role as public space are highlighted in this study. While the theoretical framework is intertwined in the positions and perspectives of the research design, the framework is further presented and discussed in Chapter 6 below.

5.3 Strategies - Case Study Methodology

The chosen research strategy is case study methodology. Case study methodology is defined by a focus on a contemporary, real-life object that is studied within its context (Gillham 2000; Johansson 2003; Zainal, 2007; Toloie-Eshlaghy et al., 2011). It is an empirical inquiry that investigates a contemporary phenomenon in its real-life context, and whose boundaries are not clearly evident (Stake, 1995). One definition is that the case study *“illuminates a decision or set of decisions, why these were taken, how they were implemented, and with what results”* (Schramm 1971, 12 in Yin 1994, 13). Validity is constructed through multiple sources of data and chains of evidence, and is reviewed by key informants and reliability through case study protocols with clear demonstrations of the empirical conduct (Yin, 1994). Case studies are holistic, qualitative inquiries through contextualization, and are characterized by a focus on interpretation (Stake, 1995). Arguing for the centrality of case knowledge to human learning, Flyvbjerg (2004) discusses case study methodology both as a tool to develop nuanced views of reality and as important for the researchers' learning. The case study as a research method allows exploration and comprehending of socially complex issues and recognition as a response to the limitations of quantitative methods (Zainal, 2007). Cases can therefore be seen as microcosms, and even though cases are bounded, *“any social phenomena occurs in a specific context, and is likely to be the product of multiple causal processes”* (Gomm et al., 2000, 99).

The most prominent critique of the case study methodology concerns possibilities for generalizability (Yin 1994; Stake, 1995; Gomm et al., 2000; Johansson, 2003). At the same time, Stake (2000) criticizes traditional positivistic ideas of scientific generalizability, as abstraction can foster false laws that make phenomena seem simpler than they are. Additionally, Lincoln and Guba (2000) discuss an overemphasis on generalization as problematic, as knowledge can never be free from time and context. In addition, Donmoyer (2000) points out that identification of laws, such as generalizations, is not appropriate in applied sciences, as the social world is complex and context-dependent. Case studies offer possibilities of

generalizations through exemplifying broader theoretical issues rather than contributing to the understanding of other cases (Yin, 1994; Zainal, 2007). The inductive theory generation often creates a set of related concepts by which generalization is made possible (Johansson, 2003). Tellis (1997) considers this as a multi-perspective analysis, drawing from Yin's discussion of analytical generalizations, as opposed to scientific generalization, as "*in analytic generalization, previously developed theory is used as a template against which to compare the empirical results of the case study*" (Yin, 1984 in Tellis, 1997: 2). Moreover, Johansson (2003) poses analytical generalizations instead of a statistical generalization to characterize case studies. Cases can have general relevance through theoretical inference without relying on empirical generalization. This is especially important, since cases in practice can be difficult to fully define and delimit, and general relevance is thus found in the response of the case to external variables (Gomm et al., 2000). According to Stake (1995), case study knowledge is generalised through interpretations of assertions by the researcher, summaries of interpretation and results, and 'naturalistic generalizations' by the reader. 'Naturalistic generalizations' modify old generalizations by bridging the unique and the common based on interpretation and experiences (Stake, 1995). While theory-building through case study is thus stressed, there is no consensus regarding when a theoretical framework should be developed. Gillham (2000) states that a fundamental characteristic of the case study is that it does not have *a priori* theoretical notions. On the other hand, Yin (1994) proposes that case studies benefit from prior development of theoretical propositions. In this study, the theoretical framework has been developed in parallel with case studies, as each case has added to, and developed, the theoretical aspects.

5.3.1 Practical Application of Case Study Methodology

Discussing the advantages and disadvantages of the case study as a research methodology, Stake (1995) argues that, while being time-consuming, case studies offer a powerful method to portray images of the particular and unique to foster a deep elucidation of complex phenomena. Further advantages of the methodology are that data are analysed within their context instead of focusing only on a limited number of variables within an experimental setting. Furthermore, case studies allow both qualitative and quantitative data to be merged, and have a detail level suitable for complex issues. Disadvantages include time and resource consumption, possible biases in the interpretation, and high demands for rigor regarding the reliability of the study (Zainal, 2007). Concerning biases, Gillham (2000) discusses observations as a core data collection method within case studies

calling for structured approaches, as delimitation of the researchers' memory is critical to take into account. For this reason, notes and interviews need to be summarized and analysed as soon as possible.

By conducting a case study, the emphasis is on relationships and processes with a general and systematic view, which serves the objective of this research. The purpose is to comprehend a case from different angles, by employing several sources of data and methods, as well as triangulation for validity. This holistic approach is in line with the very essence of urban planning, combining approaches and aspects from various scales and disciplines (Groat & Wang, 2002). Research in the built environment has a tradition of this kind of approach of trial and error, with observations leading to modifications and innovations. Case study methodology has special importance for practice-oriented research (Johansson, 2003; Corcoran et al., 2004). Corcoran et al. (2004) argue for the transformative power of case studies, as the methodology can problematize practice by identifying tensions between the contextual and universal, and illuminate roles, actors, and power dimensions. Although contextual analysis to present complex issues is central, this transformative potential is dependent on theorizing research methodology (Corcoran et al., 2004).

In this study, multiple cases with embedded units of analysis are used to be able to investigate several angles of each case, i.e., the research questions involve factors of importance that vary from one case to another. While the cases themselves contribute with situated knowledge of the specific context, analytical generalization can be drawn from the theoretical framework. Here, the four cases are in different cultural and legal contexts, as well as represent urban green planning incentives at the range of scale from Stockholm as a capital city to small scale, semi-temporal parklets. However, as all cases are situated in a Western context with similar influences, challenges and opportunities, the analysis takes into account their embeddedness in local, regional, and global processes. The research problem formulation acts as the basis for both the case selection and defining the aim, research questions, and the theoretical framework and is, consequently, related to the actual cases. In the first phase of the research, the process was characterized by iterations from the cases back to the formulations and selection (see Figure 2, based on the figure in Yin, 1994, 49). In the partly overlapping second phase, each case was analysed separately and presented in a research paper. The last phase focused on analysis and conclusions. Here, the cross-case analysis modified the theoretical framework and established the cross-case conclusions.

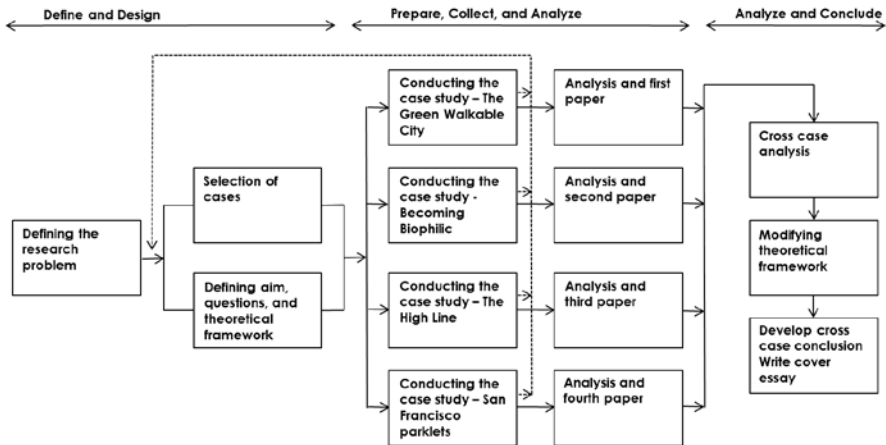


Figure 2. Phases in case study research, adopted from Yin 1994,49.

5.3.2 Case Selection

In case study methodology, the choice of cases is crucial. They can either be chosen based on an intrinsic interest in the specific case or chosen according to purpose, i.e., by being especially information-rich, relevant, unique, or extreme (Johansson, 2003). The cases can therefore be said to be instrumental, chosen to illustrate specific issues, and not intrinsic or directly related to the research question (Stake, 1995). In this study, the cases have been selected for being especially information-rich, with both local and global importance. Inspired by a paradigmatic approach, the cases are all high profile and important for contemporary paradigms. Paradigmatic cases operate “as a reference point and may function as a focus” for emerging frameworks (Flyvbjerg, 2004, 427), and are selected examples of a phenomena (Pavlich, 2010). A single case can therefore be representative of a broader trend, and is identified based on its metaphorical and prototypical value (Flyvbjerg, 2001 & 2004). The high profile cases selected for this study draw from Flyvbjerg (2001 & 2004) and Pavlich (2010) as cases selected as examples of larger phenomena. At the same time, cases represent situated knowledge limited by their spatial and material boundaries.

Even though the four cases represent a specific spatial, material, legal and cultural context, they have been selected as high profile cases with the potential for global influence. Stockholm was the first EU Green Capital Award winner (EGCA, undated) and often appears in best green cities rankings (e.g., Siemens Green City index, simens.com, undated). Possessing

a world-leader reputation and belonging to the green capital network situates Stockholm and the policies developed there as a role model and best practice. Thus, changing practices and discourses in Stockholm's green space planning could potentially influence broader trends and approaches towards urban green space. Meanwhile, while being a central player in the global green city arena, Stockholm is also understood to be sensitive to external input regarding environmental and urban green space policies. In Paper I, The Green Walkable City project is defined as the case, and the study involves The Green Walkable City planning program, the public consultation responses, and the contextualization of the project within the local history of Stockholm and urban green space planning in Sweden. In Paper II, The Green Living Spaces plan from Birmingham is analysed. This case was chosen, since the plan introduces the aim for Birmingham to become the UK's first Biophilic City. Biophilic Urbanism (e.g., Beatley, 2011; Beatley & Newman, 2013; Reeve, 2014, biophiliccities.org, u.d.) has received increased attention in academia and practice, and Birmingham is one of the few cities explicitly using the concept in an official planning document. Belonging to the Biophilic Cities network and taking on this new approach to urban (green space) planning makes Birmingham an important case to investigate how the concept of biophilia can be utilized in planning policy.

In Papers III and IV, the focus is on high profile, high impact urban green space projects. The High Line in New York has been identified as a paradigmatic project both for its importance for the landscape urbanism approach (e.g., Waldheim, 2006, 2009 & 2010; Duany & Talen, 2013), but also due to its popularity and high impact on the local vicinity. While cities around the world are being inspired and want to copy the project, the connection between the park and the gentrification of its surroundings has been massively debated. Additionally, The High Line has been named the 10th most popular landmark in the world (Spagnolo, 2012), and is acclaimed by its founders to represent a new relationship between the city and nature (David & Hammond, 2011). In Paper IV, a case study is carried out of the parklets in San Francisco. Originating from one two-hour installation, San Francisco now has more than 50 parklets, and the overarching planning program, *From Pavements to Parks*, intends to actively support cities around the world to implement their own parklets. Today, more than 80 cities around the world have parklets or parklet and plaza programs, mostly in the U.S., but also in South America, Europe, Australia and New Zealand, and many other cities are currently working to develop programs (pavementstoparks.sfplanning.org, n.d.).

In the data collection for each case, considerations of research ethics have been made. The interview respondents in Papers I and II have been invited to read and comment on the results. In Papers II and IV, substantial photos were taken, and special considerations were made not to publish any photos in which users could be identified.

All cases were chosen for this research project, and there has been no conflict of interest in the data collection.

5.4 Methods for Data Collection

The research strategy is a qualitative multiple case study with embedded units of analysis. A unit of analysis represents an entity or practice to be analysed, and is determined by the analytical approach of each study. The empirical conduct has been characterized by multiple sources of data and triangulation.

5.4.1 Empirical Conduct

5.4.1.1. *Paper I*

In Paper I, The Green Walkable City planning project and document, the public consultation responses, and the contextualization of the project within the local history of Stockholm and urban green space planning in Sweden are analysed. Supported by a literature review to identify social and psychological benefits connected to urban green space to support well-being, primary data was collected through interviews, content analysis, and observations in public meetings. The project leader at the Stockholm Municipal Planning Office was interviewed on two occasions, during and after the public consultation. The first interview took place at the planning office in Stockholm on the 12th of March, 2013, and focused on the development of the plan, composition of the working group, and conceptualizations of values and benefits connected to urban green space highlighted in the development process. In the second interview, on the 3rd of February, 2014, the public consultation process was completed, and the received comments were summarized and considered within the working group and with the political leaders. This follow-up interview focused on these responses and the extent to which they had influenced the plan and in what way. Furthermore, the identification of areas of conflict was addressed. The interviews followed an inductive approach, with qualitative, semi-structured questions, and the project leader was identified as a key respondent due to her role in the working group. Moreover, two public meetings were attended. On the 10th of September, 2012, the City was invited to a public hearing at the Stockholm planning office, where the key

strategies of the plan were presented. On the 16th of October, 2012, a half-day seminar was conducted within the scope of the Stockholm on the Move exhibition at Färgfabriken (fargfabriken.se, n.d.). The analysis of the 111 written responses from the public consultation was based on quantitative and qualitative content analysis. Defined as a “*technique for making inferences by objectively and systematically identifying specified characteristics of messages*” (Holsti, 1969:14 in Bryman 2012, 289), the objective was to identify conflicts and conceptualizations of well-being aspects connected to urban green space. Content analysis is a systematization of text analysis (Krippendorff, 2004) and was chosen as each response ranged from one to several pages of text, and one important strength of content analysis is that large volumes of text can be analysed (Elo & Kyngäs, 2008). The two units of analysis derive from inductive and deductive content analysis respectively. As the conflicts at the starting point were not identified an inductive approach discussed by Elo and Kyngäs (2008) as deriving categories from the data moving from the specific to the general. For the well-being aspects, they were identified in the literature review and the content analysis then had a deductive approach, testing these categories against the data (Elo & Kyngäs, 2008). Participating in public meetings and presentations of the new programme revealed an intense debate over urban green space, and was often exemplified in conflicts regarding a particular location or case.

5.4.1.2. Paper II

In Paper II, primary and secondary data collected through document analysis and interviews were combined. The archival research is based on qualitative document analysis through content analysis, concentrating on the use and meaning of the concepts biophilia (e.g. Fromm, 1964; Wilson, 1984; Kellert and Wilson, 1993; Kahn, 1997; Mayer and Frantz, 2004; Joye and De Block, 2011; Joye and van den Berg, 2011; Gunderson, 2014) and biophilic urbanism (e.g. Beatley, 2009; Beatley, 2011; Beatley & Newman, 2013; Reeve, 2014). The analysis focused on the origin, meaning and potentials for implementation of the concepts. For the case study, planning documents and media articles concerning The Green Living Spaces plan, as well as comprehensive and supporting plans, were studied. Semi-structured interviews were conducted with six actors in Birmingham involved in the development and implementation of the plan and the ongoing work with urban greening (see Table 2).

Table 2. Interview respondents in Birmingham (from Paper II, Littke 2016, 17)

<i>Respondent</i>	<i>Professional role in Birmingham green space planning</i>
GLS Project leader	Birmingham City Council's Climate Change and Sustainability Manager
Councillor	Birmingham City Councillor responsible for Sustainability and the Green Commission
CEEP Consultant	Consultant behind the environmental assessments in the GLS
Representative from BOSF	The Birmingham Open Spaces Forum is a network for local friends groups and organizations
Ecologist working with	Principal Ecologist Wildlife Trust and Secretariat for the Birmingham & Black Country Local
the Wildlife Trust and LNP	Nature Partnership
Public Health trainee	Trainee in the West Midlands and academic at the University of Birmingham

The interviewees were identified as key actors based on the GLS plan, as their professional roles and organizations are represented in the planning document. While the project leader and councillor responsible for the specific policy area had key roles, the consultant doing the assessments, the Birmingham Open Spaces Forum (BOSF), Wildlife Trust and the Local Nature Partnership, as well as Birmingham Public Health and Birmingham University, are essential actors identified in the plan. The semi-structured qualitative approach was chosen to allow for a broad approach to the plan and the Birmingham context to identify underlying themes and concerns filtered out from the official planning documents. All interviews opened with general questions concerning incentives and challenges for urban green space in Birmingham. Furthermore, the respondents were asked about their involvement in Birmingham's urban green space planning, and their view on biophilia and biophilic urbanism and how The Green Living Spaces Plan has been received in Birmingham. The last section of the interviews focused on measures and implementation of green space policies, as well as potential conflicts between new development and urban green space, and concluded with a discussion of how the GLS strategies connect to other policies and plans.

5.4.1.3. Paper III

Paper III is based on observations and archival research, including the analysis of documents, blogs, reviews, and journals. The debate surrounding The High Line's development has been examined, by including more than 25 documents and three scientific articles published from June 2009, when the first section was opened, to 2014, when the final section was opened. The main focus surrounds the summer of 2012, when the debate peaked with a New York Times op-ed by blogger Jeremiah Moss. The documents

were analysed to understand the effects of the project on local and global levels, and observations were made to support a critical discussion of the material dimension of the structure itself.

The observations were carried out during three separate occasions: the 5th of November, 2012; the 2nd of February, 2013; and a follow-up observation on the 12th of October, 2014, to include the third and last part of The High Line, which opened in September, 2014. During the observations, the full stretch of The High Line was studied, and extensive photos and notes were taken. Access points, physical and visual connections to the surroundings, access to green elements, as well as commercial activities available on the structure were identified and mapped. The entrances to The High Line were considered as important in the functionality of the park's design as public space, for potential connections between The High Line and the street level. In September 2014, the third and last section of The High Line opened and, at the last observation in October of the same year, the number of commercial functions had increased significantly. As the analysis of the paper also concerns the narrative of urban nature contributed by The High Line, the observations further focused on the possibilities for interaction with vegetation.

5.4.1.4. *Paper IV*

Paper IV relies on observations and archival research. The parklets were analysed as public green space through a literature review, document analysis, and an observational study carried out in San Francisco. Secondary data were collected through the Pavements to Parks program, the parklet manual, and articles and theses written on parklets. The observational study of the existing parklets in San Francisco was conducted in February, 2015. Aside from direct observations, the information about the location, design, and management of the parklets was also collated from secondary sources, including websites, their promotional literature, media reportage, and existing academic research on the subject of the broad spectrum of everyday and tactical urbanism approaches.

The observations were based on a table adapted from Németh and Schmidt (2011a), used in this study to index both publicness and *parklikeness*. Each parklet was evaluated based on quantification of directly observable components. Multi-functionality and the furnishing of the parklets are connected to the design choices made by the sponsor. Perceived ownership of the space is influenced by the appearance of the parklet, as well as whether or not the sponsor is obvious for the parklet users. The 'parklikeness' was evaluated based on the existence of vegetation, the

provision of shade and movement by the vegetation, and the ecological functionality as the connection to the city’s green structure. All of the 51 official parklets at the time (according to the map at pavementstoparks.sfplanning.org) were visited and assessed. The aim was not to acquire statistical data *per se*, but rather to determine what had been implemented, to compare the materialized result with the goals and guidelines in the parklet program, and to identify common features and trends among the existing parklets. Data for each parklet were collected, as shown in Table 3.

Table 3. Results of the categorized public consultation responses. Values are recorded in total numbers and percentages.

Parklet	Vegetation	Shade/ movement	Multi- functional	Connection to other green structure	Furniture	Obvious sponsor
Address	Y/N+ % coverage	Y/N	Y/N	Y/N	Mobile or permanent	Name

The observations were carried out during weekdays, and the weather conditions were good on all days, i.e., sunny and around 20°C (68°F). All parklets were visited by the author, who sat down (if possible) and took notes while visiting the parklet. The vegetation coverage is based on a visual assessment using the categories: no vegetation, <1%, <5%, <10%, and >10%. Categories were chosen over more exact estimations, as the assessment is based on visual approximation. Additionally, the temporal status of the parklets, and especially regarding planters, was analysed as trends in the level of prioritization of vegetation – thus expressing the role and the function of green space.

6 Theoretical Framework

Today, it is recognized that urban green space plays an important role in the liveability of cities, and this importance is pointed out from several different aspects and disciplines due to the inherent interdisciplinary nature of urban green space planning (e.g., Jim, 2004; Konijnendijk et al., 2005). Urban green space represents a large group of spatial concepts, forms and functions, and includes ecological, social, cultural, and political dimensions. Discussing connections between urban green space and urban planning, theories, and concepts from many fields are highly relevant. The four cases stress different aspects and connections between urban planning processes and spatial and material expressions of urban green space. The study seeks to understand the complex reality of contemporary public urban green space in times of urban densification strategies, global competitiveness between cities and trends of ‘re-naturing’/greening, as well as acknowledging the many connections between urban green space and well-being. The theory is therefore built up by conceptualizing the theoretical framework of urban densification strategies, ecological gentrification, and green city branding (see Figure 3 below). While these processes and strategies are interrelated, the theoretical framework is developed with an understanding of the overlapping aspects concerning these different theoretical approaches. Furthermore, acknowledging the importance of urban green space as public space and the need for accessibility and connectivity of these spaces to secure the delivery of well-being aspects of green space conceptualizations of publicness embeds these theoretical discussions as an overarching dimension.



Figure 3. Theoretical framework.

Planning practices of urban greening are identified as urban planning tools, as urban greening is often framed as strategies for sustainability and urban resident well-being. These planning practices can also steer urban agendas of development, entrepreneurship, and transformation. From this perspective, the planning, provision, management, and design of public urban green space is therefore critical, as diffusion of roles and responsibility, as well as fragmented policy-making structures influence discourses and materializations of contemporary public urban green space. This theoretical approach identifies main contemporary challenges for public urban green space, as well as highlights the paradoxes in sustainable urban ideals as potential conflicts and interrelationships between densification strategies and green space, balancing social and ecological aspects, and positioning on local and global agendas.

6.1 Spatial Properties of Urban Green Space

“(Parklets) repurposes part of the street into a public space for people. They are intended as aesthetic enhancements to the streetscape, providing an economical solution to the need for increased public open space”

Pavements to Parks, 2013. In Littke, 2015b

While urban green space can be found both in publicly and privately owned space, the urban planning perspective, as well as the focus on well-being for urban residents, points to the importance of publicly accessible, everyday green space. Parks and urban forests are therefore indispensable parts of a city’s public space (see Figure 4 below). Simultaneously, the boundaries between public space and public green space, as well as whether or not urban green space is actually or perceived to be public, are often vague.

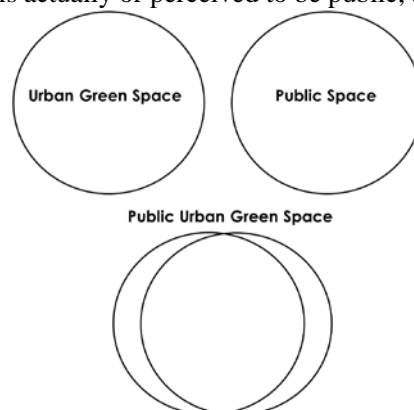


Figure 4. Urban green space and public space are overlapping spaces.

Classic urban ideas about how to make public places inviting, lively, and attractive from writers, such as Jane Jacobs (1961), William Whyte (1980) and Jan Gehl (2001), point to the need to be able to sit, eat, observe, and meet. The key to success includes enabling diverse groups of visitors, at different times, and for various reasons to use and enjoy the place. An important issue is therefore not only the actual, but the perceived, publicness of a place, a factor that, in turn, is influenced by ownership, management, and design.

6.1.1 Public and Private

"I took a parking space and built a parklet (...) I paid for it, I am keeping it clean, and now I can't deliver food to the table? It doesn't make sense"

Nevius, 2015. In Littke, 2015b

The quote above shows the frustration of a parklet sponsor in San Francisco. The management model of parklets puts the responsibility of design, construction, management and liability on the sponsor, while the space officially is public. Being a restaurant owner, building a parklet in connection to the business has thus influenced the sponsor's perception of ownership of the parklet, revealing how complex publicness can be in practice.

While all four papers underscore the importance of public involvement and accessibility of public green space, Papers III and IV explicitly discuss conceptualizations of publicness and aspects of public space as ownership, management, design, and control. While representing a main area of interest within several disciplines, public space is widely acknowledged as an essential urban feature, discussed as crucial for practices of everyday life (Jacobs, 1961; Whyte, 1980; Gehl, 2001), democratic processes (Low & Smith, 2006), and social integration (Madanipour, 1999). Recent debate over public space has a strong focus on the involvement of the private sector in provision and management (cf. Mitchell, 2003; Kohn, 2004; Low & Smith, 2006; Németh & Schmidt, 2011a & 2011b).

As discussed in Paper IV, changes in the provision and management of public space, as well as shifting regimes of urban governance, are largely due to associated financial strains (Kohn, 2004; De Magalhães, 2010; Németh & Schmidt, 2011a; Southworth, 2014). While common for governance structures, with increased involvement of the private sector, there is a focus on efficiency over potential negative social impacts,

including privatization of safety and the creation of consumption-based environments (Southworth, 2014). These privatization processes of public space take many forms, from inclusion in gated communities to management by BIDs (Business Improvement Districts) and other public-private partnership arrangements (Németh & Schmidt, 2011a). Additionally, this reality for public space is also connected to a redistribution of roles, rights and responsibilities, including private and voluntary entities in the public domain (De Magalhães, 2010). The capacity of these governance arrangements is challenged by this redistribution of roles and changing demands, and there is therefore a need to explore the risks and potentials of this development. Németh and Schmidt (2011a) argue that, despite legal agreements, privately-owned and operated spaces often serve as extensions of the sponsor's public image, with management priorities based on financial, rather than social, elements. Moreover, private interest in public space diminishes diversity and increases regulation and consumption activities, and empirical data confirm that privately owned public spaces are controlled more than publicly owned ones (Németh & Schmidt, 2011a).

In Paper IV, neoliberal governance and neoliberal models of service provisions, and the shifting of roles and responsibilities from state to private agencies and organizations are discussed, regarding their effects on public space and parks. Ranging from public to private management, different models of park management highlight different characteristics of the conflicts between public and private interests. According to More (2005), while a fully public management structure with legislative oversight and transparency is connected with problems, such as inefficiency and free riders, private models have long-term consequences that are difficult to predict, including exclusion and strategic investments in popular sites at the expense of less popular ones.

Perkins (2009, 396) identifies public parks and urban natural environments as 'critical urban amenities' due to the critical social and material benefits that they provide to urban dwellers. As shifting modes of provision and increased interest in environmental issues among residents affect management structures Perkins (2013) connects diminishing park budgets with an increased involvement of the public sector through volunteering. This, in turn, consolidates a neoliberal hegemony expressed by urban governance characterized by a nexus of public and private organizations and voluntary groups, as these voluntary efforts are a response to the situation that they facilitate. Perkins (2009) describes this as shared governance resulting from diminishing city budgets, pointing out that non-profits have taken on considerable environmental responsibility, since costs of

environmental service provisions are transferred to them from the government, which is ideologically legitimated by neoliberal market logics. Even though this process has the potential to empower non-profits and volunteers, and promotes active citizenship, the environmental provision is negotiated through market mechanisms between governments and the civil society. According to Perkins (2009), this situation does not guarantee long-term commitment and change, as non-profits and volunteering activities are sensitive organizations based on active involvement by the stakeholders. On the other hand, even though these new roles in urban governance are reproducing a neoliberal hegemony, Elwood (2002) contends that volunteerism offers the potential for spatial changes in power and participation by creating new spaces of engagement and a discourse of collaboration by legitimizing non-profits and volunteer claims for inclusion.

Although ownership and official status are key features of publicness, attempts to conceptualize publicness reveal that this endeavour is complicated. Madanipour examines publicness in a framework of access agency and interest (1999), and Kohn (2004), on the other hand, uses the criteria of ownership, accessibility, and intersubjectivity (e.g., the ability to foster communication and interaction). According to Kohn (2004, 11), public space is a cluster concept with “*multiple and sometimes contradictory meanings*”, arguing that multi-criteria approaches to publicness are required, as there are no clear distinctions, but a continuum of private and public space. Ideas of publicness are expressed through a constant struggle to define and control space, creating ownership hybridization of the public and private, as well as nuances of publicness. Varna and Tiesdells’ (2010) approach to conceptualizing publicness uses the five meta-dimensions of ownership, control, civility, physical configuration, and animation to establish a range from more to less public. Civility here refers to management and openness; physical configuration is in relation to both the surroundings and the interior design; and animation is the “*degree to which the design of the place supports and meets human needs in public space, and whether it is actively used and shared by different individuals and groups*” (2010, 585). Németh and Schmidt (2011a) have developed a conceptual model based on the interaction between the criteria of ownership, management, and the use/users. In their model, ownership and operation are closely related, since a traditional division of publicly-owned publicly-operated and privately-owned privately-operated has been challenged by models of private-public partnership. Management in the model refers to control and maintenance, and use and users is both a quantitative measure of diversity and a qualitative assessment of behaviour and perceptions.

Both in Paper III and IV, conceptualizations of publicness and neoliberal governance structures can be identified and used as tools for analysis. While the urban green space projects discussed in the papers are community incentives based on voluntary efforts, they are embedded in a complex reality of public space provision, design, and management.

6.2 Urban Densification and Urban Green Space

“On the one hand, urban green areas are often viewed as potentially attractive in terms of construction and development sites - especially when located in close proximity to railway stations. On the other hand, urban green qualities have received more attention given the practice of green structure plans”.

Hofstad, 2012, 15-16

In the global search for more sustainable cities and societies, a dense urban form with mixed uses is often seen to be the answer. At the same time, cities around the world are experiencing decreasing public budgets and urban population growth, which creates a complex reality for public green space. The interlinked challenges comprise issues of quantity, as green space is challenged by other uses of floor space, quality of the space due to decreasing budgets, and increasing users and accessibility, as temporal uses, tactics, and green roofs are proposed as new, innovative public spaces without guaranteeing long-term change and public accessibility. Even though there is an increasing international awareness of the importance of green space, large natural areas are protected with less focus on everyday urban nature (Cheisura, 2004; Erixon, 2013). Balancing new development and urban green space presents a major challenge (Erixon et al., 2013) and, in trade-offs, green space is often neglected (Tjallingii, 2005). Meanwhile, the sustainable quality of dense urban forms is questioned (Burton, 2000; Masnavi, 2000). Densification does not automatically create the dynamic and diverse qualities of a traditional inner city (Lindholm, 2003; Sim, 2009), and unsustainable travel patterns, lifestyles, and consumption are effected by a complex set of variables other than the urban form (Holden and Norland 2005; Andersson, 2015).

Ideas of dense and compact urban forms are hegemonic responses to sustainable planning (Burgess, 2002; Krenz, 2002; Hofstad, 2012), and are often portrayed as opposite to urban sprawl (Dieleman, & Wegener, 2004; Neuman, 2005). The compact city shows potential for more efficient land resources, less traffic, and improved social cohesion, accessibility and walkability, thereby becoming a tool for municipalities to achieve

sustainability targets (Dieleman, & Wegener, 2004; Toderian & Holland, 2008). Ideals of compactness and densification are rooted in sustainability imperatives and have massively influenced planning over the last decades. However, despite many attempts to define the compact city, what it actually consists of, and looks like, remains unclear (Burgess, 2002). No coherent definition exists, but key features are population density, mixed land uses, public transportation, increased social and economic interaction, contiguous development, focus on urban infrastructure, accessibility, street connectives, and a high degree of impervious surface coverage (Neuman, 2005). Burgess (2002) discusses compact city approaches “*to increase built area and residential population densities; to intensify urban economic, social and cultural activities and to manipulate urban size, form and structure and settlement systems in pursuit of the environmental, social and global sustainability benefits derived from the concentration of urban functions*” (2002, 9-10), and Jenks et al. discusses the theoretical premises of the compact city as “*urban containment, to provide a concentration of socially sustainable mixed uses, that will concentrate development and reduce the need to travel, thus reducing vehicle emissions*” (Jenks et al. in Krenz 2002, 614).

The theoretical basis for the compact city is that it offers mixed use functions, intensification of density, efficient infrastructure and flexible buildings, sustainable transport systems, and efficient use of water. However, the relationship between the compact city and sustainable city remains unclear. The potential for the compact city to reduce transportation and energy use is addressed in connection to lifestyles and consumer behaviour. A Norwegian study showed that everyday travel was lower in dense urban centres compared to their surroundings; compact city residents had a much higher share of long leisure travel by airplane. Relationships between the built environment and travel patterns are thus contested. Furthermore, the study suggests that many who live in dense cities do so as they prefer to travel less, not as a response to the urban form (Boarnet & Crane, 2001, in Holden & Norland, 2005). Reviewing the effects of urban form on transport, Hall (2001) concludes that “*the research results are not consistent; indeed they are confusing*” (Hall, 2001, 102 In Neuman 2005, 12). Relationships between compactness and sustainability are thus disputed (Neuman, 2005), and Dieleman and Wegener (2004) propose that strong planning interventions are needed to support the compact city. Social sustainability is supported by compact forms that enable more social interactions and better quality of life with proximity to services and economic sustainability through revitalization and agglomerations of people and businesses (Hofstad, 2012). Environmental sustainability is bolstered by

more efficient use of resources and reduced pressure on green areas outside of city centres, but there is a potential conflict in regard to green space in the city. In addition, Hofstad (2012) argues that policy-makers have favoured economic arguments and failed to meet social goals. Focus on larger green/natural areas outside of cities reproduces ideas of the city as opposite to nature and green space. In addition, Krenz (2002) points out the disadvantages of diseconomies of scale, such as pollution and congestion, decreased green space, and loss of privacy. The built in tension between ecological, social, and economic goals is visible. Thus, there exists so-called 'balancing principles' of compensation of green space loss which, in practice, can be viewed as a commodification of natural values, in turn, requiring valuing and trade-offs that are never value-free (Hofstad, 2012).

As urban green space is a crucial part of cities, interlinkages between urban development and green space are numerous, from planning and design approaches to conflicts over floor space. Densifying cities will inherently mean that something else is removed. As argued above, urban green space can be both planned, as built parks, as well as unplanned in-betweens. All four papers relate to the (re)use of urban space – in Papers I and II, new development on green space is deemed to be inevitable and requires justification through new urban green planning policies. In Papers III and IV, grey infrastructure is reused and reprogrammed for green and public uses. These urban interventions are, in turn, related to planning and design approaches. Even though sustainable urbanists advocate for the need for greenery and the benefits thereof, a denser city can mean less green space. Halvorsen Thorén and Jørgensen (2008) assert that densification may constitute a threat to urban green space, and would increase the need for planning and prioritizing urban green space. On the other hand, more efficient use of existing green space and strategic efforts in compact cities can improve the perception of green space (Stähle, 2008). Stähle (2008) calls for a focus on urban morphology and the quality of design, and argues that the potential to have more usable green in dense cities is unattractive for urban residents and developers alike. The position of urban green areas in central areas is thus given an unclear status, both being attractive for development and as space for new development. Therefore, the status of green space is crucial and needs to be institutionalized (Hofstad, 2012).

The compact city contributes inherent physical and institutional obstacles for green spaces, restricting both quality and quantity thereof. Greening of the city is a response to attitudes and political climate, and needs to be safeguarded through partnerships among governments, developers, and citizens (Jim, 2004). Jim (2013) emphasises spatial and material properties

of green space further through the importance of heritage, champion trees, and the general higher ecological functionality of inherent sites than prepared sites (Jim, 2004 & 2013). Furthermore, for dense cities, roadside trees are the most cost-efficient way to bring in new green (Jim, 2013), and new compact development trees should be mandated as essential infrastructure (Jim, 2004). Trees and large parks were found to be the most appreciated urban green features in a study from Hong Kong (Lo & Jim, 2012). The same study concluded that that green spaces in dense cities are mostly appreciated for their positive influence on microclimate and beatifications, more than social and abstract environmental aspects. To secure urban green space in compact cities, a comprehensive green plan should contain specific recommendations, locations, dimensions, and functions (Jim, 2004).

The paradox of the compact city is an inverse relation between sustainability and liveability, as liveability is not only a matter of urban form (Neuman, 2005). Moreover, lacking a coherent definition, the compact city requires sensitivity towards local needs and circumstances, coordinated planning, and fiscal capacity of local governments (Neuman, 2005). Lo and Jim (2012) argue for a benefit of evaluation, rather than a limited focus on population density. Neuman (1005) stresses the primacy of process over form for distinguishing the sustainable city from the compact city. As sustainability concerns how to live, compactness is about form, i.e., the sustainable city is a more promising approach than just compactness itself (Neuman, 2005). The compact city must thus pay more attention to the green spaces available to safeguard well-being and quality of life for its inhabitants.

6.3 Ecological Gentrification

“No doubt, the ecological argument for preserving the High Line as a green space was a tactic to quell potential opposition to its impact on affordable housing”

Patrick, 2014. In Littke et al., 2015

Parks have long been used as urban planning tools for economic development by raising property values (Cranz, 1982; Dooling, 2009), and the distribution of new green space has disproportionately favoured more affluent communities (Wolch et al., 2014). As an issue of environmental justice, strategies to supply more green in underserved areas often lead to higher property prices and rents. Wolch et al. (2014) stresses the complexity of urban green space, on the one hand, being a positive factor for public health and, on the other, leading to gentrification and environmental

injustice. Here, the concept of ecological gentrification provides an analytic tool to comprehend the active role of urban green space planning and projects.

As discussed in paper III, the concept of ecological gentrification (Dooling, 2009), environmental gentrification (Checker, 2011), and green gentrification (Patrick, 2014) connects ecology and sustainability motives with urban transformation. Environmental gentrification, according to Checker (2011), is ecologically minded urban redevelopment under an apolitical banner of sustainability, appearing politically neutral and consensus-based, but in practice serving high-end residential development and displacement. Based on the spatial links between justice and nature in cities, Dooling discusses processes of displacement and exclusion as effects of ecological gentrification, defined as “*the implementation of an environmental planning agenda related to public green spaces that leads to (...) displacement or exclusion*” (2009, 630). Dooling (2009) further asserts that ecological gentrification uses environmentalism as a rationale for overriding social outcomes, a process described by Checker (2011, 225) as ‘sustainability then becomes part of a post-political project that sidelines questions of real political inclusion and justice in the name of technocratic, community-based deliberation’. Pearsall (2012) shows how sustainability measures affect long-time and vulnerable residents through greening projects, highlighting the connections between social and environmental justice, and proposing socio-ecological resilience in strategies against gentrification.

The term ‘gentrification’ was coined in 1964, defined as a process in which one class is ‘invaded’ and further replaced by a class with more buying power, a process that, in time, changes the whole social character of the district (Glass, 1964). The term has grown since then into a large area of scholarly research of its own, and is often situated in proximity to similar terms, such as urban regeneration, revitalization, renewal, re-invasion, and the ‘back-to-the-city movement’ (London & Palen, 1984, 6). Theories abound regarding the cause and effect of gentrification, ranging from Smith’s production side theory that points to economic and capital restructuring of space (1986), to Ley’s consumption side theory that points to an influx and ‘geography of a new cultural class’ into the city (1996, 68), to theories surrounding globalization and the new economy (Sassen, 1995; Smith 2002). Smith (2002) describes waves of gentrification, each embodying different characteristics and the result of various conditions. Dating back to the 1950’s, he calls this first wave ‘sporadic’ and aligns it with Glass’s 1964 definition. The second wave from the 1970’s-1980’s

resulted from ‘urban and economic restructuring,’ and the third wave from the 1990’s is described as ‘gentrification generalized’ (2002, 440). Smith points out that the third-wave gentrification has focused on bringing the middle-class back to the city through more than only providing housing options, but that it has “*evolved into a vehicle for transforming whole areas into new landscape complexes that pioneer a comprehensive class-inflected urban remake*” (2002, 443), including new ‘cultural facilities, open space, complexes of recreation and pleasure’ (443). Today, gentrification can be viewed as a global public policy connected to entrepreneurial cities (Lees and Ley, 2008), and urban regeneration has become the prevailing term to soften the emotiveness of gentrification which emerged in Europe as an attempt to “*incorporate gentrification into the heart of transnational urban policies*” (Smith, 2002, 444). Essentially, this is becoming a more advanced and coordinated style of gentrification, and Smith notes that urban regeneration constitutes the next wave of gentrification (2002: 445). As gentrification has transformed into a new more palatable term, it has become part of a global urban strategy, which is an ‘expression of neoliberal urbanism’ (2002, 446). A further development of the term is ‘supergentrification’ describing gentrification of already gentrified areas into exclusive enclaves connected to global finance and corporate service industries (Lees, 2003).

As the theoretical debate focuses mainly on the causes of gentrification from the production and the consumption side and role of the new middle class, Slater (2006 & 2011) proposes that this has occurred at the expense of critical examination of the effects of gentrification. Once being a concept helping class struggles and urban social movements to mobilize and gain visibility (Slater, 2011), it has become a neoliberal urban policy connected to the creation of hip and creative urban imaginaries (Slater, 2006). The decrease of critical perspectives can be traced also to methodological issues of measuring the invisible, since the costs of gentrification are connected to the often elusive concepts of cultural identity and displacement (Slater, 2006 & 2011). Gentrification today has become institutionalized arrangements favouring urban environments created to serve the needs of capital accumulation, and a critical perspective must therefore focus on the serious consequences for the disempowered (Slater, 2011). Although urban renaissance has become a way to create images of positive gentrification (Lees and Ley, 2008), the use of alternative terms, such as ‘revitalization’ and ‘regeneration’, are analytically incorrect, according to Slater (2011). The reclaiming of the term is connected to neoliberal urban strategies of fast, pragmatic and creative governance (Lees, 2012), and the use of environmental and ecological framing of urban transformations is related to

these strategies through ecological gentrification. The terms environmental-, ecological- and green gentrification are seemingly synonymous with ‘relocating gentrification within the environmental discourses’ (Dooling 2009, 630). Dooling (2009) and Patrick (2014) relate their discussions more to exclusionary aspects of public spaces, and Checker (2011) to high-end urban renewal. These conceptualizations can both be connected to the production side of gentrification through urban restructuring and, to a lesser degree, to the consumption side of new needs and desires of a new urban middle class. Most importantly, connected to the hegemonic status of sustainability and ‘greening’, whether actual or metaphorical, ecological gentrification connects to contemporary ideals of gentrification by creating positive imaginaries of the green, pleasant, recreational city as an apolitical and entrepreneurial tool for governance, serving the needs of capital accumulation and potentially leading to displacement.

From an urban planning perspective, Wolch et al. (2014) discuss an approach to new urban green space that is ‘just green enough’, targeting both social and environmental justice, and shaped by community needs. To replace market-driven or ecologically-justified projects, new urban green space should be supported by anti-gentrification strategies, such as rent control and affordable housing (Pearsall 2012; Wolch et al., 2014), or the risk exists that “*a dazzling park comes in, the low income locals go out*” (Jaffe, 2014).

6.4 Green City Branding

“Birmingham has an ambition to become a world leading ‘green’ city. Membership of the biophilic cities network will provide Birmingham with the opportunity to learn from and exchange good practice with exemplar cities across the world”

Morris, 2014. In Littke, 2016

Green city branding has become a global policy tool for city governments to create and strengthen their image as liveable, sustainable cities, as well as increase their competitiveness to attract capital, residents, and companies (Jonas & While, 2007; Gulsrud, 2015). Green city rankings, such as The Europe’s Green Capital Award (EGCA, n.d.) and Siemens Green City Index (simens.com, n.d.), measure environmental performance, and these awards and rankings make cities global role models, both in respect to actual environmental achievements, as well as the result of successful marketing strategies (Gulsrud, 2015; Gulsrud et al., 2015).

Place marketing and branding as urban policy strategies are connected to economic and cultural globalization, enabling flows of people, capital and companies, making it important for cities to attract new, and keep existing, residents and companies satisfied (Kavaratzis, 2005; Ashworth, & Kavaratzis, 2010), associated to, and driven by, external global forces (Skinner, 2008). Approaches can be derived from several disciplines, making them complex and multi-faceted (Hankinson, 2010), and can be seen as instruments of place management, recognizing the importance of differentiating places on a global competitive market of cities (Kavaratzis 2005; Hankinson, 2010; Warnaby & Medway, 2010), intimately connected through changes in priorities of planning, and a shift from government to governance (Kavaratzis & Ashworth, 2010). Marketing is thus part of the entrepreneurial city (Kavaratzis, 2004), and growing interest in practice and academia have been linked to new post-industrial urban identities (Skinner, 2008). While place promotion is not a new phenomenon, contemporary strategies are more focused, integrated, and strategic than early examples of boosterism, and promotion as more intuitive and random (Kavaratzis 2005). According to Hankinson (2010), contemporary place branding strategies can be separated from traditional place promotion in the urban policy literature as more focused on the commodification of places, creating a positive perspective connected to the emergence of managerial forms of governance. Place marketing and place branding originate from marketing science, and represent concepts that are well established in both theory and practice. These represent a growing field of literature (Kavaratzis & Ashworth, 2010), and branding activities are currently high on the urban agenda (Kavaratzis 2005). While there is no clear differentiation between place marketing and place branding (Kavaratzis & Ashworth, 2010), the latter can be regarded as a development of the former (Warnaby & Medway, 2010). Today, place branding is the dominant term in the literature (Dinnie, 2011). Kavaratzis and Ashworth (2005) identify three types of place branding: 'geographical nomenclature' giving a product its name from the location: 'product based co-branding', associating a product with attributes of a place to strengthen the brand of both; and 'place management' aiming to change the perceptions of a place by creating advertisements that use images. Place marketing and branding strategies include nation branding for tourism and foreign investments, destination branding for tourists, as well as culture/entertainment branding of the physical, economic, and social environment of cities, aiming at both tourists and local residents (Lucarelli & Berg, 2011). Techniques include re-imagining of localities, spectacles, mega-events, advertising, art, cultural regeneration, and public-private partnerships (Kavaratzis, 2005). Branding, in this sense, can be defined as a deliberate process to influence interpretation and meaning connected to

physical and social-psychological attributes, and a multi-dimensional construct with emotional functional, relational, and strategic elements (Kavaratzis & Ashworth, 2010).

Branding is communicating an image with qualities, values and feelings, and consists of everything that a city communicates, including formal communication, what is actually carried out in strategies, projects and structure, and informal communication through word-of-mouth and the media (Kavaratzis, 2004 & 2005). In addition, as places are much more complex than products and place branding and marketing strategies are aiming both at individuals, groups, residents and visitors, these kinds of brands are more difficult to control than conventional products, making applicability and usefulness one of the main critiques against branding as an urban strategy (Kavaratzis, 2005). By its nature, a place brand is positive, as well as excluding and explicitly aiming to modify perceptions, as disregarding negative aspects creates an intrinsic gap between image and reality (Kavaratzis & Ashworth, 2010; Ooi, 2011). Although creation of a place brand is dependent on stakeholder cooperation, it is not necessarily associated with consensus, since the image is based on a power negotiation (Pritchard & Morgan 2001; Warnaby & Medway, 2010). Place branding is therefore a highly political process (Kavaratzis & Ashworth, 2010). Processes of place branding are usually carried out by a public-private partnership, and the branding process as urban policy is overlaid by other political objectives (Hankinson, 2010). Moreover, the urban policies connected to marketing focus on communication and image promotion, rather than developing a 'product' that meets the needs and desires of potential consumers (Hankinson, 2010). The multitude of areas and professional interest in place marketing and branding creates a fragmented and confused identity of the concepts (Papadopolus, 2004; Skinner 2008). Thus, the concepts, aims and methods, as well as their interrelations, need to be clarified (Kavaratzis, 2005). This fragmentation also treats place branding as a research area Lucarelli and Berg (2011), and three main theoretical approaches have been identified: branding as production (e.g., how to, management, organization, governance); branding as appropriation (e.g., reception, use and consumption, interpretation, and utilization); and critique (positive and negative and effects).

While cities are developing place branding strategies, climate change mitigation and focus on sustainability have increased interest in green city branding. Traditional place branding has focused on competitive advantages in regard to businesses and liveability, and green city branding has the potential to combine these focuses with sustainability measures (Busch &

Anderberg, 2015). Additionally, Gulsrud (2015) identifies a global focus of 're-natureing' cities together with a response to global economics, and local environmental crises in the post-industrial city as key drivers for green city branding. As an urban policy tool, green city brands provide visions for a better quality of life, promotion of sustainable development, and competitive advantages for economic development. However, within these green growth discourses, the role of actual biophysical green space remains unclear (Gulsrud, 2015). At the same time, actual green space and public parks have high potential as resources in branding (Braiterman, 2011; Chan et al., 2015; Gulsrud, 2015). Additionally, the social dimension of urban green space is often overridden by ecological arguments in sustainability branding, creating a paradox of the strategic policy goals of entrepreneurship and sustainability (Jonas & While, 2007). Contemporary, post-industrial cities are searching for innovative forms of green space in streets, walls and roofs, as the industrial era banished nature to the outskirts or contained it in strictly defined parks. This could be, at least partly, accomplished by recognizing that abundant green space is a competitive advantage that contributes to well-being and quality of life (Braiterman, 2011).

Braitman (2011) stresses that much of the innovation in urban green space comes from the private sector and people not traditionally involved in urban planning, such as farmers, entrepreneurs and artists, due to decreasing city budgets, this needs to be incorporated in urban greening and branding policies. Local resources and culture have the potential to create unique urban green space, and Braiteman contends that the "*solution needs to be a mix of globally shared ideas (...) that respond to specific places*" (Braiteman 2011, 80). Furthermore, as pointed out by Gulsrud (2015), the word 'green' in marketing and branding strategies both refers to environmental policies, as well as biophysical vegetation. While sustainable urban development through environmental policies can include a focus on parks and urban green structure, studies have found a weak relationship between branding and actual green space (Gulsrud et al., 2013; Gulsrud, 2015). Certain terms, such as 'natural', 'green', and 'sustainable' have multiple connotations and connections to a wide range of policy areas. Gulsrud (2015) argues that this represents a core paradox in green city branding.

6.5 Application of the Theoretical Framework

Urban densification strategies, green city branding, and ecological gentrification are processes influencing and determining the role, function, and form of contemporary public urban green space. In the papers, all of these dimensions are visible and influential. Paper I seeks to investigate

challenges and conflicts in contemporary urban green space planning in Stockholm, where densification as hegemonic urban form for the sustainable city, as well as reproducing and manifesting Stockholm's reputation as a leading green city, are central concerns. Becoming a green city is a central driver for the implementation of the biophilia concept in Birmingham urban green space planning, and Paper II discusses this in the context of positioning and advocating urban green space, as the city is densifying. In Paper III, The High Line is analyzed in regard to ecological gentrification. Moreover, the re-use of infrastructure creates new imaginaries regarding how new green space can be provided in dense urban environments. In Paper IV, symbolic shifts from grey to green, since parklets are introduced as public mini-parks, motivate the discussion of ecological functionalities and narratives of parks as urban strategy. In Papers III and IV, conceptualizations of publicness are discussed. While publicness is not explicitly a focus in Papers I and II, the analysis connects the need for physical accessibility and connectivity to the delivery of well-being aspects of urban green space that, consequently, constitute main arguments in both green space planning programs.

Distinct urban planning strategies and processes in the theoretical framework overlap to a large extent. Private-public partnerships as management forms are central in regard to both public space provision and through branding strategies. These management forms are challenging governance approaches regarding transparency and inclusion of public opinion, as long-term commitment can be questioned – but also through legitimizing claims from volunteers and other groups not traditionally involved in public service. General problems with decreasing public funds are a main argument for developing these new management forms, and branding is often portrayed as a tool for inter-city competitiveness to both retain and attract businesses and residents to, among other things, secure public funds. Common to the approaches is that they are multi-dimensional, i.e., aspects and functions influencing publicness, in branding as derived from several disciplines, through the contested connections between densification and green space, and the development of gentrification from mobilizing local struggle to global development strategy. Urban green space is here seen as central, as a competing urban feature in densification strategies, as a competitive feature for branding, and as a de-politicizing aspect of gentrification. Thus, the role of the material green, as well as discursive green, has a crucial function in these approaches.

Together, the four papers show how contemporary challenges for public urban green space interlink through entrepreneurial urban policies,

densification strategies and sustainability, privatization of public space, as well as the dynamics of the concept public urban green space and the significance behind classification and conceptualization of these spaces. The urban planning perspective is made central through a discussion of both procedural and substantial dimensions of the projects. Public space and supporting of the well-being aspects of urban green space are essential urban planning issues. Moreover, a problematizing approach is utilized to be able to discuss possible synergies and opportunities for the sensitive promotion of public urban green space.

7 Discussion and Conclusions

7.1 Main Findings

The four cases together build up a narrative of contemporary challenges and opportunities for urban public green space. In Papers I and II, urban growth and densification strategies are central to urban green space planning. The two plans, The Green Walkable City and Green Living Spaces, are connected to outspoken goals of densification and sustainability, and new development is proposed on existing green space. In Stockholm, The Green Walkable City plan justifies this development by higher quality demands on the remaining green space, without specifying what quality, in this regard, really means. Despite the tradition in Sweden towards a multi-functional approach to urban green space, the recent studies discussed above demonstrate a trend favouring ecological functions. This is also the case in Birmingham, i.e., despite the holistic theoretical background of biophilia, the indicators and strategies are highly instrumental and ecologically-focused. In The Green Walkable City plan, new connections between areas, supported multi-functionality and improved tools for compensation and public debate are put forward. However, as the conducted public consultation indicated, the new comprehensive plan includes strategies that will enable pervasive and locally significant changes. Language and clarification of concepts play a central role in this motivation to comprehend the new plan, since professional and non-professional language often differ.

In Paper II, the concept of biophilia in urban planning strategies is discussed. As a concept, biophilia represents a holistic perspective on urban nature – bringing emotional and intuitive aspects to urban green space planning. While showing the potential to position the status of urban green space by connecting policies thereof to higher priority policy areas, such as health, the concept itself is deemed as confusing, both for the general public and planners.

Papers I and II show that, even though connections between well-being and urban green space are increasingly acknowledged in practice, and social and psychological benefits are stressed, the plans, as such, lack real legal status, introducing concerns regarding their implementation. On the other hand, the development of the plans, as well as accumulated knowledge among the planners involved, underscore and strengthen urban green planning as a policy area. Furthermore, the findings in these papers show a strong connection between urban green space planning and positioning of the cities

on a global arena for sustainable cities. While Stockholm is already world-renown for greenness and sustainability, Birmingham is aspiring to become a leading green city. Urban green space, as public space, is not explicitly addressed in either of the plans, but the focus on well-being and connectivity implicates publicness and everyday nature experiences.

In Papers III and IV, two contemporary concepts for innovative public urban green space provision are investigated. The High Line in New York has started a worldwide trend of elevated parks, and constitutes an expression of Landscape Urbanism by focusing on the reuse of abandoned infrastructure, activating landscapes, and urban greening. In San Francisco, a local, tactical action has led to a city-wide planning program and global annual event to turn parking lots into mini-parks. While both projects have been massively acclaimed and are being copied in localities all over the world, critical analysis has shown complex consequences. In New York, The High Line is connected to the ongoing transformation of its vicinity. Skyrocketing real estate prices and changes in the local retail market are analysed in the framework of ecological gentrification, as ecological and landscape concerns cannot replace social and political considerations. In San Francisco, the parklets are embedded in a narrative of nature, but the study finds a low ecological functionality. Additionally, the private-public partnership model with the city owning and permitting interventions and the private sponsor designing, financing and managing challenges of the perceived publicness, arises. Landscape urbanism in the case of The High Line has shown the potential to bring in new nature, but gives little consideration to the public features and needs of a park. Tactical urbanism, in the case of the parklets, is also challenging publicness, since roles and responsibilities have been changed, blurring the line between the planner and the community activist.

7.2 Discussion

The aim of this study is to problematize the complex reality of contemporary public urban green space from an urban planning perspective. While a critical perspective has been central in the analysis and discussions of the papers, identifying and raising questions and issues connected to densification strategies, global competitiveness and trends of 're-naturing' cities is crucial for the successful promotion of these spaces. A central proposition has been to advocate for public urban green space as essential for quality of life and well-being for urban residents, and identifying urban planning as a normative discipline following the overarching goal of improving urban environments and processes.

The epistemological perspective of post-positivism has enabled identification of benefits and values connected to urban green space, acknowledging the importance of tools and approaches to measure and quantify them as ecosystem services. At the same time, drawing from a critical realist ontology, reality is acknowledged to be complex, and knowledge is always contextual and value-dependent. This relates to the reflections of complexity as influencing the system of inquiry and epistemological perspectives discussed in the methodology chapter. Drawing from Rittel and Webber (1973), social sciences are inherently complex, and it is crucial to be able to define problems and questions to be able to understand them. Therefore, the reflexive approach proposed by Alvesson and Sköldbäck (2009) has been central to the work. So, while urban densification strategies, green city branding, and politicizing nature through ecological gentrification have been identified as potential conflicts of interest for a green city, promotion of public urban green space must be done with this in mind. Sensitive greening practices should be able to take advantage of the policy opportunities connected to these strategies, i.e., as shown in the papers, to provide green space in new kinds of localities, to strengthen the position of urban green space policies, and to facilitate the integration of both policies and stakeholders for provision and management.

The concept of complexity has also been a central aspect from a research design perspective in analysing public urban green space, as this is a multi-faceted concept, defined by inherently complex terms. As shown in the theoretical framework, conceptualization of publicness is a multi-dimensional exercise. Additionally, both cities and the natural world can be seen as social and ecological networks, as argued by Benton-Short and Short *“(t)he city is implicated with the “natural” world in connections that embody and reflect social, economic and political power. The city is an integral part of nature and nature is intimately interwoven into the social life of cities”* (2013, 5). The complexity of public urban green space is thus embedded in perceptions, the multitude of forms and functions represented in the concept, as well as the power dynamics between them. How spaces are defined, who has the power to influence provision, design and management, and the context in which they are situated will influence how they are used and perceived.

To investigate these issues, case study methodology is chosen as a research strategy, as complexity and contextualization are central features of the methodology. The methodology, as such, has an intrinsic tension between general relevance and snapshots of situated knowledge, i.e., how to see the

universal in the contextual. As situated knowledge, generalizations are done through theoretical frameworks. At the same time, the case can be approached as a microcosm with floating boundaries, as even local practices and processes are results of multiple inputs, on multiple scales, and never disconnected from time and space (cf. Zainal, 2007; Gomm et al., 2000). In urban planning, local, regional, and global scales are always connected and influencing each other. This contextualization makes case studies especially important for practice-oriented research to show the transformative power of practices and projects (Johansson, 2003; Corcoran et al., 2014). As pointed out above, since generalization from cases is done through a theoretical framework, the development of the theory and choice of the cases are an iterative and mutually supporting process. As the research problem and aim have suggested, the focus is on contemporary, high profile cases, highlighting complexities of global competitiveness, densification, and greening practices. As high profile cases, the reality that they describe is not universal in its particularities. However, it is exactly these particularities that are of general relevance, as they represent tendencies illuminating global processes. In the analysis, contemporary society is understood to be influenced by a shift from government to governance, and planning and decision-making processes are thus influenced by multiple stakeholders and dimensions. Cities are increasingly market-oriented and entrepreneurial, which influences urban strategies and management forms. This, in turn, emphasises a global competitiveness between cities to attract and retain labour and businesses through attractiveness and entrepreneurial urban strategies.

7.2.1 Discussing Challenges for Public Urban Green Space

To fulfil the aim of problematizing, and thus to contribute insights for better promotion of public urban green spaces, the research has been guided by two research questions. The first, aiming to identify problems and questions important for elucidating contemporary reality is - *What challenges for public urban green space can be identified in contemporary high profile urban green projects?*

A central challenge already acknowledged in the aim is the conflict existing between urban densification strategies and urban green space. The four cases are embedded in a global trend of densification strategies and urban growth. Moreover, a dense urban form has hegemonic status regarding expressing sustainability, as a reaction to sprawl, high energy use, and massive transportation. However, as shown both in the theory and in the papers, densification can be both a threat and an opportunity for urban green

space. For example, what actually constitutes a dense city and how it is measured is contested. Although density has the potential for better social cohesion, increased travel by foot and public transport, as well as energy savings, lifestyles and transportation patterns are complex and cannot be solved by form itself. Furthermore, measuring density by inhabitants per area might be achieved in numerous ways, e.g., one high-rise surrounded by a parking lot can house as many as a low-rise, mixed-used neighbourhood. As argued by Neuman (2005), process must have primacy over form, and densification must be carried out with place-specific solutions, focusing on liveability. Conflicts between interests, users, and politics are mirrored in urban green spaces and, as asserted by Cillies et al. (2015), green spaces are often neglected at the cost of other land uses. However, in a competitive reality for cities, green space has the potential to strengthen the city's position. Redefining the conflict between development and green space would mean highlighting the *urban* function of urban green space. Understanding the importance of these spaces through their contribution to liveability and well-being as critical urban considerations and features would mean that the conflict rests on false assumptions. Green spaces are not voids or non-urban; instead, as shown in the papers, they constitute active spaces intertwined with urban processes and strategies. Despite holistic and ambitious approaches towards urban green space, the plans in Papers I and II propose new developments on greenfields. Interestingly, however, the analysis in Paper I shows no absolute resistance towards this development, but rather the criticism is focused on the vagueness of the plan, and calls for definitions and clarifications. In Paper III, a new green space has been provided by re-use of infrastructure, but the increase of green space has been overridden by a discussion of environmental justice and local social needs. Creating a compact, sustainable city must therefore be sensitive to local conditions and needs.

Connections of branding and positioning can be found in all of the papers, implicitly or explicitly. While the Pavements to Parks program in San Francisco aims to help other cities create parklets, Birmingham actively strives to be a leading green city. While Stockholm lives on old merits as a sustainability capital, The High Line's success is reinforced by the many cities and projects looking at it for inspiration. Challenges for public urban green space can therefore be both in reproducing and transferring best practices and concepts to new localities, and drawing from Gulsrud (2015) the unclear relationship between green city branding strategies and biophysical forms of green. While place promotion and marketing has a very long tradition, it has experienced increasing attention, as cities are becoming competitive and entrepreneurial. Even though the literature suggests that

place marketing and branding are deliberate processes, the cases show that ideas of marketing and branding are deeply embedded in urban strategies. Stockholm has a long tradition of promoting an environmental and green profile, and this is strategically promoted in The Green Walkable City program. At the same time, decreasing green space and unclear implementation of the introduced strategies present the risk of diluting the city's green values. As discussed in Paper I, the very incentive for The Green Walkable City program came from a strong focus on green values and green space concerns while developing the comprehensive plan. Thus, the new program was a response to highlight and safeguard these issues. In Birmingham, The Green Living Spaces plan and membership in the Biophilic Cities network are connected to the explicitly expressed goal to become a leading green city. The strategies, however, are also connected to real concerns and local issues, such as the need to improve public health. Here, the strategies of branding and local problem-solving are thus parallel, intertwined, and independent. In Papers III and IV, the projects are advocated within a narrative of naturalness and greenness – adding green urban values to the cities' reputation. However, while The High Line has limited, inaccessible green cover, parklets are not required to have any, and exhibit limited green cover and low ecological functionality. In both cases, the symbolism of nature is central, as nature opposed to the city, by turning grey street and rail into green park or nature. Simultaneously, the literature suggests that urban green space is an underused resource for city branding strategies (Braiteman, 2011; Gulsrud, 2015). Additionally, the contradictory relationship between place branding and green space is evident in the low or unclear status of urban green space planning. Both in Stockholm and Birmingham, the plans lack legal status and are dependent on the inclusion of the strategies in other statutory plans. In Sweden, the government recommends that all municipalities have green strategy plans, and green plans are identified as central vehicles for delivering national environmental quality objectives. Nevertheless, in 2011, only 23% of all municipalities had plans covering the whole municipality, and they had a wide variation of shape, scope, name, and structure (Littke, 2015a). In Birmingham, changes in national planning legislation drastically reducing the number of supporting planning documents led to the plan now being only an advisory document. Overall, not only do the plans lack legal status, they are also vague in implementation and measurable indicators, especially as the focus on well-being benefits makes measurement complicated. At the same time, the analysis of both Papers I and II shows that introducing the plans has changed attitudes and distributed knowledge about urban green space internally.

Focusing on the public aspects of public urban green space, conceptualizations of publicness have been shown to be multi-dimensional. In Papers I and II, the strategic planning programs are on an abstract level that does not concern public space explicitly. However, as they are city-wide, public space, as well as public influence, are still central. In addition, relying on well-being aspects and benefits connected to green space, universal accessibility is needed for their delivery. The contemporary urban planning and design approaches biophilic urbanism and landscape urbanism discussed in Papers II and III, respectively, also lack explicit discussion of publicness. While biophilic urbanism stresses the need for everyday contact with nature, landscape urbanism is mostly associated with public space and parks projects. In Paper III, The High Line as a landscape urbanism role model is shown to have problematic features for publicness through low connectivity, access, and a high degree of control. The discussion further pointed out the lack of social concern and sensitivity of the landscape urbanism approach. By concentrating on landscape, instead of the building, as a design object, the approach has already distanced itself from the private sphere of the home and the workplace. However, public space is much more than form and design, i.e., perceptions, use, and social dimensions are equally essential. In the case of The High Line, the landscape approach has been able to insert itself as the elevated, long-stretched, object in the dense city. As Kelbaugh, (2014) points out, the uniqueness of The High Line is dependent on Manhattan's street grid as a counterpoint. Moreover, ecosystem services as an anthropocentric tool for valuing and acknowledging the values and benefits of urban green space do not distinguish between public and private access, and landownership. In a way, this is understandable, since green space on private land is an important part of green structures and networks. However, actually delivering services that are connected to direct well-being necessitates physical accessibility. In the high profile projects in Papers III and IV, they are contemporary and currently popular, but publicness aspects are in question. Public space is facing major challenges, such as privatization, control and neoliberal forms of governance, and management of urban green space as a public space is facing the same kinds of challenges. Although the involvement of the private sector and volunteers certainly has the potential to create new spaces of engagement and imaginaries for new forms of public urban green space, it does not guarantee long-term commitment and risks reproducing underfunded public spaces.

Decreasing public funds is identified to be a main reason for the increasing involvement of the private sector in the provision, design, and management of public space. Money, or rather the lack thereof, is an obvious challenge

for public urban green space, and the cases have shown the central position of financial aspects. In San Francisco, the parklet provision and management strategy are directly related to decreasing public funds. The model puts a heavy financial burden on the sponsor which, in turn, affects the sponsor's perceived ownership of the parklet. Other financial aspects exist related to the role and status of urban green spaces. In Birmingham, the budget share for urban green space has been steadily decreasing for decades. While fighting for the position of green space policies, both planners and the community organisation BOSF realised that health was on the top of the decision-makers' budget priorities. Understanding the many connections between improved green space and improved public health, this was identified as a vehicle to promote green space. On the other hand, parks have long been used as tools for economic development by raising property values, and this was therefore used to gain political support for The High Line in the initiation of the project. Both in Stockholm and Birmingham, the plans identify the need for new development on green space to not risk physical or economic growth. However, no real consideration is given to the cost of the loss of green space.

Distribution of new green space has disproportionately favoured more affluent communities, and ecological gentrification has been developed as a theoretical concept to describe connections between green space and displacement through upscaling. As discussed in Paper III, ecological arguments have been overshadowing social concerns, and this depoliticization of the green can also be connected to the narrative of parks connected to the parklets. Even though greening the streetscape and creating new public space create new imaginaries of public urban green space, the power relations embedded in planning and design processes are also valuable in forms of shared governance and public-private partnership models for the design, provision, and management discussed in Papers III and IV.

7.2.2 Analysing Classifications of Public Urban Green Space

The second research question has been directed towards the consequences of these challenges through understanding *how the variety of concepts and classifications of public urban green space can be understood what are the implications thereof?*

Public urban green spaces represent a large group of spatial concepts, forms, and functions. They are parks, streets, gardens, commons, in-between spaces, sports fields, cemeteries, etc. It can be discerned from the names of

these forms that they are related to use, function, and form. However, the unifying features are that they are, at least to some degree, publicly accessible and covered with at least some vegetation. Nevertheless, this definition is quite vague. As public urban green space is connected to this conceptual complexity, it is almost impossible, and not even desirable, to create global definitions and classifications. At the same time, it is important to acknowledge and analyse this variety, as classifications and terminology are related to one's analytical perspective. In addition, classifications and perceptions are based on the local context and cultural ideals of urban nature relationship. What is considered a park and what functions it is ascribed are based on social and political influences, from royal, exclusive hunting grounds to the public park movement. Functional and anthropocentric approaches, including ecosystem services, are evaluated based on ecology and functionality – while gardens and recreation areas relate to local culture and experiences. It is also important to note that, spatially and materially, all of these processes and functions are present in the very same place.

Urban green space planning, as both procedural and substantive exercises, involves many actors and stakeholders, from professional planners, politicians, and developers. Moreover, the involvement of the general public and community organizations is crucial for democratic planning processes. As seen in the concepts in Paper I, definitions and language presented a main area of conflict. The public consultation revealed the concern that higher quality of urban green space, as opposed to quantity, in practice meant the 'parkification' of nature. Despite this, neither the official statement of the city nor the interviews with the project leader found this to be a central concern in the plan. Lövré (2003) argues that the primary reason for this conceptual confusion is a conflict between everyday practice and professional language. However, Paper I concludes that language and clarification of concepts play a central role to understand the new plan, and the concerns would be better addressed in the document with examples and definitions in both spatial and conceptual forms. In addition, these classifications and connotations are both conscious and unconscious. Planning, as a democratic process of inclusion, must therefore be more sensitive concerning use of concepts and spatial terms as well as improving communication with the public.

Paper II, just like Paper I, concerns the strategic, abstract planning dimension of urban green space, and the central concept here is biophilia. As a novel and generally unknown concept, its usability has been questioned, and the introduction of the concept in planning policy was debated. On the other hand, the concept has helped green space policy to attract attention and

is regarded as a vehicle for the everyday, emotional, and intuitive connections between urban residents and nature. Perhaps this is precisely what is needed to not become mired in business as usual. Health, as a key feature in The Green Living Spaces Plan, is a local response to two pressing needs, local public health challenges and budget priorities. Furthermore, the analysis shows how attitudes towards, and the status of, green space policies is crucial. In Paper III, the contemporary approach of landscape urbanism lacks coherent definitions or rigid frameworks, but still possesses the strength of focusing on ecology and landscape.

Implications of a large variety of concepts describing public urban green spaces can be seen in the inherent power dynamics of concepts and definitions as shown in Papers III and IV, in which both The High Line and parklets are connected to narratives of nature, providing green space, and public space, and therefore are presented as generally positive or as amenities. While public urban green space in many regards is exactly that, the analysis shows that both the public and ecological functions of the projects are controversial and conflicting. *Can a park lack vegetation? Is a disconnected and heavily controlled space really public?* The rules and regulations of The High Line prohibit gatherings, smoking, dogs and skating, and heavily restrict vendors. The elevated structure with limited and easy closing of entrances, as well as guards and volunteers restricts and controls conduct and conveys clear messages regarding who and what behaviours are desirable. A study by Loughran (2014) discusses these forms of control in connection to social strata as white, properly dressed people could be observed sleeping on benches, whereas a homeless man was thrown out for doing the exact same thing. These projects reveal how nature and green space are politically entangled, and challenge traditional ideas of both the park and the public space. However, *could they instead be examples of new forms of nature? Could the city and nature merge?* as proposed by the founder of The High Line. If so, they need to be understood as such, and as a complement, not a replacement, for the public park. Actual vegetation or biophysical forms of green are essential for well-being and ecological functionality. However, green and nature are complex concepts with multiple, and even conflicting, connotations. Literal greening of the streetscape, as in the parklet case, is symbolically important, but to paraphrase Hatherley (2014) *is something actually good for the environment just because it has some vegetation?* With the potential of public urban green space to enhance urban environments and quality of life for urban residents, no quick fix exists for long-term, complex issues.

Classifications and conceptualizations of public urban green space are therefore an important dimensions of the theoretical framework developed in this study. Aspects of publicness, the political aspects of green space provision, the potential for green space in city branding strategies, and problematizing the role of green space in densifying cities are connected to how public urban green space is classified and conceptualized. In conclusion, the terminology connected to urban green planning is diffused and non-coherent. Use of the term is connected to the intentional aspects and local identity, and can be used to influence perceptions.

In the planning documents in Papers I and II, the general and vague approach to what urban green space is, where it can be found, and how it is defined is partly explained by the abstraction level associated with strategic planning. However, it can also be analysed as a pragmatic way to achieve an official narrative of the importance and focus on local urban green space and, at the same time, allow for interpretive flexibility further along the planning process. As urban green space has received increased attention in planning policy due to global urbanization (Qui, 2014), the concepts used are never value-free. Tunström (2009) shows, in her discursive analysis on constructions of urban ideals, how historical and spatial connotations of defined and discernible categories influence planning practices and perceptions. While in-betweens and green space are seen as indistinct, hard to relate to space, the park and the street are relatable categories, making the distinction between park and green space crucial for its inclusion in strategies, plans, and even discussions of what and where the city actually is. Lövrje (2001) calls for problematization of urban green space concepts being both scientific and democratically important. With an increased focus on urban green space and green space values, understanding what kinds of spaces and values are being considered will affect both strategies and their implementation. The spatial identity, the material properties, and the structural perspective of urban green space must therefore be highlighted together with the dimension of publicness to secure the creation of green, sustainable, and inclusive cities.

7.3 Conclusions

The findings from the cases in this study have shown that public urban green space can be conceptualized in many ways, reflecting social, economic, and political realities. ‘(Re)-naturing’ and ‘greening’ are urban drivers, project narratives, and tools for branding, positioning, and delivering benefits and values with the potential to increase well-being, health, social cohesion, and quality of life. Understanding the city as a complex space of physical and

socio-ecological relationships, any separation between the city and nature, such as green spaces, is quite difficult. Instead, the many roles and functions of urban green space reflect the complex and diversifying needs of society. Contemporary urban planning and design trends and approaches both focus on the need for, and benefits of, green structures in public space and recognize the importance of parks and recreational areas as public space. By acknowledging the numerous roles and functions of nature and urban greenery, and to thoroughly acknowledge the complexity of social sciences, nature can play a more inclusive and fruitful role in urban planning and design. New 'natures' are generated by societal change, needs, and practices. They can be good and evil, wild and civilized, active and passive. In an age when sustainability has a hegemonic status, the 'Green City' is full of contradictions, of technology and naturalness, and technologically adjusted ecological functions (in this context, the word 'green' is given a multitude of meanings). Parallel movements, as tactical and landscape urbanisms, romanticize an "urban wilderness", a pristine nature that would not even exist without the city. Moreover, in the biophilic celebration of the beauty of nature – what is the role of "ugly" urban nature, e.g., rats, germs, or organic waste? The complexity of society and science, of fluid realities and producers of knowledge in producing their own realities argue for a search for local goods, not truths. Planning policies are one-shot operations, following Rittel and Weber (1973), and best practices and examples can be supportive of new decision-making. They are, however, only local truths in time and space.

What can we learn about contemporary conceptualizations of urban nature through high profile urban green space projects? As Heynen et al. proposes, "the making of urban parks (...) contain and express fused socio-physical processes that contain and embody particular metabolic and social relations" (2006, 11). The making and conceptualizations of the four cases show multiple intersections between social, political, economic, and material processes. While The High Line is argued to represent a 'new' role of urban greenery "Central Park was meant to be an escape (...) On the High Line, you're in nature, but you can hear the traffic, you can see the Empire State Building" (Jacobs, 2012). Moreover, the concept of biophilia aims to relate to complex learning rules that are embedded in our genes. While parklets only contribute with decorative, symbolic greenery, The Green Walkable City advocates for a more qualitative focused approach, implicitly maximizing ecosystem services to make 'nature' more efficient. Turning the grey into green is both symbolic and tangible, since the cases also illustrate how narratives of green and nature carry social and cultural

power. Green public amenities are embedded in a positive aura, as providers of high quality environments contribute to well-being and quality of life.

On the other hand, Papers I and II present ambitious and informed urban green space plans, justifying new development on greenfields, thus decreasing the quantity of urban green space. Papers III and IV show concepts of urban greening with a limited ecological functionality due to a low degree of connection to a green network, as well as ranging publicness due to functions of design and management. These high profile urban green space projects thus indicate integrated approaches of nature as an inherent part of the urban landscape, while the question of nature's real involvement remains. Symbolic and decorative greening or branding, and highlighting greenery is not enough. Actual urban green space is needed to secure these high quality of life and well-being objectives.

As shown above, public urban green space is associated with a wide range of well-being benefits, including improving public health, reducing stress, and strengthening social ties. While these benefits have considerable direct and indirect economic value, Papers I and II show that instrumental, tangible, and ecological values are favoured. In Paper II, urban green space advocates have struggled to raise the status of green space policies by promoting health and health-related costs and the capitalization of green space values. Meanwhile, the core of the biophilia concept is the emotional and intuitive value of nature. In this way, biophilic urbanism can be seen to reject a division between anthropocentric and ecocentric perspectives by giving humans, nature, functions, and emotions equal importance. The spatial and material properties of urban green space are stressed, as many of the derived benefits are related to trees and abundant vegetation. While the spatial properties of values and benefits must be considered in planning practices, so must social and procedural dimensions. The realization of public urban green spaces is therefore far more complex and in need of long-term commitment that involves more than just two-dimensional green markings on a planning map. Urban green space can occupy both private and public land, but urban parks are also one of the most prominent public spaces. In the urban greenery literature, public space, green space and open space are often used synonymously. However, with increased privatization of public space, this also becomes a pressing issue for urban green space. Papers II and IV analyse conceptualizations of publicness through the lenses of design, ownership, and management. While neoliberal governance of urban green space is characterized by the involvement of private actors and volunteers, traditional roles and responsibilities are challenged.

Further planning implications for a better inclusion of well-being values and benefits of urban green are the use of classifications, concepts, and language. While Paper I shows that concerns arose in the public consultation regarding the ‘parkification’ of nature, these concerns are rationalized by the official planning program. In Paper II, the concept of biophilia is considered to be confusing by both planners and the general public. As shown in the study, the role of green space in urban planning and design requires problematization and enhancement, i.e., nature or the ‘green’ is not something in between the built, the non-built passive urban environment, but can play active roles in urban processes and transformations. As discussed above, classifications, terminology, and concepts are influential and never value-free. Functions ascribed to public urban green space, as well as its spatial and material properties, are mirrored through analytical perspectives. The professional planner, the everyday user, the community organization, the politician, and the developer are all embedded in local, professional, and relational mind-sets. Spaces are perceived as a result of one’s point of view, giving them multiple identities. The High Line can equally be the destroyer of the social fabric of a neighbourhood, a beloved park, an economic driver, and a tourist attraction. In the same way, parklets are a pragmatic and engaging response to a need for public urban green space, as well as a street beatification, consumer attractor, or even a sleeping place.

Even if the promotion of public urban green space is central in this study, the analysis of the four cases shows that *planning practices of greening* are also *planning practices of greying*. Growing cities and densifying cities often mean less green space, at least per capita, when the urban population grows. More users also mean increased pressure on management, and decreased public funds will lead to new forms of management, including actors not traditionally involved in public urban green space provision. At the same time, there is an increasing recognition of the importance of public urban green space, for well-being, as a competitive advantage, and as an urban building block. The study shows that challenges for contemporary public urban green space can be conceptualized through the complex interrelationship between struggle over urban floor space, political narratives in urban renewal as well as branding and perceptions of publicness. *So, is there room for green in the dense city?* Even if the dense city has the potential to create more liveable, social and energy-efficient urban environments, density in itself must be problematized and sensitive to local needs and wishes. For public urban green space, re-use of infrastructure, symbolic shifts from grey to green, innovative approaches, and integrated policies can safeguard and support public urban green space. Most importantly, however, recognizing green as an essential urban element

means that the conflict between dense and green is never about *if* or *where*, but rather about universal access, connectivity, design, and ecological functionality.

7.4 Contributions and Concluding Remarks

This study contributes to a growing literature on sustainable and green cities, with insights on connections between narratives of nature, materialized urban greenery projects, and conceptualizations of functionality of nature in urban planning and urban design. From the post-industrial, pristine flirting crafted wilderness of The High Line; the symbolic, but cosmetic, scrambling with planters and narratives of the greenness of parklets; the dualistic argumentations of natural values connected to quality over quantity of nature in a densifying and growing Stockholm; to the pragmatic, yet emotional and ambitious, conceptualizations of human nature in biohilic urbanism and green space planning in Birmingham. Gentrification, publicness, and production and construction of public space, densification as a hegemonic sustainable urban form, and policy meta-narratives are central themes in urban studies. As shown in this study, however, nature and urban greening can play an active role in these processes. The conclusions show that integrated policies and understanding public urban green space as explicitly *urban* spaces can help to promote green space in the dense city, advocate for the importance of both actual and perceived publicness, and underscore the complexity inherent in planning, providing and managing spaces with multiple uses, functions, and forms.

The underlying motivation for this study has been to discuss integrated approaches that acknowledge the need for long-term commitment and inspire further critical inquiry regarding the nature and challenges of public urban green space. For integrated policies, the cases showed both theoretical and practical potential. In Birmingham, green space policies have been connected to health policy, i.e., although budget priorities for green space decreased, health was on the top of the agenda. This identified the potential for economizing health budgets through proactive green space investments. Also in regard to city branding, urban green space is found to be an underused potential, especially for the well-being of both residents and visitors. The objective to facilitate discussions among decision-makers and planners at several scales has been pursued through highlighting the spatial and material properties of well-being aspects and public urban green space, as well as emphasizing the conceptual pluralism related to these spaces. Acknowledging existing complexities and potential challenges is an

essential step towards the promotion and provision of public urban green space.

Connecting public urban green space to processes of gentrification and branding has shown the active role that these spaces play in political processes. In addition, further classifications and conceptualizations of these multi-functional, diverse spaces have revealed the plurality in spatial and material manifestations of these spaces. Reflecting on the theoretical framework, the results of the cases show that there are many more connections between the theoretical approaches. In Stockholm, urban green space planning has a close connection to branding strategies; whereas, in San Francisco, the relationship between parklets and gentrification presents an interesting topic. These areas could be pursued in future research.

Ultimately, each approach and study possesses its own drawbacks, and pursuing integrated approaches and problematization of public urban green space could have been done in numerous other ways. While the cases complemented each other, their divergent spatial, legal, and political contexts have prevented comparative analysis. The delimitation to focus on well-being aspects of public urban green space, e.g., social and psychological, has been critical to strengthen the discussion of these aspects, but is also difficult to separate from other aspects, especially ecological ones.

7.5 Looking Ahead

Relationships between the city and nature have been discussed as long as cities have existed. However, with the pressing need for sustainable societies combined with the current pace of urbanisation, elucidating the many roles of nature and green space in our cities constitutes a crucial issue. The built environment influences its surroundings during its entire lifespan and beyond. Although these four cases represent contemporary, influential urban green space conceptualizations, many other perspectives could have been adopted to investigate these relationships.

A majority of the world's human population today live in urban areas, but cities are also the home of many non-humans, animals, plants and lifeforms ranging from the smallest germs in our sewers to majestic old trees. Acknowledging the interrelationships between cities and nature, the built and the non-built, humans and non-humans is crucial in a system or network approach – it gets complicated and complex but it also opens up potential for imagination. Acknowledging urban green space as inherently urban

opens up discussions of roles, functions and modes of governance of urban spaces – without a division between urban or urban green spaces. Important for future research is therefore to discuss how these different urban spaces are contributing to well-being, are available, accessible and inclusive as well as how they connect to global and local environmental challenges. *How can the popular tactics of green roofs, green walls and urban agriculture support the greening of cities? How to support new and innovative ways of creating urban green space for all, and not risk it becoming flagship, high profile solutions for the already privileged? We also need to discuss if leading ‘green cities’ are actually ‘green’, or is ‘greenness’ measured with ‘non-green’ criteria? Also, in urban green planning, do all stakeholders understand green space in similar ways, if not, how can parallel, conflicting and divergent understandings be interlinked?*

While the findings of this study are located in a Western context, the discussions in this study can also be relevant in other contexts. The high profile of each case makes them popular examples of best practice, and their centrality in international networks of influential cities indicates a cross-cultural relevance. While sensitivity to local context is an important consideration, the adaptation of the public urban green space discussion outside of a Western perspective offers an interesting subject for further research.

By showing that urban green space projects and green structure plans are social, material, and discursive constructions – inherently connected with governance, planning goals, and everyday life – this study calls for integrated approaches to urban planning that acknowledge the many roles of nature in cities. Planning practices of greening are closely interlinked with planning practices of greying – and the challenge here is to create green urban environments supporting well-being, supporting ecosystems, and supporting a more sustainable society for all.

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8 References

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