

Chapter 5

Contesting longstanding conceptualisations of urban green space

Meredith Whitten

Abstract

Ever since the Victorian era saw the creation of “parks for the people,” health and wellbeing benefits have been considered a primary benefit of urban parks and green spaces. Today, public health remains a policy priority, with illnesses and conditions such as diabetes, obesity and depression a mounting concern, notably in increasingly urbanised environments. Urban green space often is portrayed as a nature-based solution for addressing such health concerns. In this chapter, Meredith Whitten investigates how the health and wellbeing benefits these spaces provide are limited by a narrow perspective of urban green space. Whitten explores how our understandings of urban green space remain rooted in Victorian ideals and calls into question how fit for purpose they are in 21st-century cities. Calling on empirical evidence collected in three boroughs in London with changing and increasing demographic populations, she challenges the long-held cultural underpinnings that lead to urban green space being portrayed “as a panacea to urban problems, yet treating it as a ‘cosmetic afterthought’” (Whitten 2019b, p. 18).

5.1 Introduction

In 1840, a 21-year-old Queen Victoria received a petition from 30,000 residents of London’s East End asking for royal consent to build a park amongst the overcrowded, neglected and unsanitary slums. Observing that the congested district of Tower Hamlets had a population “exceeding 400,000 souls, nearly double that of any City or Town within the British Dominions,” the petition laid out its case for creation of a public urban green space to the monarch:

...these Poor People, closely crowded in confined districts, have no open spaces in the vicinity of their humble dwellings for air, exercise or healthful recreation; circumstances which produce the most painful effects on their physical and moral condition” (Poulsen 1976, p. 18).

The petition to the queen was successful and followed by an Act of Parliament in 1841. The growing support for establishing a green space, open to people of all classes, in London’s East End was fuelled by Victorian ideas that “nature, like art, was thought to have a morally beneficial influence as well as recuperative powers” (Reeder 2006, p. 43). Victoria Park became the first publicly funded, publicly accessible park built in London specifically for local

residents and communities, thus ushering in the Victorian public parks movement in the British capital.

Today, Victoria Park, which is the largest green space in in the London borough of Tower Hamlets, is described as the “crown jewel” of parks and green spaces across the East End (Kvist 2011; Fig. 5.1 and 5.2). Born out of Victorian liberalism, public parks and green spaces form a highly visible part of the city’s urban fabric and continue to be lauded as the “lungs of London” (Reeder 2006, p. 42). They also are central to the city’s identity, as the recent campaign to designate London as a National Park City illustrates (LNPC 2015). Indeed, 47 percent of London is considered green, with 33 percent of this space being vegetated green space, according to surveyed habitat information, and an additional 14 percent is estimated to be vegetated private, domestic garden green space (LNPC 2015; GiGL 2015). London’s boroughs have designated 18 percent of Greater London as public open space (GiGL 2015).

Fig. 5.1 Victoria Park



Despite the perseverance of the Victorian idea of publicly funded, publicly accessible green spaces over the past 175 years, urban green spaces have recently been portrayed as under threat, with headlines proclaiming, “London’s parks ‘could become inaccessible to the public’” (BBC 2015) “England’s parks and open spaces have lost £75m in cuts since 2010” (Carrington 2013) and “‘Time running out’ for UK parks, government told” (Taylor 2018). In part, this reflects differing – and, at times, conflicting – perspectives on urban green space. Urban green space is provided for a long list of reasons, including sport and recreation (Hillsdon et al. 2006), enhanced economic competitiveness (Panduro and Veie 2013); air and water filtration (Heidt and Neef 2008); flood control and prevention (Zhang et al. 2012); and social cohesion (Peters et al. 2010). Such a wide-ranging list means conflicting demands on urban green space can exist, and this can lead to conflicting approaches to green space management.

Fig. 5.2 Victoria Park fountain. (Photo by Nicola Dempsey).



Different discourses around green space also reflect the changing context in which green space in cities is provided. The setting in which London's urban green spaces exist has changed considerably since the Victorian era, and even within the past several decades. In 2017, London's population stood at an estimated 8,835,500, the largest in its history (GLA 2017). Between 2001 and 2011, the city's population grew 11.6 percent, more than any

region in England (ONS 2012). London also is significantly more densely populated than other urban areas in the UK; even the least-populated London borough – Bromley – is more than five times denser than the England and Wales average (ONS 2012; GLA 2018). Although London has the 69th-largest urban footprint, by land area, of cities with at least 500,000 residents in the world (Demographia 2018; GLA 2018), its reach stretches far beyond its administrative borders, with 18 percent of London workers commuting from outside the city’s boundary (GLA Economics 2017). London residents also are younger and more diverse than the rest of the country, with an average age of 36.0 years, compared to 40.1 years across the UK, and more than one third (36.6 percent) of residents born outside the UK, compared to 13.3 percent across Britain (GLA 2017). Thus, contemporary London continues to experience urban changes and, as such, continues to feel the impacts of urbanisation. Such growth will be challenging for efforts to provide and manage urban green space in the British capital.

While vulnerable and inconsistent funding is a factor in the precarious position of parks and green spaces – especially given the recent era of austerity in Britain (Whitten 2019a) – this chapter goes beyond the challenge of funding to instead explore whether the green space being provided and managed remains fit for purpose in 21st century London.

5.2 Measuring Fitness for Purpose

The research discussed in this chapter stems from a project that aimed to determine the primary influences on how contemporary urban green space is delivered and managed in Inner London, particularly given the city’s increasing population. Data for the research called on in this chapter was collected using interviews, site observation, archival research and document review. The primary method involved conducting 50 in-depth, semi-structured interviews with three general groups: local authority and other government officers; developers, registered social landlords and consultants; and representatives from charities and nonprofit organisations, including user groups and “friends of the park” organisations. Of the 50 interviews, 23 were with local authority officers and staff from other public-sector agencies; five were developers, registered social landlords or planning consultants; and 22 were from charities, community organisations and user groups. Questions asked of respondents included:

- What do you think is the borough’s goal regarding green space?
- What do you see as the borough’s/organisation’s future role regarding urban green space?
- What/who influences decisions about urban green space?

- What are the biggest pressures or constraints on green space in the borough? Do you think the way green space is provided is changing across London? If so, how?

The research was based in three Inner London boroughs: Islington, Tower Hamlets and Wandsworth, although several interview respondents, such as representatives of charities or government agencies, provided a wider, multiborough perspective. These three boroughs were selected based on analysis of the population density and residential development across all 33 London boroughs (GLA 2011a,b). Islington, Tower Hamlets and Wandsworth each ranked high in both categories, indicating they are dense boroughs continuing to get denser. Thus, green space managers in these boroughs face growing pressures to provide green space to more people in less space. Interviews were recorded and transcribed, and a coding framework based on emergent themes was developed. These codes were applied to the interview data using NVIVO software. Prominent themes that emerged from the data include: importance/value of green space in urban areas; history of parks and green spaces; changes in population and density; sustainability; health and wellbeing; sport, leisure and exercise; use conflict; internal governance; and green infrastructure.

5.3 Unchanging Rationales

Although lifestyle and population changes mean there is a very different set of London park users today, the rationale for providing urban green space remains largely unchanged from when the Victorians established public green spaces nearly two centuries ago. The concept of what urban green space is and what it is for has endured, even though the urban context in which London's green spaces exist has changed considerably since "Vicky Park" welcomed its first users in 1845.

Islington, Tower Hamlets and Wandsworth councils each specifically refers to the role of green space for health, leisure, biodiversity and quality of life in planning and policy documents. For example, in discussing open space and the natural environment, Wandsworth's Core Strategy states that the borough's open spaces, including green spaces, "are important for both formal and informal recreation, physical activity, sport and play, providing playing fields, walking and cycling routes" and "also play an important role in the delivery of broad government objectives," including improving residents' health and wellbeing (Wandsworth Council 2016, p. 37). Similarly, respondents consistently mentioned physical and mental health and wellbeing, leisure and recreation, and quality of life as benefits of urban green space. Respondent 11 (senior staff, national charity) highlighted this linkage of current justifications for providing green space to the Victorian origins of public

green spaces: “In a sense, the issues of that time [the Victorian era] are very similar to the issues we still have today.”

5.3.1 Connection to health

The 19th-century argument for providing publicly accessible urban green spaces was grounded in health concerns, as public health was a major issue at that time, with a particular emphasis on the health of the urban poor (Poulsen 1976; Cranz and Boland 2004; Clark and Jauhiainen 2006; Brück 2013). Worry about diseases such as cholera, typhoid and smallpox, particularly in urban areas, dominated public-health debate throughout the century (Gaskell 1980; Malchow 1985; Brown 2013). Although the era lacked scientific evidence supporting the role of green spaces in fostering a healthy environment, these spaces were thought to help “cleanse cities by opening them to purifying sunlight and air” (Malchow 1985, p. 99).

Social and sanitary reformers, such as Octavia Hill and J.C. Loudon, used the squalid conditions and lack of access to nature in the East End to highlight the threat of “a disease mist or miasma” hanging over crowded urban areas and to argue for the provision of urban green space to serve as London’s lungs (Reeder 2006, p. 42; Dempsey et al. 2012). Public-health expert William Farr’s verdict about the potential health impacts of green space was meticulous: “A park in the East End of London would probably diminish the annual deaths by serval thousands ... and add several years to the lives of the entire population” (Poulsen 1976, p. 16).

Today, the health benefits of urban green space continue to be a prominent reason for maintaining existing spaces and developing new green spaces accessible to the public (see GLA 2011b, 2017d; Esbah et al. 2005; Baycan-Levent et al. 2009; DCLG 2012), and respondents frequently referred to the connection between health and urban green space. Respondent 15 (planner, Tower Hamlets) noted that “open space is seen as absolutely critical to health,” while respondent 11 (senior staff, national charity) said in the near future physicians routinely would prescribe time spent in the park instead of medication for some illnesses and conditions because of the health benefits derived from green space (Fig. 5.3). Indeed, social prescribing has already been implemented in some boroughs, such as Richmond-Upon-Thames, with general practitioners “prescribing outdoor activity as a medical treatment rather than a handful of pills” (APSE 2016; Richmond CCG 2017). Respondent 46 (senior staff, national charity) observed that public health is a major reason green space has risen up the policy agenda, reflecting the attention the Victorians gave it:

“Public health has renewed interest in the wider determinants of health and that’s led to a renewed interest in green spaces. It has gone full circle.”

Indeed, health concerns rank high among local, regional and national policymakers and the connection between health and urban green space is an area of increasing research (Maas et al. 2006; Lee and Maheswaran 2011). In its 2014 briefing, “Local action on health inequalities: Improving access to green spaces,” Public Health England commissioned research, conducted by the UCL Institute of Health Equity, to provide evidence regarding how improving access to green space leads to improved health of local communities (PHE 2014). The National Planning Policy Framework addresses protection of open space in a section called “Promoting healthy communities,” noting that “access to high-quality open spaces and opportunities for sport and recreation can make an important contribution to the health and wellbeing of communities” (DCLG 2012, p. 18). Similar statements connecting improvements in health to green space provision are found in local authorities’ core strategies and other planning documents.

Fig. 5.3 The London Borough of Redbridge offers organised weekly “walking for health” opportunities in many of its green spaces, such as Valentines Park in Ilford.



While the Victorians were predominantly concerned with the working class having access to fresh air and exercise to ward off diseases that spread from cramped living conditions, the health concerns that invoke green space use today largely relate to a 21st-century stressful, inactive lifestyle (Chiesura 2004; Pincetl and Gearin 2005). “We’ve got our own health problems in the 21st century. They’re different problems [than in the 19th century] – they’re long-term chronic illnesses rather than infectious illnesses” (respondent 46, senior staff, national charity). Addressing obesity and diseases exacerbated by it, such as diabetes, as well as the impact of stress on physical and mental health, sits high on the policy agenda (Barton et al. 2009). As a result, local authorities increasingly tie their justifications for providing green space to their policy goals to improve individual health and to develop healthier communities.

5.3.2 Leisure and Recreation

Closely connected to health, leisure and recreation form another key justification for maintaining urban green space as inherited from the Victorians. For the Victorians, a “main use of the open spaces was for sports” (Conway 1991, p. 191). In 2017-18, the most common reason English residents visited the natural environment was for health and exercise; the second-most common reason was to walk the dog (Natural England 2018). However, this varies amongst different groups. For example, the most common reason people aged 16-24 gave for visiting the natural environment is to spend time with friends (Natural England 2018). Forty-nine percent of natural environments visited in 2017-18 were in a town or city (Natural England 2018). Nearly all interview respondents referred to sport and recreation as a contemporary reason for continuing to deliver and manage urban green space, supporting Sandström’s (2002) finding that recreation traditionally has been the primary role of urban parks and green spaces. Similarly, through analysis of open space plans for London between 1929 and 1976, Turner (1995) demonstrates the primacy of recreation over environmental services in these spaces. The emphasis on recreation in green space is highlighted in urban areas, such as London, where the amount of green space per capita and total amount of green space is constrained by development and population density. Several respondents said Inner London local authorities cannot keep up with demand for sports in their green spaces. For example, respondent 18 (strategy officer, Tower Hamlets) said sport and recreation use easily could dominate the borough’s existing system of green spaces: “We’re never going to be able to provide enough football pitches for everyone to be in a league and do what they want to do ... every park in the borough would have to be plastered with football pitches.”

Giles-Corti et al. find that “a disproportionate amount of community public open space is zoned for organized sports” (2005, p. 174). Respondent 11 (senior staff, national charity) agreed and said this sport provision occurs at the expense of other types of activities: “Sporting interests are looked after far better than other open space interests. The importance of informal, casual recreation and what it might bring in terms of general health, including mental health, is far less developed.” Although efforts to incorporate opportunities for recreation and fitness beyond organised sports, such as green gyms, do occur, formal, structured sport continues to pervade boroughs’ green spaces. This illustrates the difficulty of connecting green space and health beyond the traditional forms of leisure and recreation and this, then, influences the types of green space provided, ultimately reinforcing Victorian visions of green space. Indeed, with decreasing green space per capita, but an increasing emphasis on health through sport and recreation, there is tension between councils’ ability to provide adequate green space and their increased emphasis on connecting their wellbeing and green space strategies. Yet, England residents cited relaxing and unwinding, enjoying fresh air or pleasant weather, and enjoying the scenery as top reasons for visiting the natural environment (Natural England 2018). For adults with access to a private garden, the top 10 reasons for enjoying their gardens did not include sport or physical activity, other than for gardening and as a place where children can play (Natural England 2018). Instead, the reasons included enjoying plants, trees, wildlife and views.

5.3.3 Behavioural and Moral Wellbeing

For the Victorians, “physical health was inextricably linked to social and moral improvement,” and, thus, improving the moral behaviour of the working class also was a driving force behind providing public green spaces (Brück 2013, p. 207). Green space was important because natural areas were thought to “purify the spirit” (Brück 2013, p. 207). Publicly accessible urban green spaces were meant to provide an alternative to the working class’ rowdy activities, such as drinking and gambling (Brück 2013). In parks, which were intended for activities deemed acceptable such as walking or promenading, the working class would be exposed to the refined manners of the upper class (Olsen 1993; Taylor 1995; Reeder 2006). The spaces’ design further encouraged “polite forms of behaviour;” for example, “paths and railings defined where and how one could walk while shelters and seating were provided at those locations considered educational” (Brück 2013, p. 210).

Modern green space planners and advocates emphasise the impact of green space on mental health and wellbeing, as well, and this justification is evoked often in urban areas. Research shows that a prominent benefit of urban green space is its positive impact on mental health and psychological wellbeing and, notably, it can help combat stress and

anxiety (Bishop et al. 2001; Chiesura, 2004; Esbah et al. 2005; Choumert and Salanié 2008). Environmental psychologists maintain that contact with nature enables psychological restoration (Van Den Berg et al. 2007). Yet, research does not limit the benefits to large, rural spaces. Indeed, green walls, green roofs, street trees and other greening structures found within urban areas can have a positive impact on health (Mentens et al. 2006; Gill et al. 2007; Norton et al. 2015). Yet, such non-traditional spaces do not cater to traditional uses – one can't play organised sport on a green wall. Thus, they often are neglected in councils' decision making regarding green space planning. Indeed, green roofs and green walls often are seen as something the private sector provides and, therefore, are rarely incorporated into a council's green space strategies, even though they can provide public benefits. For example, a green wall can offer biodiversity enhancement and mental health improvement as a place for quiet reflection (Fig. 5.4).

Fig. 5.4 Birmingham Library rooftop garden



Today's focus on the health benefits of urban green space mirroring the rationale for establishing publicly accessible urban green spaces in the 1800s is, on the face of it, not necessarily surprising. Research increasingly shows positive effects of nature and urban greening on health conditions, from cancer (Porcherie et al. 2018) to depression (Miles et al. 2012). However, the parallels in rationale by today's proponents of green space with those of the Victorian era should be a concern here. This narrow adherence to Victorian green-space principles limits the ability of London's urban green spaces to adapt to modern needs, demands and demographics. Focusing on the past limits what green space can do for the future. Additionally, a narrowly conceived idea of green space overlooks the growing understanding of how, more broadly, green spaces' ecological services, such as biodiversity, affect urban health and wellbeing. Further, thinking about the connection of green space and health primarily in terms of recreation and leisure, neglects the social and economic benefits that green spaces provide which can contribute to the health of individuals and communities.

With their green space budgets decimated in recent years, local councils are quick to target new sources of funding. An understandable, but overzealous chasing of health-related funding threatens to distract green space planners and managers from conceptualising urban green space more broadly. Instead, the traditional approach is reinforced.

Although health is a contemporary policy priority, the conceptualisation of green space that drives present-day green space planning and decision making remains rooted in 19th-century thought. Ultimately, this limits the ability to think more broadly about what urban green space is, including what it can do, particularly in a more strategic sense, to create a healthier environment for city dwellers. For example, while recreation provides health benefits, so, too, does fostering biodiversity, preventing floods, and filtering pollutants from air and water.

5.4 Changing Cities

Approaching green-space management with Victorian-era principles is a concern as cities, such as London, continue to evolve. More than half of the global population – and 75 percent of Europe's population – now lives in urban areas (Bertram and Rehdanz 2015; UNFPA 2016). This rapid urbanisation matters for urban green space provision: London's green spaces must not only serve more people, but they must cater to changes in sociodemographic makeup, changing user preferences, and variations in contexts of the built environment and social interaction.

The three boroughs in this research were selected because of their rapid pace of change in population, demographics and development, although all 32 London boroughs and the City

of London have experienced population growth in recent years. Since a previous period of decay, from about 1939 to 1988, when London's population fell by 22 percent, the rapid pace of the city's growth and change has seen London transform "from a declining industrial city to its current status as an iconic centre of global financial and cultural flows," with people, jobs and economic activity returning to the capital (Butler and Hamnett 2009, p. 40; GLA Intelligence 2015).

Commenting on London's urban change, respondents discussed pressures on urban green space, notably pressure from expanding and changing populations, and increased housebuilding. Respondents identified the pace of population growth and the amount and density of development as challenges for delivering and managing urban green space in Inner London, with local authorities falling further behind in their green space planning targets, such as green space per capita. For example, in Tower Hamlets, the fastest-growing London borough, respondent 15 (planner) observed:

We've got a phenomenal increase in population, with a lot of new housing coming in. If you look at the census 2001 to 2011, we've gone up from about 210,000 to 260,000 in population, which is quite staggering. The issue that we're really grappling with is, how do you provide high-quality residential environments at really high densities? When you're building at high densities, you have a lot of flats with no gardens because they have balconies. So, it [urban green space] is absolutely essential in terms of liveability in Tower Hamlets.

Londoners also are changing culturally and socially and this puts pressure on the city's green spaces. In 2017, 40.1 percent of Inner London residents were born overseas, a 48 percent change from 2001 (GLA 2017). International in-migration has led to cultural changes in London and this has resulted in changing usage patterns in and demands on London's green space (Butler and Hamnett 2009; Özgüner 2011). Indeed, "different cultures have different value systems and relationships with nature" (James et al. 2009). Respondent 11 (senior staff, national charity) added: "As demographics change and as population profiles change, then the use of an open space changes. If you've got 35 percent of a community from a particular background then it makes no sense at all that they should conform to something which isn't standard for them." Thus, delivering and managing urban green spaces for London's changing demographics and cultural mix becomes an increasingly "challenging task" (Özgüner 2011, p. 617).

In Tower Hamlets, where more than half (54 percent) of the borough's population comes from black and minority ethnic (BAME) groups (TH 2013; GLA 2017), respondent 39 (green space staff) said, "For us, other than the budget issue, the main issue is catering for the whole diaspora of people we have wanting to do different things in our parks and the different expectations they have for their green spaces. That's where we find a lot of conflict arises." Also in Tower Hamlets, respondent 24 (senior staff, housing association), discussed green space use by the sizeable and growing Asian population: "They will use pocket parks in a different way to other communities. They love growing their own food, so their gardens are generally almost turned over to agriculture, in a way."

At the same time, the age of Londoners is changing. London's over-65 population is projected to grow by 21 percent over the next decade (London Councils 2013). Meanwhile, some boroughs, such as Tower Hamlets, are experiencing a simultaneous increase in young residents (GLA 2017). The school-age population in London is set for 12 percent growth over the next decade (London Councils 2013). Both changes have ramifications for how urban green space is used and, thus, delivered and managed, including for wellbeing. The green space uses of different age groups can vary widely – and even conflict. This tension is compounded by councils' needs to provide for both younger and older populations within the same space, creating conflicting demands on green space designers and planners. Respondent 18 (strategy officer, Tower Hamlets) addressed the impact on younger residents:

We have a very strong and very sizeable football community, lots and lots of football clubs, very many of them, actually, young Bangladeshi men, and we just don't have enough football pitches. And we're never going to So, we have lots of young men, which has an impact on the kind of activities they may want to do in those parks, but given the limited space, we can't necessarily cater for that.

Meanwhile, respondent 45 (landscape architect, national charity) discussed the importance of features, such as benches, for older Londoners:

I put that seat there [in a green space] because it has a role to play for the elderly people who live in the top of this tower block because, actually, that is halfway between there and the shops. The reality is that's an important little rest break.... That's actually massively important as a key concept.

Spending on adult and child social care, by far the largest expenditure for London councils, made up 62 percent of budgets in 2017-18, compared to 54 percent in 2010-11 (Centre for London 2018). This trend is projected to continue, even without austerity measures (Whitten 2019b). As demands on statutory services, particularly adult and child social care, continue to increase with growing and changing populations, the ability to recover council funding for green space and other discretionary services seems unlikely, as respondent 23 (senior staff, national charity) said:

Museums, libraries, archives, archaeological services, historic environment records, archives, all that sort of stuff is going to get squashed and squashed and squashed. So, if they're [local councils] going to continue doing these kinds of services, they need to find new ways of funding them.

As their budgets shrink and development increases, local authorities are less able to take on management and maintenance responsibility for new – and even some existing – green spaces (Rupprecht et al. 2015; interview respondents). Yet, the increased demand for adult and child social care puts added pressure on the need to provide urban green spaces, as the broad range of benefits these spaces provide offer critical opportunities not just for improving health and wellbeing, but also for fostering social interaction, education and child development, and environmental services – all of which contribute to adult and child care and wellbeing and are necessary for urban resilience.

The impact of urban change on green space delivery and management in Inner London is still playing out, and a knowledge gap regarding “how the needs and preferences of the changing demographics align or not with current urban green space” exists, adding to the pressure on London’s green spaces’ ability to meet its wide-ranging contemporary demands (Rutt and Gulsrud 2016, p. 124).

5.4.1 Changing Environmental Awareness

Urban resilience has become a prominent policy and planning concern (Leichenko, 2011; Meerow, Newell and Stults, 2016). Although definitions of “urban resilience” differ across the literature, the concept can be used to “emphasize the idea that cities, urban systems, and urban constituencies need to be able to quickly bounce back from climate-related shocks and stresses” (Leichenko 2011, p. 164), particularly as processes of urbanisation have resulted in increased energy consumption (Rees and Wackernagel 1996; Steemers 2003), increased impermeable surfaces (Young 2010), disruption of the hydrological cycle (Andersson 2006), loss of habitat and biodiversity (Young 2010), and climate change (Young

2010; Hebbert and Jankovic 2013). Thus, cities often are blamed for contributing disproportionately to global greenhouse gas emissions and the catastrophic effects of global warming (WECD 1987; Dodman 2009; Young 2010). Research shows that green spaces counteract the negative impacts of urbanisation by providing critical environmental services (Jim and Chen 2003; Chiesura 2004; Choumert and Salanié 2008; Rutt and Gulsrud 2016). Thus, a renewed interest in urban green space coincides with an increased awareness about climate change and cities' contributions to mitigating its effects. Indeed, Wright argues that England's planning system is "now explicitly concerned with climate change" (2011, p. 1008). Green spaces are particularly important for mitigating impacts of climate change in dense urban areas, as they reduce carbon emissions and other harmful pollutants in the air, create cooler temperatures and reduce the amount of surface water runoff (Pincetl and Gearin 2005; Gill et al. 2007; Rutt and Gulsrud 2016).

Although present-day policies recognise that providing urban green spaces helps mitigate and adapt to the impacts of climate change, in practice this was not identified by respondents as a predominant reason why local councils deliver and manage urban green space (interview respondents; Swanwick et al. 2003; Pincetl and Gearin 2005; Gill et al. 2007). Indeed, while Chiesura (2004), Clark and Jauhainen (2006) and others argue that including urban green space throughout the city, including in the urban core, is a critical ingredient for the sustainable city, only seven of 50 respondents referred to mitigating climate change as a reason for providing for urban green space. This omission supports research that shows that "ecosystem services provided by urban greenspace are often overlooked and undervalued" (Gill et al. 2007, p. 116).

5.5 Discussion

Lauded for their economic, environmental and social benefits, urban green spaces are presented as a policy and planning panacea as urban change continues at a rapid pace and our understanding of the role urban greening plays in mitigating climate change and other negative effects of urbanisation evolves. Yet, in practice, urban green space is provided as an optional, ornamental amenity with inconsistent support and vulnerable funding. As a result, London's urban green spaces remain "frozen in time" (respondent 2, senior staff, national charity), with a 19th-century solution being used for 21st-century problems. As such, there are missed opportunities to use green space as an effective planning tool to provide the strategic connectivity and multifunctional infrastructure identified as essential for urban sustainability.

This research identifies three broad reasons for this paradox of urban green space: a focus on a rural ideal, inadequate planning designations and rigid, siloed governance structures.

5.5.1 Perseverance of 19th century rural ideals

The environmental value of green space in an urban setting was not the Victorians' primary focus when they created publicly accessible urban parks in Britain and, as present green space justifications mirror those of the Victorian era, the environmental benefits of London's urban parks are not the primary focus today, either. Instead, a cultural and policy fixation on the "rural ideal" explains why "increased understanding of the ecosystem services provided by urban green space has not been adequately integrated into the management process" (Malchow 1985, p. 97; Young 2010, p. 314). Crazz and Boland highlight the disconnect between Victorian ways of thinking about urban parks and more modern uses: "Historically, urban parks responded to social problems and expressed various ideas about nature, but they showed little concern for actual ecological fitness" (2004, p. 102).

The 19th-century perspective of green space was rooted in Victorians' disdain for urban life and their reverence for the idealised, virtuous and superior countryside, and this perspective heavily influenced the establishment of public parks and green spaces as a counterpoint to industrialisation (Conway 1991; Gabriel 2011). The Victorians subscribed to the belief that "physical, mental and moral decay were inseparable and intimately linked to urban life" (Malchow 1985, p. 109). As such, cities were considered "the antithesis of good living environments" (Dempsey 2009, p. 316). The response was to bring the countryside into the city, simulating the country for those urban dwellers – namely, the working class – who could not flee the corruptive influences of the city for the virtuous and therapeutic countryside.

In creating public parks and green spaces, the Victorians established the idea that, by replicating an idealised version of the countryside within an urban area, urban green spaces offered an essential retreat from the city to the physically and morally healthier countryside. Exposing the working class to the fresh air and "ideals of beauty" of the countryside would improve their physical health and lead to the poor and working class becoming "cultivated" (Brück 2013, p. 204). These spaces would provide the working class with places for "suitable" recreation and, thus, they would become "thrifty, industrious, docile and moral" (Conway 1991, p. 34; Brown 2013). As such, "the main trends of Victorian town-planning and architecture reflect, on the whole, a characteristic insistence on designing the urban scene in rural terms" (Hulin 1979, p. 17). These beliefs formed the foundation for what became England's public park movement – a movement that since has been exported beyond Britain and has influenced park and green space planning, development and

management across the world. Thus, the Victorian concept of green space is visible well beyond Britain's borders (Fig. 5.5).

Fig. 5.5 The Sabarmati Riverfront Park in Gujarat, India adheres to some of the principles of the Victorian park such as lawns which arguably inappropriate give the extensive maintenance and watering required in the hot and humid climate (Photo by Nicola Dempsey).



Respondents repeated this theme of bringing the countryside into the city. Respondent 35 (green space staff, Tower Hamlets) illustrated this by describing how “the purpose of green space is to encapsulate the countryside.” Urban green spaces, respondents said, provide an escape from Inner London, allowing Londoners to feel as if they are no longer in the city, but instead have been transported to the countryside. Such comments tie directly to the Victorians’ “rural ideal” and exemplify how the concept of urban green space as countryside in the city remains embedded in urban planning today (Malchow 1985, p. 97; Gabriel 2011). This perpetuates the idea that the city is corrupt, polluted and generally not good for us, hence the need to escape it. This conflicts with broader, more contemporary, interconnected and multifunctional approaches to urban greening, including green infrastructure. Linking town and country is a potential outcome of the spatial connectivity that is a hallmark of the

green infrastructure approach. In other words, with green infrastructure, urban and suburban or rural spaces are connected, but are not the same; urban green space does not replicate the countryside, but instead complements it (Kambites and Owen 2006).

By grounding the foundation of the public green space movement in the belief that urban green space should replicate the countryside and reject the urban context of its setting, the Victorians created a powerful concept for green space that perseveres today (Hulin 1979). Walker and Duffield acknowledge this: “The myth of the rural arcadia fuelled the desire to reconstruct the countryside in town. The impact of this idea has been far-reaching and has influenced the approach to open space and to outdoor recreation even to the present” (1983, p. 2).

5.5.2 Planning Designations

How urban green space is defined – which occurs largely through informal and unofficial definitions – also contributes to limited understanding and harnessing of the benefits of urban green space experienced today. The definition of urban green space – or lack of a formal definition – perpetuates a traditional concept of and approach to green space. Having a vague or no definition could be conceived as providing flexibility, such is argued with the concept of sustainable development (Tate 1994). In practice, though, the definitional void reinforces historical ways of thinking about green space, enabling traditional ideas of urban green space to endure (Tate 1994; Wheeler 2000; Jepson 2001; Chiesura 2004; Benedict and McMahon 2006; Connelly 2007; Mell 2008; Slavin 2011; Wright 2011).

No single definition of urban green space – or even green space more generally – exists. This lack of clarity conflicts with planning strategies and policies that call for urban green space to be protected and enhanced. For example, at the regional level, the London Plan does not define urban green space, despite claiming that increasing green space in the capital is a policy priority (GLA 2016). Although guided by national and regional planning policy, local authorities are left largely to define the concept as they prefer. While this leaves space for local context to be factored, it also enables local councils to continue to provide green space in a traditional, unchanging way. Among respondents, the concept of urban green space was implicit – none elaborated on what they meant by or how they defined urban green space, with most substituting the term “park” for “green space,” underscoring how entrenched the Victorian construction of the concept remains today. Yet, the word “park” has been ambiguous from the beginning of the public park movement, with terms such as “park,” “garden” and “walk” used so “loosely” that “the type of open space and its accessibility could not be deduced from the terms ... used” (Conway 1991, p. 1, p. 11).

Despite widely varying roles with urban green space – such as biodiversity conservation, residential development and heritage protection – respondents all assumed that when they talk about green space, their audience inherently knows what they mean. This signifies an enduring and specific shared, tacit idea of what urban green space is, despite widespread recognition that green space has a broad range of benefits and can play multiple roles in support of the economically, environmentally and socially sustainable city (Chiesura 2004; Haaland and van den Bosch 2015).

By being everything to everyone, the concept of urban green space risks being an empty signifier, or a discursive element that has become “emptied of [its] actual content and provide[s] for the unity of the discourse” (Methmann 2010, p. 352). Policymakers, local residents, green space users and respondents all can argue in support of urban green space because it has no definition or defined concept and, thus, they advocate for their perspective. Yet, despite its ubiquity, if the concept of green spaces is “too elastic,” there is little “substantive to be said in their favour (or against them)” (O’Neill 2011, p. 137). As such, “ambiguous definitions” of urban green space have led to a hollow – and, in many regards, meaningless – label that everyone can support without any risk (see Cox 2004, p. 216).

5.5.3 Statutory Designations

Despite a cultural- and a policy-based emphasis on a rural ideal, applied in urban areas, providing urban green space has never been a statutory requirement in Britain. Even policies calling for urban greening to contribute to the UK’s statutory priority of combatting the adverse impacts of climate change are not statutorily prescribed. This demonstrates the lack of connection between thinking about urban green space as an optional amenity and thinking about the essential, multifunctional work these spaces contribute to urban resilience if they are recognised as “critical scaffolding” (Eisenman 2013, p. 298). Several respondents argued that the recent austerity-related cuts to green space budgets would not have been as deep if providing green space provision was a statutory requirement: “Because parks are not a statutory service, it has taken, some would say, more than its fair share of cuts” (respondent 44, green space staff, Islington).

Meanwhile, other respondents said designating green space provision as statutory would not change anything related to green space delivery and management unless statutory status came with stable and increased funding. Others said if green space was statutory, local authorities could be more assertive in requiring green space contributions from developers as a condition of planning permission. Without statutory teeth, the approach to urban green

space delivery and management remains a “cosmetic afterthought” to development (Department of the Environment 1996, p. iii). Respondents reiterated the belief that green space staff, budgets and resources are low-hanging fruit for decision makers looking to make cuts, with some saying that doing so was short-sighted. Respondent 22 (landscape architect, national charity) observed that reducing green space budgets “runs against a lot of the research about the benefits and the importance of open space, psychologically and for education and for health. I think it’s just that it’s an easy target.”

Despite government policies and planning strategies hailing the multifunctional benefits of green spaces that ultimately support other council-provided goals and statutory services, urban green spaces are not thought of as a core role of local authorities. This is a critical point about green space categorisation: green spaces are essential for meeting statutory objectives, but green spaces themselves do not merit statutory designation. Respondent 8 (regional planner) and respondent 9 (regional policy officer) argued that discussing the role of urban green space as green infrastructure, and not simply as recreation and amenity space, would demonstrate that green space is integral to London’s economic, environmental and social survival (see Gill et al. 2007). Yet London’s urban green spaces are not conceptualised as essential infrastructure that is part of the urban fabric, but rather as individual islands of countryside transported to the city.

Respondents said statutory services such as adult social care would always be prioritised above green space. In discussing council priorities, most respondents did not mention how green space relates to other council services, such as adult and child social care, and health and wellbeing, thus overlooking green space’s potential multifunctionality beyond merely amenity. Respondent 2 (senior staff, regional charity) was an exception:

It’s not a statutory service, so it doesn’t command the leverage for sustained funding. Housing, education, social services will all be top of the pile. ... But, you could argue that health and wellbeing is derived from parks even if you don’t use it, if you just look at it. There’s research that shows that’s enough.

While being a non-statutory service might seem to provide a level of flexibility to urban green space delivery and management, my research indicates being a discretionary service actually reinforces a traditional approach to urban green space, thus, holding the Victorian-inherited conceptualisation of green space in place instead of allowing the concept to shift as cities, cultures and societal awareness of the benefits of urban green space change. As such, green space continues to be conceptualised as an amenity, despite the work these

spaces can do for the contemporary city. This, again, harks back to the origins of public parks and green spaces. Despite the Victorians' recognition of the important role of green spaces – important enough to establish public parks in the first place – green space remained an amenity: something that helped make life liveable, but was not necessarily essential to life itself.

5.5.4 Governance Structures

A third reason urban green space does not realise its full potential relates to governance structures. In particular, the structures and processes of local authorities heavily influence the delivery and management of urban green space and, ultimately, urban resilience.

Within the past decade, local councils have experienced dramatic cuts to their budgets, primarily from sustained reductions in public spending stemming from austerity measures imposed by national government in response to the global financial crisis (Lowndes and Gardner 2016). The budget cuts to local governments have been intense, with a proposed £5.5 billion reduction in funding resulting in a 27 percent decrease from 2010-2011 to 2014-2015 (Lowndes and Pratchett 2012; Lowndes and McCaughie 2013; Platts-Fowler and Robinson 2016). The deepest cuts have hit discretionary services, such as provision and management of urban green spaces (NAO 2014; Brown and Wilson 2015; Centre for London 2018). Indeed, almost every local authority in Britain experienced some cut to its green space resources (HLF 2016). In London, local authorities saw an 18 percent decrease in spending on open space, which includes green space, including a reduction of more than 10 percent in 2014-2015 (London Councils 2015; LAEC 2016). Nearly every respondent described austerity-related funding cuts as a significant cause of the mounting pressure on green spaces.

Despite such deep cuts, local authorities remain the primary provider of publicly accessible urban green spaces (NAO 2006; James et al. 2009; Mathers et al. 2015; Dempsey et al. 2016; HLF 2016). Every local authority in London and the City of London Corporation owns and manages green spaces for public benefit, although how they do this varies widely. Typically, public parks and green spaces fall under the oversight of a culture and leisure team. For example, in Wandsworth, green space falls under Contracts and Leisure. Green space and planning may fall within the same broad directorate, such as Environment and Regeneration, as is the case in Islington. However, the parks team and the planning teams remain separate and discrete functional areas, with parks taking on responsibility for maintenance of green spaces for leisure and amenity and more contemporary urban greening activities, such as green roofs, green walls and street trees falling under other

functional areas, such as planning, environment or highways. Thus, other types of urban greening are often conceptualised as connected to development and infrastructure and as part of the urban fabric. Parks and green spaces, despite existing in the urban environment, are perceived as amenity spaces separate from the city and from development decisions, and are treated differently, with funding coming from different sources, policies disconnected in separate sections of planning and development documents, and oversight and management falling into different areas of a council's organisation.

5.5.5 Planning and Green Space

Respondents described a complicated, often uneven relationship between councils' planning and green space staffs. Respondent 2 (senior staff, regional charity) said, "There is a disconnect between parks people and policy and planning. There is a need for greater integration and communication. They [green space staff] are emasculated." Respondent 44 (green space staff, Islington) was blunt: "We have a difficult relationship with planning."

Green space staff manage day-to-day operations, interact with green space users and bear the brunt of green space budget cuts. Meanwhile, planners' focus on green space comes largely at the strategic planning level and during the individual planning application process. While some green space decisions are not planning related – the frequency with which to mow the grass, for example – many decisions are because they relate to land use or land management. In London, most planning decisions affecting urban green space are connected to development or regeneration, thus it is through planning that decisions about development and provision of or impact on green space primarily occur, making planning the prominent influence on the delivery of urban green space. Through the planning process, including imposing planning conditions, a council negotiates development's impact on existing green space and creation of new green spaces. With decision making resting predominantly in planning, the relationship between planning officers and green space staff becomes critical for green space staff's ability to influence how these spaces are provided.

The process to involve green space staff in planning and development decisions is generally similar across the three councils. The green space team is considered an internal consultee as are other functional teams, such as highways or housing. The planning officer handling a particular application decides whether to contact internal consultees. Green space staff do not review all planning applications, but rather respond when requested to do so by planning officers. As such, planners hold considerable power and green space staff must trust that planning officers consistently refer applications and do so at a stage in the planning process when green space staff can affect decisions. Respondent 31 (green space staff, Islington)

said, “Trying to get involved at the right stage can be hard,” while respondent 19 (green space staff, Wandsworth) observed that, “If the planner says there’s going to be an implication for green space or a new green space created or it’s got a biodiversity implication, then it should come through to us automatically, although we’re never entirely sure what their screening process is. And, so, the kind of regularity of that and the effectiveness of it fluctuates.”

As an internal consultee, some green space teams charge other council departments for their input through service-level agreements. Similarly, other departments, such as planning, charge green space for their services. Budget cuts and reduced staff across local councils affect how much two departments can afford to consult with each other. This leads to less collaboration, notably on smaller and more informal or incidental spaces, on which planning officers are less likely to consult. Additionally, it deters planning staff from expanding their approach to urban greening or green infrastructure to include the green space team. According to respondent 44 (green space staff, Islington): “I used to be able to ask [planning] all sorts of things, but now we’ve just stopped asking.”

Although each council has established a process to elicit input from green space staff on planning proposals, respondents described processes dependent not only on relationships between the two organisational areas, but also between individual planning and green space officers. Respondent 27 (green space staff, Islington) elaborated on this:

It all comes down to your relationship with the individual case officers. If you have a good relationship with the case officer, you have regular conversations and they incorporate your thoughts into the [officer’s] report. On other occasions, things happen and you think, ‘whoa, why didn’t we get told about this?’

Decisions about green space provision are largely shaped – and, in some instances, wholly determined – by council planning staff, as green space staff are seen as responsible solely for managing amenity issues in existing spaces. Respondent 31 (green space staff, Islington) said the primary decision-making authority that lies with that council’s green space staff relates to landscape maintenance of existing green spaces, with no responsibility relating to development. The demarcation of functions is key because it reflects and reinforces a silo mentality within local authorities (see Kambites and Owen, 2006). Organisational fragmentation is problematic for the delivery and management of urban green space, as nearly every department, from planning to health to education to housing, within a

local authority has a connection to providing, managing or maintaining a borough's green spaces.

Green space staff also work with staff in other functional areas of the council, such as housing, education and health, that have activities affecting green space. At the same time, these other teams also may be working with planning officers without involving green space officers. For example, a council housing department could work with its planning team on a project regarding green amenity space or a green roof on a council housing estate, without involving green space staff. Indeed, "departments often have overlapping responsibilities for parks, which can render the governance arrangements complex and fragmented" (Dempsey et al. 2016, p. 445).

With green space carved up and spread among different departments and responsibilities, a council's ability to conceptualise urban green space as strategic, interconnected and multifunctional is nearly impossible. Instead of having a single, strong voice advocating for urban green space, multiple smaller, weaker voices advocating fractured, separate purposes for urban green space exist within the organisation. This makes significant change difficult. This fragmentation affects how green space delivery and management is coordinated (James et al. 2009). Respondent 19 (green space staff, Wandsworth) said:

I feel sometimes like I'm pitching a battle with my lovely colleagues in sports development who want people to be more physically active because everybody is putting the same demand on the finite space. ... what tends to win is not what's good for that landscape as a green space through time, but what meets the political pressure now. There's a demand now to stop kids from being obese and give them sports pitches. People will put sports pitches in. If I'm not strong enough that means that might happen at the expense of biodiversity.

Respondent 27 (green space staff, Islington) expressed a similar concern:

We had a site that's being renovated and it had a well-established long-grass meadow that we conditioned had to be moved and maintained on site so it could be replaced somewhere within the development once it had been finished. The argument I heard [from planning] was, 'Oh, it won't work, it's dead, so we'll just have to replace it with some turf.' Their whole argument was around the fact that they needed this space for amenity provision because somewhere else in the planning

process someone had probably said to them, ‘You need to provide X metres squared of amenity space.’

Respondent 11 (senior staff, national charity) said fragmentation also exists among green space-related charity organisations, while respondent 2 (senior staff, regional charity) added that the fragmentation of green space management at the local level reflects disintegration at the national level:

[There’s an array of benefits] – environmental, economic, social, health – that’s linked to silos within central government because parks are under the DCLG [Department for Communities and Local Government], but it’s considered a cultural service by many. It doesn’t come under the Department of Culture, Media and Sport. It’s in a separate department. The two departments don’t talk to each other. Then you extend that argument to say health or education and, again, no dialogue. All those silos have their funding schemes, as well. And, you have exactly the same in local authorities.

This fragmentation makes it all the more difficult to provide multifunctional green spaces, as each department or area within a council focuses on their specific area of responsibility. With the smaller green spaces typically found in dense, urban areas, such as Inner London, providing multifunctional spaces becomes even more daunting. According to respondent 31 (green space staff, Islington): “We’ve got lots of small spaces, and high levels of user and resident involvement, which makes Islington a real challenge ... because they [parks and open spaces] are under an intensity of use and conflict of uses that are much harder to manage in small spaces.”

5.6 Conclusions

Multiple forces are at work that prevent London’s urban green spaces from meeting contemporary demands based on changing users, changing uses and changing awareness of the impact of urban nature on human and environmental health. Although London’s existing parks and green space network has functioned well for the purposes of amenity and recreation for nearly two centuries, green space design, delivery and management remain “stuck in a time warp” (respondent 2, senior staff, regional charity). Despite changes in population, cultural and sociodemographic makeup, the provision of urban green space has remained similar to the original 1800s, Victorian-era concept of what public green space is, how it should look and how it should be used. This can conflict with evolving understandings of how critical urban greening efforts are to combatting weighty issues stemming from 21st-century urbanisation and the serious, global impacts flowing from it.

Although council planning strategies refer to multifunctional use of green spaces, in practice, traditional uses related to health and amenity dominate. Conceptualising urban green space more broadly as multifunctional and interconnected – as green infrastructure – that provides a wider array of essential, critical services, such as flood control, urban agriculture, and air and water filtration, does not feature as prominently in planning and other decisions, even though such other services contribute to a healthier environment. Indeed, this is a prominent limiting feature of urban green space in London today: Other factors beyond the traditional uses of recreation, sport, leisure and quiet reflection contribute to health and wellbeing, but to realise this, green space must be thought of and managed in a more strategic, holistic, multifunctional way. This requires reorganising how green space is planned, designed and managed.

Delivering and managing urban green space with a narrow focus obfuscates the wider range of benefits that cities can derive from green space. In other words, health and wellbeing are connected to green space in broader ways than merely providing green gyms or social prescriptions. Managing green space for a wider array of benefits, such as flood prevention, air and water filtration, biodiversity, urban agriculture and education, leads to more resilient cities, which further supports improved wellbeing (Fig. 5.6).

Fig. 5.6 Parkland Walk is a local nature reserve and a Site of Metropolitan Importance for Nature Conservation in London which follows the former railway line. It demonstrates how a green space can be multifunctional, interconnected to other green infrastructure and provide environmental services that meet contemporary Londoners needs, while respecting the heritage of the site.



Although an understanding of the multifunctional benefits of urban green space “is reasonably well developed,” in practice this has not been well integrated into planning and development and other local authority processes (James et al. 2009). This ties to a broader perspective on the role urban green spaces can play in economic, environmental and social sustainability. To achieve this, a “paradigm shift” is needed to overcome the entrenched Victorian concept of urban green space as a “rural ideal” that currently exists, thus, allowing urban green space to be managed as a multifunctional, interconnected network of urban green spaces across the capital (GLA 2014, p. 43).

The role of urban green space as amenity remains strong, evidenced, in part, by the nonstatutory status of green space. Despite supporting a range of statutory services, from health to climate change to housing, green space continues to be provided as a discretionary service, making its status more as an ornamental postscript. To accurately reflect the critical role urban green spaces play in a range of essential services, such as clean air and water, physical health and mental wellbeing, flood prevention, and utilities and transportation corridors, green spaces – particularly those in urban areas – must be afforded statutory protection.

Our understanding of the benefits of urban green spaces for the environmental, social and economic sustainability of urban areas has progressed, and research increasingly shows the immense value urban green spaces provide to urban resilience. A key area is a growing understanding of how instrumental urban nature and urban greening efforts are to reducing greenhouse gas emissions and mitigating climate change. This, again, highlights how the Victorian approach to urban green space is too narrow for contemporary concerns, as the contribution of green space to environmental and ecosystem services and the mitigation of climate change was not a 19th-century concern. Today, however, climate change is a key priority for the health of individuals, cities and the planet. Green space must be managed for climate change mitigation – these spaces do not achieve that simply by existing.

Ultimately, to help urban green spaces move away from being merely a paradox and instead towards the panacea they are typically presented as, we must move beyond the Victorian ideal and acknowledge a new, 21st-century ideal for urban green space. Instead of being confined to a traditional idea and design of green space, with particular features and formal designation, the concept of green space should be more expansive and include urban greening efforts beyond the site scale that are increasingly likely to be provided in densely populated and densely developed urban spaces. This will incorporate green walls and green roofs, street trees, informal and incidental spaces, and notably small green spaces, highway verges, housing amenity green spaces, elevated green spaces, and spaces where the primary use is not recreation or where public access is not the priority. Urban green space must be treated as multifunctional and interconnected, encouraging different shapes and sizes, and recognising that green space will not be able to meet all user demands as population and development grow in amount and density across cities. Long-standing perceptions of what green space is and how it is delivered and managed must be challenged if Londoners are to truly reap the benefits of urban green space now and well into the future.

References

- Andersson E (2006) Urban landscapes and sustainable cities. *Ecol Soc* 11(1): art. 34.
- Arnold CL, Gibbons CJ (1996) Impervious surface coverage: the emergence of a key environmental indicator. *J Am Plann Assoc* 62(2): 243-258
- Association for Public Service Excellence (APSE) (2016) Written evidence submitted to Communities and Local Government Committee inquiry into public parks. <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/housing-communities-and-local-government-committee/public-parks/written/39504.pdf>. Accessed 15 June 2018
- Barton J, Hine R, Pretty J (2009) The health benefits of walking in greenspaces of high natural and heritage value. *J Integr Environ Sci* 6(4):261-278
- Baycan-Levent T, Vreeker R, Nijkamp P (2009) A multi-criteria evaluation of green spaces in European cities. *Eur Urban Reg Stud* 16(2):192-213
- BBC News (2015) London's parks 'could become inaccessible to the public'. <https://www.bbc.co.uk/news/uk-england-london-33205239>. Accessed 10 June 2018
- Benedict MA, McMahon ET (2006) *Green infrastructure: linking landscapes and communities*. Island Press, Washington, D.C.
- Bertram C, Rehdanz K (2015) The role of urban green space for human well-being. *Ecol Econ* 120:139-152
- Bishop ID, Ye WS, Karadaglis C (2001) Experimental approach to perception response in virtual worlds. *Landsc Urban Plan* 54:115-123
- Brown T (2013) The making of urban 'healthieries': the transformation of cemeteries and burial grounds in late-Victorian East London. *J Hist Geogr* 42:12-23
- Brown R, Wilson B (2015) Running on fumes? London council services in austerity. Centre for London, London https://www.centreforlondon.org/wp-content/uploads/2016/08/CFL3888_Running-on-fumes_short_paper_12.11.15_WEB-1.pdf. Accessed 22 June 2017
- Brück J (2013) Landscapes of desire: parks, colonialism, and identity in Victorian and Edwardian Ireland. *Int J Hist Archaeol* 17(1):196-223
- Butler T, Hamnett, C (2009) Regenerating a global city. In: Imrie R, Lees L, Raco M (eds) *Regenerating London*. Routledge, Abingdon, Ch. 3
- Campbell S, (1996) Green cities, growing cities, just cities? Urban planning and the contractions of sustainable development. *J Am Plann Assoc* 62(3):296-312
- Carrington D (2013) England's parks and open spaces have lost £75m in cuts since 2010. *The Guardian*. Available: <https://www.theguardian.com/environment/2013/nov/19/england-parks-spending-cuts>. Accessed 10 Jun 2018
- Centre for London (2018) The London intelligence. <https://www.centreforlondon.org/wp-content/uploads/2018/05/Issue-4-TLI.pdf>. Accessed 10 Jun 2018
- Cheng V (2010) Understanding density and high density. In: Ng E (ed) *Designing high-density cities for social and environmental sustainability*. Earthscan, London, pp 3-18.
- Chiesura A (2004) The role of urban parks for the sustainable city. *Landsc Urban Plan* 68(1):129-138

- Choumert J, Salanié J (2008) Provision of urban green spaces: some insights from economics. *Landsc Res* 33(3): 331-345
- Clark P, Jauhainen JS (2006) Introduction. In: Clark P (ed.) *The European city and green space*. Aldershot: Ashgate.
- Clarke, SE (1995) Institutional logics and local economic development: a comparative analysis of eight American cities. *Int J Urban Region Res* 19(4):513-533
- Clifford B (2016) 'Clock-watching and box-ticking': British local authority planners, professionalism and performance targets. *Plann Practice Res* 31(4):383-401
- Clifford B, Tewdwr-Jones M (2014) *The collaborating planner? Practitioners in the neoliberal age*. Policy Press, London.
- Connelly S (2007) Mapping sustainable development as a contested concept. *Local Env* 12(3): 259-278
- Conway H (1991) *People's parks: the design and development of Victorian parks in Britain*. Cambridge University Press, Cambridge
- Cox R (2004) The path-dependency of an idea: why Scandinavian welfare states remain distinct. *Soc Policy Admin* 38(2):204-219
- Cranz G (1982) *The politics of park design*. MIT Press, Cambridge, Massachusetts
- Cranz G, Boland M (2004) Defining the sustainable park: a fifth model for urban parks. *Landsc J* 23(2): 102-120
- Demographia (2018) *World urban areas, 14th Annual Edition: 201804*. <http://demographia.com/db-worldua.pdf>. Accessed 15 Jun 2018
- Dempsey N (2009) Are good-quality environments socially cohesive? Measuring quality and cohesion in urban neighbourhoods. *Town Plann Rev* 80(3):315-345
- Dempsey N, Brown C, Bramley G (2012) The key to sustainable urban development in UK cities? The influence of density on social sustainability. *Progress Plan* 77(3):89-141
- Dempsey N, Burton M, Selin J (2016) Contracting out parks and roads maintenance in England. *Int J Public Sector Man* 29(5):441-456
- Department for Communities and Local Government (DCLG) (2012) *National Planning Policy Framework*. <http://webarchive.nationalarchives.gov.uk/20180608095821/https://www.gov.uk/government/publications/national-planning-policy-framework--2>. Accessed 21 Aug 2018
- Department of the Environment (DoE) (1996) *Greening the city: a guide to good practice*. HMSO, London
- Dodman D (2009) Blaming cities for climate change? An analysis of urban greenhouse gas emissions inventories. *Environ Urban* 21(1):185-201
- Dunnett N, Swanwick C, Woolley H (2002) *Improving urban parks, play areas and green spaces*. Department for Transport, Local Government and the Regions, London
- Eisenman TS (2013) Frederick Law Olmsted, green infrastructure, and the evolving city. *J Plann Hist* 12(4): 287-311
- Erickson D (2006) *Metro green: connecting open space in North American cities*. Island Press, London
- Esbah H, Deniz B (2007) Effects of land use development on urban open spaces. *Appl Sci* 7(8):1138-1144

- Esbah H, Deniz B, Cook EA (2005) Isolation trends of urban open spaces. In: Proceedings of the ISPRS joint conference, Tempe, Arizona.
<http://www.isprs.org/proceedings/XXXVI/8-W27/esbah02.pdf>. Accessed 22 Jul 2016
- Fors H, Molin JF, Murphy et al (2015) User participation in urban green spaces – for the people or the parks? *Urban For Urban Gree* 14(3):722–734
- Gabriel N (2011) The work that parks do: towards an urban environmentality. *Soc Cult Geogr* 12(2):123-141
- Gaskell SM (1980) Gardens for the working class: Victorian practical pleasure. *Victorian Stud* 23(4):479-501
- Giles-Corti B, Broomhall MH, Knuiiman M et al (2005) Increasing walking: how important is distance to, attractiveness, and size of public open space? *Am J Prev Med* 28(2):169-176
- Gill SE, Handley JF, Ennos AR et al (2007) Adapting cities for climate change: the role of the green infrastructure. *Built Environ* 33(1):115-133
- GLA Intelligence (2015) Population growth in London, 1939-2015.
<https://files.datapress.com/london/dataset/population-change-1939-2015/historical%20population%201939-2015.pdf>. Accessed 15 Jun 2018
- GLA Economics (2017) A description of London's economy. Working paper 85.
<https://www.london.gov.uk/sites/default/files/description-londons-economy-working-paper-85.pdf>. Accessed 30 Jun 2018
- Greater London Authority (GLA) (2011a) Population by age, UK local authorities.
<https://files.datapress.com/london/dataset/census-2011-population-age-uk-districts/census-2011-population-5year-age-ukdistricts.xls>. Accessed 18 Jun 2018
- GLA (2011b) The London Plan: spatial development strategy for Greater London. [online] Available: <https://www.london.gov.uk/what-we-do/planning/london-plan/past-versions-and-alterations-london-plan/london-plan-2011>. Accessed 12 Apr 2012
- GLA (2013) Mayor launches community fund to help create his 100 'Pocket Parks.' [press release] 20 June 2013. <https://www.london.gov.uk/press-releases-5639>. Accessed 17 Nov 2016
- GLA (2014) London Infrastructure Plan 2050: a consultation.
<https://www.london.gov.uk/file/19038/download?token=1Zj5uQZf>. Accessed 26 Oct 2016
- GLA (2016) The London Plan: spatial development strategy for London consolidated with alterations since 2011.
https://www.london.gov.uk/sites/default/files/the_london_plan_2016_jan_2017_fix.pdf. Accessed 17 Aug 2017
- GLA (2017) London borough profiles. <https://data.london.gov.uk/dataset/london-borough-profiles>. Accessed 18 Jun 2018
- GLA (2018) Land area and population density, ward and borough. [online] Available: <https://data.london.gov.uk/dataset/land-area-and-population-density-ward-and-borough>. Accessed 8 Jul 2018
- Greenspace Information for Greater London CIC (GiGL) (2015) Key London Figures.
<http://www.gigl.org.uk/keyfigures/>. Accessed 7 May 2019
- Haaland C, van den Bosch CK (2015) Challenges and strategies for urban green-space planning in cities undergoing densification: A review. *Urban For Urban Gree*, 14(4):760-771

- Hebbert M, Jankovic V (2013) Cities and Climate Change: The Precedents and Why They Matter. *Urban Stud* 50(7):1332–1347
- Heidt V, Neef M (2008) Benefits of urban green space for improving urban climate. In: Carreiro MM, Song YC, Wu J (eds.) (2008) *Ecology, Planning, and Management of Urban Forests*. New York: Springer.
- Heritage Lottery Fund (HLF) (2016) State of UK public parks. https://www.hlf.org.uk/file/22227/download?token=7M-v0jWAeQUsWU522K-jUN8pCHxX-93_-GUt6Jao58E. Accessed 9 Sep 2017
- HLF (2017) Parks for people: application guidance. https://closedprogrammes.hlf.org.uk/pfp_application_guidance.pdf. Accessed 18 Aug 2018
- Hillsdon M, Panter J, Foster C et al (2006) The relationship between access and quality of urban green space with population physical activity. *Public Health* 120:1127-1132
- Holman N, Thornley A (2015) Backlash in the London suburbs: the local-strategic tension in multilevel governance. *Environ Plan C* 33(3):496-511
- Hulin J-P (1979) Rus in urbe: a key to Victorian anti-urbanism? In: Hulin JP and Coustillas P (eds) *Victorian Writers and the City*. Publications de l'Université de Lille, Lille
- James P, Tzoulas K, Adams MD et al (2009) Towards an integrated understanding of green space in the European built environment. *Urban For Urban Gree* 8(2): 65-75
- Jepson Jr. EJ (2001) Sustainability and planning: diverse concepts and close associations. *J Plann Lit* 15(4):499-510
- Jim CY (2004) Green-space preservation and allocation for sustainable greening of compact cities. *Cities* 21(4):311-320
- Jim CY, Chen SS (2003) Comprehensive greenspace planning based on landscape ecology principles in compact Nanjing city, China. *Lands Urban Plan*, 65: 95-116
- Kambites C, Owen S (2006) Renewed prospects for green infrastructure planning in the UK 1. *Plann Practice Res*, 21(4):483-496
- Knight C (1996) Economic and social issues. In: Jenks M, Burton E, Williams K (eds.) *The compact city: a sustainable urban form?* E&FN Spon, London, pp 114-121
- Kvist E (2011) Vicky Park voted capital's favourite park in national competition. *The Docklands & East London Advertiser*. <https://www.eastlondonadvertiser.co.uk/news/education/vicky-park-voted-capital-s-favourite-park-in-national-competition-1-1068489>. Accessed 4 Jun 2019
- Lee A, Maheswaran R (2011) The health benefits of urban green spaces: a review of the evidence. *Public Health* 33(2):212-222
- Leichenko R (2011) Climate change and urban resilience. *Curr Opin Environ Sustain* 3(3):164-168
- Lennon M (2015) Green infrastructure and planning policy: a critical assessment. *Local Environ* 20(8):957-980
- London Assembly Environment Committee (LAEC) (2016) Green Spaces - scoping note. https://www.london.gov.uk/sites/default/files/green_spaces_investigation_-_scoping_paper.pdf. Accessed 25 Feb 2017
- London Councils (2015) Spending Review 2015: London Councils' Submission to HM Treasury. London: London Councils. https://www.londoncouncils.gov.uk/sites/default/files/Policy%20themes/Local%20government%20finance/LC_Spending_Review01d.pdf Accessed 15 Apr 2018

- London Councils (2013) London's population. <https://www.londoncouncils.gov.uk/node/1551>. Accessed 15 May 2018
- London National Park City (LNPC) (2015) National Park City: a proposal to make Greater London the world's first National Park City. [http://s3-eu-west-1.amazonaws.com/nationalparkcity/\(Full+Tabloid+Design\)+Greater+London+National+Park+City+Proposal.pdf](http://s3-eu-west-1.amazonaws.com/nationalparkcity/(Full+Tabloid+Design)+Greater+London+National+Park+City+Proposal.pdf). Accessed 18 Jun 2018
- Lowndes V (2005) Something old, something new, something borrowed.... Policy Stud 26(3-4):291-309
- Lowndes V, Gardner A (2016) Local governance under the Conservatives: super-austerity, devolution and the 'smarter state.' Local Government Stud 42(3):357-375
- Lowndes V, McCaughie K (2013) Weathering the perfect storm? Austerity and institutional resilience in local government. Policy & Politics, 4(4):533-549
- Lowndes V, Pratchett L (2012) Local Governance under the Coalition Government: Austerity, Localism and the 'Big Society'. Local Government Stud 38(1):21-40
- Maas J, Verheij RA, Groenwegen P et al (2006) Green space, urbanity, and health: how strong is the relation? J Epidemiol Community Health 60:587-592
- Mace A (2018) The Metropolitan Green Belt, changing an institution. Progress Plan 121:1-28
- Malchow H (1985) Public gardens and social action in late Victorian London. Victorian Stud 29(1):97-124
- Mathers A, Dempsey N, Molin JF (2015) Place-keeping in action: evaluating the capacity of green space partnerships in England. Lands Urban 139:126-136
- Meerow S, Newell JP, Stults M (2016) Defining urban resilience: A review. Lands Urban Plan 147: 38-49
- Mell IC (2008) Green infrastructure: concepts and planning. Forum 8(1):69-80
- Mentens J, Raes D, Hermy M (2006) Green roofs as a tool for solving the rainwater runoff problem in the urbanized 21st century? Lands Urban Plan 77(3):217-226
- Methmann CP (2010) 'Climate Protection' as Empty Signifier: A Discourse Theoretical Perspective on Climate Mainstreaming in World Politics. Millennium: J Int Stud, 39(2):345-372
- Miles R, Coutts C, Mohamadi A (2012) Neighborhood Urban Form, Social Environment, and Depression. J Urban Health 89(1):1-18
- National Audit Office (NAO) (2014) The impact of funding reductions on local authorities. <https://www.nao.org.uk/wp-content/uploads/2014/11/Impact-of-funding-reductions-on-local-authorities.pdf> Accessed 10 Jul 2018
- NAO (2006) Enhancing urban green space. <https://www.nao.org.uk/wp-content/uploads/2006/03/0506935.pdf>. Accessed 15 Jun 2016
- Natural England (2018) Monitor of Engagement with the Natural Environment: Headline report. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/738891/Monitorof_Engagementwiththe_Natural_Environment_Headline_Report_March_2016to_February_2018.pdf. Accessed 11 Jun 2019
- Norton BA, Coutts AM, Livesley SJ et al (2015) Planning for cooler cities: A framework to prioritise green infrastructure to mitigate high temperatures in urban landscapes. Lands Urban Plan 134:127-138

- O'Neill O (2011) Social justice and sustainability: elastic terms of debate. In: Held D, Fane-Hervey A, Theros M (eds.) The governance of climate change: science, politics and ethics. Polity Press, Cambridge
- Office for National Statistics (2012) 2011 Census - population and household estimates for England and Wales, March 2011. [www.ons.gov.uk/ons/dcp171778_270487.pdf. Accessed 15 Jun 2018
- Olsen D (1993) People's parks: The design and development of Victorian parks in Britain by Hazel Conway [review]. *Victorian Stud* 36:491-492
- Özgüner H (2011) Cultural differences in attitudes towards urban parks and green spaces. *Landsc Res* 36(5):599-620
- Panduro T, Veie KL (2013) Classification and valuation of urban green spaces: a hedonic house price valuation. *Lands Urban Plan* 120:119-128
- Peters K, Elands B, Buijs A (2010) Social interactions in urban parks: Stimulating social cohesion? *Urban For Urban Gree* 9(2):93-100
- Pincetl S, Gearin E (2005) The reinvention of public green space. *Urban Geogr* 26(5):365-384
- Platts-Fowler D, Robinson D (2016) Community resilience: a policy tool for local government? *Local Government Stud* 42(5):762-784
- Porcherie M, Lejeune M, Gaudel M, et al (2018) Urban green spaces and cancer: a protocol for a scoping review. *BMJ Open* 8(2): 1-5.
- Poulsen C (1976) *Victoria Park : a study in the history of East London*. Stepney Books London
- Public Health England (PHE) (2014) Local action on health inequalities: Improving access to green spaces. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/355792/Briefing8_Green_spaces_health_inequalities.pdf. Accessed 9 Jun 2019
- Reeder D (2006) The social construction of green space in London prior to the Second World War. In: Clark P (ed) *The European City and Green Space*. Ashgate, Aldershot
- Rees W, Wackernagel M (1996) Urban ecological footprints: why cities cannot be sustainable – and why they are a key to sustainability. *Environ Impact Assess Rev* 16:223-248
- Richmond Clinical Commissioning Group (CCG) (2017) Social prescribing – just what the doctor ordered! <http://www.richmondccg.nhs.uk/your-health/social-prescribing>. Accessed 12 Apr 2018
- Rupprecht CD, Byrne JA, Ueda H et al (2015) 'It's real, not fake like a park': Residents' perception and use of informal urban green-space in Brisbane, Australia and Sapporo, Japan. *Lands Urban Plan* 143:205-218
- Rutt RL, Gulsrud NM (2016) Green justice in the city: A new agenda for urban green space research in Europe. *Urban For Urban Gree* 19:123-127
- Sandström U (2002) Green infrastructure planning in urban Sweden. *Plann Practice Res*, 17(4): 373-385
- Slavin M (2011) *Sustainability in American cities*. Island Press, Washington, D.C
- Stemmers K (2003) Energy and the city: density, buildings and transport. *Energ Buildings*, 35:3-14

- Swanwick C, Dunnett N, Woolley H. (2003) Nature, role and value of green space in towns and cities: an overview. *Built Environ* 29(2):94-106
- Tate J (1994) Sustainability: A case of back to basics? *Plann Practice Res*, 9(4):367-379
- Taylor HA (1995) Urban public parks, 1840-1900: design and meaning. *Garden Hist* 23(2):201-221
- Taylor M (2018) 'Time running out' for UK parks, government told. *The Guardian* <https://www.theguardian.com/environment/2018/jun/21/time-running-out-for-uk-parks-government-told>. Accessed 21 Jun 2018
- Thomas K, Littlewood S (2010) From green belts to green infrastructure? the evolution of a new concept in the emerging soft governance of spatial strategies, *Plann Practice Res*, 25(2):203-222
- Thompson CW (2002) Urban open space in the 21st century. *Lands Urban Plan* 60(2):59-72
- Tower Hamlets Council (TH) (2013) Ethnicity in Tower Hamlets analysis of 2011 Census data. https://www.towerhamlets.gov.uk/Documents/Borough_statistics/Ward_profiles/Census-2011/RB-Census2011-Ethnicity-2013-01.pdf. Accessed 15 June 2018
- Turner T (1995) Greenways, blueways, skyways and other ways to a better London. *Lands Urban Plan* 33(1-3):269-282
- United Nations Population Fund (UNFPA) (2016) Urbanization. <https://www.unfpa.org/urbanization>. Accessed 21 Aug 2018
- United Nations World Commission on Environment and Development (WECD) (1987) *Our common future*. Oxford University Press, New York
- Van den Berg AE, Hartig T, Staats H (2007) Preference for nature in urbanized societies: stress, restoration, and the pursuit of sustainability. *J Social Issues* 63(1):79-96
- Walker SE, Duffield BS (1983) Urban parks and open spaces – an overview. *Landsc Res* 8(2):2-12
- Wandsworth Council (2016) Wandsworth Local Plan: Core Strategy (adopted March 2016). http://www.wandsworth.gov.uk/download/downloads/id/11500/local_plan_-_core_strategy_adopted_march_2016.pdf. Accessed 12 Feb 2017
- Wheeler S (2000) Planning for metropolitan sustainability. *J Plann Educ Res* 20:133-145
- Whitten M (2019a) Blame it on austerity? Examining the impetus behind London's changing green space governance. *People Place Policy* 12(3):204-224
- Whitten M (2019b) Reconceptualising green space: Planning for urban green space in the contemporary city (Doctoral thesis, London School of Economics and Political Science, London, U.K.). <http://etheses.lse.ac.uk/> Accessed 12 Jun 2019
- Wright H (2011) Understanding green infrastructure: the development of a contested concept in England. *Local Environ* 16(10):1003-1019
- Yates D (1977) *The ungovernable city: the politics of urban problems and policy making*. MIT Press, Cambridge, Massachusetts
- Young, R., 2010. Managing municipal green space for ecosystem services. *Urban Forestry & Urban Greening*, 9(4), pp. 313-321.
- Zhang BX, Xie G, Zhang C et al (2012) The economic benefits of rainwater-runoff reduction by urban green spaces: A case study in Beijing, China. *J Environ Man* 100: 65-71