

The Green Living Spaces Plan: Evaluation and Future Prospects

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1. Key Messages

- 1. The work on natural capital and ecosystem services within Birmingham City Council is widely applauded as an exemplar of environmental innovation.** There has been significant thought leadership in evidence in driving forward a natural capital agenda into plans and policy recognising its potential role in achieving more integrated planning across health, social, economic and environmental agendas.
- 2. The Green Commission and its strategic vision is, in principle, supported but needs stronger and more effective delivery mechanisms on the ground.** The work of the Green Commission and vision expressed in the *Green Living Spaces Plan* are valued and supported but act as a strategic symbol, lacking resources and impact to influence other work programmes and implementation.
- 3. The City Council can benefit from a culture of increased co-production and collaboration.** Despite cross departmental initiatives such as the Green Commission a silo based culture still predominates within Birmingham City Council's work. The production of plans and projects is rarely collaborative from the outset and there is limited evidence of co-creation and active, ongoing collaboration or knowledge exchange between different departments and external stakeholders. A cross-departmental team work approach is recommended to tackle key challenges.
- 4. The *Green Living Spaces Plan* initiative is dependent on a few committed individual champions.** There has been significant work on addressing climate change impacts, the environment and green spaces (including the *Green Living Spaces Plan*) set within the auspices of the Green Commission. However, that work depends on relatively few individuals who act as champions and this makes the project highly vulnerable to future staff changes. There is a need to develop a stronger cross-departmental and cross-organisational team ethos, sharing ownership and responsibilities in driving the work forward.
- 5. Effective communication and knowledge exchange about the Green Commission and its work are important activities at a time of rapid governance change in the West Midlands.** With a programme of changing governance and different partnerships associated with the devolution agenda, the Green Commission is perceived to have lost some of its momentum and identity. It has a low public profile and understanding and seems confined to an advisory and dialogue role which is being superseded by the devolution discussions and bottom-up social and environmental enterprise initiatives.
- 6. Building and investing in effective cross-sector partnerships in both leadership and member roles is key to improved environmental and social outcomes.** Birmingham City Council were seen as rather dominant in the partnerships they lead and a need was identified to foster a more long term commitment using the experience and expertise of participants within existing and new

partnerships/initiatives, particularly across third sector participants. Conversely, council involvement as members of external partnerships was seen to be sporadic and lacking continuity.

7. **The lack of a statutory requirement for green infrastructure in planning creates a vulnerability when other economic priorities compete.** There is only limited evidence that the *Green Living Spaces Plan* is directly informing the *Birmingham Development Plan*, the *Strategic Economic Plan* and the West Midlands Combined Authority process and documents. There is a perception that the non-statutory basis is a serious handicap. There is considerable support for pursuing a more statutory basis to the green infrastructure work and related climate change mitigation and adaptation actions and benefits.
8. **The dominance of traditional economic growth and viability models in planning arguments at the national and local levels relegates the recognised green infrastructure benefits and associated fundamental health and wellbeing improvements.** The ‘negotiation’ between the public sector and developers over urban development has benefited from the use of green infrastructure and ecosystem services thinking in the *Green Living Spaces Plan* and is beginning to change attitudes. However, the national and wider West Midlands policy predilection for economic growth is hampering progress when issues such as economic viability challenge green infrastructure policy implementation and actual investment.
9. **The Birmingham Development Plan is a key statutory plan which provides an important opportunity space for the *Green Living Spaces Plan*; at present this is being diluted by other priorities.** The *Green Living Spaces Plan* implementation process is informal and forms part of a suite of non-statutory plans. The new Supplementary Planning Document *Your Green and Healthy City* is a key instrument to influence future development within the BDP framework. As part of this plan development, the translation of the *Green Living Spaces Plan* principles and ecosystem services assessment into legal requirements for planning applications is a key priority.
10. **Disciplinary language barriers are hindering the realisation of the potential of the *Green Living Spaces Plan* in wider collaboration and knowledge exchange work.** Language barriers due to complex jargon still affect many environment-planning relationships within the council and across its wider stakeholders and publics. Whilst a long-term institutional learning process is occurring, there is a need to identify more accessible concepts that can act as a bridge between different actors, stakeholders and publics. The ecosystem services and natural capital concepts are seen as complex and potentially alien starting points for many people in Birmingham and there is a need to identify more accessible terms and language in order to foster a greater awareness of the significance and value of nature to the city of Birmingham.
11. **The National Planning Policy Framework and Duty to Cooperate offer important opportunities for mainstreaming nature in planning policy.** While the National Planning Policy Framework has been criticised for its predilection on economic growth and housing need, within the 209 paragraphs there are some strong policies and mechanisms that can positively contribute to the mainstreaming of ecosystem thinking and collaborations across geographical and sectoral boundaries (e.g. collaboration between Birmingham City Council, Greater Birmingham and Solihull Local Enterprise

Partnership and the West Midlands Combined Authority) in order to secure joined efforts towards sustainable development. In particular, green infrastructure is a strategic issue that should be planned for at a greater than city scale under the duty to cooperate function and the wider recognition of the value of ecosystem services provides opportunities for translating the *Green Living Spaces Plan* into future policy and outcomes. The development of the Natural Capital Planning Tool is an exciting development and promising decision support tool.

2. Glossary

B&BC LNP	Birmingham & Black Country Local Nature Partnership
B&BC NIA	Birmingham & Black Country Nature Improvement Area
BCC	Birmingham City Council
BDP	Birmingham Development Plan
CO ₂	Carbon dioxide
DCLG	Department for Communities and Local Government
ES	Ecosystem Services
GBSLEP	Greater Birmingham and Solihull Local Enterprise Partnership
GI	Green Infrastructure
GLSP	Green Living Spaces Plan
KPIs	Key Performance Indicators
LEP	Local Enterprise Partnership
LNP	Local Nature Partnership
NCPT	Natural Capital Planning Tool
NIA	Natural Improvement Area
NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
SEP	Strategic Economic Plan
SPD	Supplementary Planning Document
SPG	Supplementary Planning Guidance
UKBCSD	UK Business Council for Sustainable Development
UKNEA	UK National Environment Assessment
UKNEAFO	UK National Environment Assessment Follow-On
WMCA	West Midlands Combined Authority
ZEC	Zero Emission City

3. Introduction

This report¹ assesses the efficacy of the Green Living Spaces Plan (GLSP) (BCC, 2013a) in Birmingham, UK, set within wider urban governance processes linking issues of climate change, public health and spatial planning. The lens of ecosystem science² is adapted and used as an evaluation framework for this purpose. The GLSP is a non-statutory plan that champions green infrastructure (GI) planning across the city. It acts as a cross-cutting strategy that seeks to inform other non-statutory and statutory plans for Birmingham as well as contributing to Birmingham's vision to be a leading green city in Europe. As part of this ambition, in 2013 the Green Commission was established as an advisory body to the City Council with the main aim to drive urban development forward in a sustainable way. The Green Vision for Birmingham (see Figure 1) was a key outcome and it provides an important strategic context within which the GLSP has been created and subsequently shaped, set within a rapidly changing national, regional and local governance framework. Figure 1 illustrates how the vision is structured on three pillars:

1. Planning Framework and Policy;
2. Sustainable Energy and Carbon Dioxide (CO₂) Emissions Reduction; and
3. Green Economy.

Consequently, the wider planning framework and policy response has been included in this study, as it contains the principal planning documents for the city's development: the *Birmingham Development Plan* (BDP: BCC, 2013b³), which is the statutory land use plan; *Your Green and Healthy City* Supplementary Planning Document (SPD: BCC⁴), which will provide revised guidance for the BDP delivery; the Green Living Spaces Plan (GLSP: BCC, 2013a) and the Climate Change Adaptation Action Plan (BCC, 2012c). Although the principal subject of this analysis is the GLSP, the relationships between all these planning documents have been investigated.

¹ This study forms part of a PhD research conducted by the lead author based at the University of Palermo. The research was supported by an EU funded grant for Alice Franchina collaborating with Birmingham City University under the supervision of Prof. Alister Scott with input from Prof. Claudia Carter.

² We define ecosystem science as incorporating a collective body of work and approaches set within a social-ecological systems perspective. This has generated a diverse conceptual ecosystem vocabulary: ecosystem approach; ecosystem services framework / ecosystem services; and natural capital.

³ The Birmingham Development Plan had been put on hold since May 2016. In December 2016 approval, has been given to the submitted plan after a Secretary of State ruling.

⁴ See https://www.birmingham.gov.uk/info/20054/planning_strategies_and_policies/304/places_for_the_future [last accessed 22 December 2016].

The GLSP was approved in 2013 and presented as the delivery "vehicle through which the City can adopt a comprehensive approach to Natural Capital, as a thread that must run through all its future considerations, for the economy, its spatial planning, its health care and its low carbon future" (BCC, 2013a: 3). It was structured on an Ecosystem Services Assessment (part of the plan's Appendices, see Hölzinger et al., 2013a) which represents a UK first in terms of application of the scientific valuation mechanisms of the National Ecosystem Assessment (UKNEA, 2011).

The GLSP evaluation is focused on both the plan-making **process** in terms of governance, partnerships, participation, and on its **outcomes** in terms of the impact the plan has had on the city, its vision and policies so far. The research has been conducted using a background desk study of official policy documents and statements and data obtained through 11 semi-structured interviews with key actors from Birmingham City Council, other local authorities, public sector bodies, non-government organisations (NGOs), and research centres / consultancies.

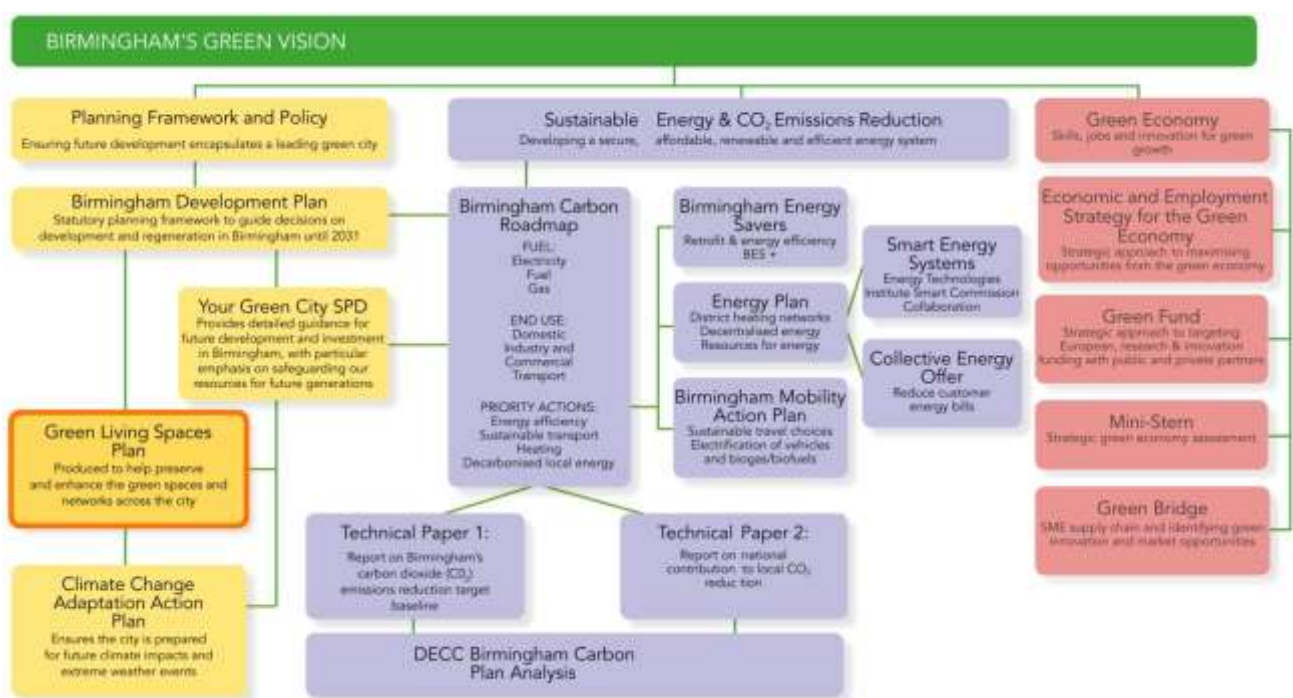


Figure 1. Green Vision for Birmingham (Source: Green Commission, 2013: 17-18).

4. Aim and Objectives

This report is written primarily for Birmingham City Council in order to help shape the future direction of planning policy and implementation as proposed in the vision and principles of the GLSP and its management, set within the emerging priorities of the Council. The main aim of the research was to undertake a critical analysis of the GLSP process and outputs thus far. The specific objectives were to:

- explore the influence and value of ecosystem science on the plan;
- assess the effectiveness of the Green Commission as a strategic delivery vehicle;
- elicit the level of involvement and awareness of internal and external stakeholders and policymakers on the GLSP (and, if the case, the reasons of exclusion of others);
- investigate the impact of the GLSP on other statutory and non-statutory planning documents;
- evaluate the impact of the GLSP on the ground;
- identify barriers or potential assets that are impacting on the creation and delivery of the GLSP process and outcomes;
- provide recommendations for the future evolution of the Green Commission and GLSP.

5. Methodology

The research used both primary and secondary data sources. A preliminary desk study analysed current environmental and spatial planning documents for Birmingham; the Kerslake Report (Kerslake, 2014), GLSP (BCC, 2013a) and BDP documents (BCC, 2013b), GLSP Appendices and draft versions of the Green Infrastructure Strategy.

Eleven semi-structured interviews were undertaken using a purposive sample of key actors that had been involved in the GLSP process and/or had been affected directly or indirectly by it (local authority officers, elected members, consultants, business stakeholders, researchers, NGOs representatives, health sector representatives and economic development partnerships, see Table 1). In part the sample was identified from statements within the document itself, such as its role in informing the statutory development plan for example. The numbers were constrained due to the limited time and resources available for the project.

Twelve interviewees were contacted by email, asking for a face-to-face discussion (only one was done through a Skype call) and eleven people agreed to be interviewed. The interviews all adopted a similar structure, with minor variations in questions depending on the interviewee's role (see Appendix 1). The questions focused around the participant's involvement in, and drivers for, ecosystem science based work / projects; their experience within / knowledge of the GLSP/Green Commission and its key outputs; and their viewpoint on barriers and opportunities relating to environmental issues at the city scale. All the interviews were conducted between June and August 2016, each lasting between 1-2 hours. They were taped, transcribed and then sent to respondents for comment and verification.

The verified transcripts were subjected to thematic content analysis in order to highlight emerging and recurring broad topic areas and associated themes and issues. This primary data was then used with the secondary desk study data to build a critical evaluation and associated narrative which is the aim of this report.

1	Birmingham City Council (BCC)	Respondent 1 (R1)
2		R2
3		R3
4		R4
5	Independent research centres	R1
6		R2
7	Non-Government Organisations (NGOs)	R1
8		R2
9		R3
10	Local Enterprise Partnership (GBSLEP)	R1
11	National Health Service (NHS)	R1

Table 1. List of respondents by agency category with anonymised coding for survey results

6. Results

6.1. Case study context

6.1.1. Birmingham City Council: a governance perspective

Birmingham has featured extensively as an exemplar in the successful mainstreaming of ecosystem science in policy and decision making (UKNEAFO, 2014; NEAT, 2014), building on its established track record in championing sustainability. The establishment of the Green Commission, the Carbon Road Map and the GLSP, together with a long tradition in open spaces care (among others, the work of Friends of the Earth groups, Birmingham and Black Country Wildlife Trust and Birmingham Open Spaces Forum), highlight significant environmental innovation and action across the city. Indeed, the successful bid to be part of a Nature Improvement Area (2012) across Birmingham and the Black Country: the only urban example in England, further consolidates Birmingham's environmental credentials.

Governance structures, with their political and management dimensions, form a necessary and vital part of the institutional context within which environmental innovation is developed and delivered. Under the Coalition and Conservative-led governments, since 2010, significant policy and funding changes have occurred devolving some powers and budgets to cities within city region deals as well as other forms of localism within Local Enterprise Partnerships and Local Nature Partnerships. In what is becoming a rapidly changing and "messy" political landscape, strong and localised urban governance becomes increasingly important.

However, in 2014 BCC was identified nationally as failing in its governance and service management provision and were subjected to an independent review by Sir Bob Kerslake (Kerslake, 2014). The Kerslake Review was particularly critical of the city's governance framework, identifying different issues and challenges for the Council to address: the size of the Council itself; the way in which it manages partnerships; the councillors' engagement with community and future relationships under devolution. With reference to this research the Review recommended, among other things:

- to reset the BCC's governance clarifying roles and responsibilities of Leader, Chief Executive, councillors, officers (recommendation 3, p. 9 and chapter 2);
- to simplify the whole planning framework (recommendation 3, p. 9 and chapter 2);
- to define a new model for devolution - resetting relationships between Combined Authority, BCC and Districts in delivering services (recommendations 7 and 9, pp. 11-13 and chapter 1);
- to redefine its approach to building and working in partnership with the private and voluntary sectors as well as citizen groups/initiatives (recommendation 9, p. 12 and chapter 4).

6.1.2. Green Commission

The Green Commission is a key partnership that was established in 2013 as an advisory board to BCC on matters related to the environment and sustainability. It was charged with securing the objective for Birmingham to be a leading green city in Europe. The main aim of the Green Commission is to develop strategies for the city's development involving a wide range of stakeholders. It is composed of 20 members; representatives of public, private, third sector and universities⁵ and its work is based on five sub-groups focused on specific themes: Green Growth, Buildings & Efficiency, Energy & Resources, Transport & Mobility, Natural Capital & Adaptation. One of the main outcomes of the Green Commission in its first stages was the Carbon Road Map (Green Commission, 2013); a strategy set to achieve by 2027 a 60% reduction of CO₂-equivalent emissions against 1990 levels. The key priorities of the Carbon Road Map are to:

- Stimulate investment in research and projects on how Birmingham should be heated and powered;
- Create decarbonised local energy generation capacity;
- Improve the way people can travel and get around the city / region more sustainably; and
- Improve the energy efficiency of Birmingham's buildings and actively promote affordable warmth. (Green Commission, 2013: 6)

In 2013, the Green Commission published another important document for the city's development, the Green Vision for Birmingham (Green Commission, 2013). The Green Vision is based on three pillars, and explicitly aims at achieving integration across the following areas of work (see Figure 1):

1. Planning Framework and Policy;
2. Sustainable Energy and Carbon Dioxide (CO₂) Emissions Reduction; and
3. Green Economy.

Each of these pillars has been supported by different policies and documents, all aiming at pursuing a green economic growth and a low carbon transition with the following objectives:

- Create a low carbon green economy and a place where businesses want to invest and are encouraged to do so;
- Maintain and enhance vital environments and ecosystems;
- Reduce CO₂ emission levels and increase local low carbon energy generation;

⁵ The composition of the Green Commission varied during the last three years. A full list of the current members is available online at <http://www.makingbirminghamgreener.com/about/> [last accessed 22 December 2016].

- Deliver social and environmental justice; and
- Improve quality of life and wellbeing. (Green Commission, 2013: 5)

6.1.3. Green Living Spaces Plan

The GLSP is a non-statutory plan for GI across the city of Birmingham; its non-statutory status was seen as advantageous in giving the plan flexibility and adaptability, enabling it to be an agent of change to inform and become an integral part of the Birmingham Development Plan (BDP). It has the explicit objective of "*linking the issues of climate change, public health and spatial planning*" together (BBC, 2013a: 6).

The GLSP process has evolved over time with the environmental and sustainability sections of the council leading the associated research and local policy-making processes organically and pragmatically, adjusting to changes in national policies and planning frameworks. The GLSP's origins date back to BCC's intention in 2009 to develop a GI plan as part of a Community Strategy within the Local Strategic Partnership that covered Birmingham and surrounding areas. In 2010, Local Strategic Partnerships were abolished by central government in favour of establishing Local Enterprise Partnerships (LEPs) and Local Nature Partnerships (LNPs), so the GI plan, which then referred to a bigger region than the city of Birmingham, had to be reframed.

At the heart of the GLSP are the twin concepts of natural capital and ecosystem services. The catalysts promoting action on these relatively new concepts within environmental planning within BCC were a combination of nationally driven policies and some senior staff who effectively took on the role of ecosystem science champions. Crucial here was the introduction of three interlinked UK Government acts - Planning Act, Energy Act, and Climate Change Act (HM Government, United Kingdom Parliament, 2008a, 2008b, 2008c) - that required city authorities to take an integrated approach towards sustainability. Key policy-related drivers were climate change related national performance indicators⁶ against which local authorities had to report in England between 2008 and 2010; the Lawton Review on England's wildlife sites (Lawton et al., 2010), the Natural Environment White Paper (HM Government, 2011), the UK National Ecosystem Assessment (UKNEA) report (2011) and the National Planning Policy Framework's (NPPF: DCLG, 2011) paragraph 109⁷.

⁶ Specifically National Performance Indicators *NI188: Adapting to climate change* and *NI186: Per capita reduction of CO₂*.

⁷ Under section 11 'Conserving and enhancing the natural environment', Paragraph 109 states: "The planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate." (DCLG, 2011: 25-26)

As a result of the legislative and policy drivers mentioned above, the council continued funding collaborations on a series of research studies on local climate change risk modelling and mapping (BUCCANEER project, see Bassett et al., 2011) and applying the Ecosystem Services (ES) methodology to six dominant urban issues (aesthetics and mobility, flood risk, urban heat island effect (local climate), educational attainment/provision, recreation and biodiversity), with each displayed as GIS maps of the city (see Scott et al., 2014). These individual maps depicted areas of high and low demand/supply of each service. The maps when combined with multiple deprivation spatial information provide a powerful relationship between ES and social/environmental justice considerations acting as an evidence base for place-specific policy interventions. In addition, they also provide a baseline for climate change mitigation and adaptation priorities and actions, revealing areas at risk from flooding and urban heat island effect. The maps were then super-imposed into a single multi-layered challenge map for Birmingham which could be, in theory, interrogated at different scales for use by residents, community groups, NGOs, strategic planners and elected members (Figure 2⁸).

The GLSP process involved the formation of a cross-disciplinary working group with both internal BCC and external members from Climate Science; Water; Biodiversity; Green Infrastructure; Sustainable Transport/Mobility; Planning; Community & Resilience; Business and Public Health; each bringing their evidence bases, policies and delivery plans to the shared table. The approach of uniting concepts of multiple benefits and assessing visions and risks in a joined-up way was used to help secure greater buy-in across these different stakeholder communities. Collectively, through various workshop discussions and meetings they were able to agree seven cross cutting principles.

These seven principles form the structure and key themes of the GLSP (see Table 2). A first draft of the GLSP, together with the two Appendices, was published for consultation in December 2012 and then after final revisions adopted by the City Council in September 2013. Subsequent work has focused on the application of the methods of the UK National Ecosystem Assessment to improve policy and decision making (UKNEA, 2011; UKNEAFO, 2014) and a comprehensive planning approach to natural capital.

⁸ This map represents a city as depicted by its relationship with its ecosystem. GIS layers of data are combined to create as multiple challenge map. The lighter the tone the greater the benefits being obtained from that local environment. Darker tone shading indicates are areas where the current quality or availability of the local environment, does not meet the full demands of the local population.

Principle	Main objectives
An Adapted City	Retain City's top ranking for adaptation <ul style="list-style-type: none"> • Ensure all future growth is 'adapted'. • Trees for cooling and thermal insulation. • Green roofs, walls and street canyon research.
The City's Blue Network	Adopt water sensitive urban design <ul style="list-style-type: none"> • Integrated SuDS, flood and water management solutions. • 'Blueprint' for enhanced walking and cycling network. • Blue Corridor/network policy with Canal River Trust.
A Healthy City	Adopt Natural Health Improvement Zones (NHIZ) <ul style="list-style-type: none"> • Integrate the delivery of health and green living spaces. • Continue to extend the Be-active offer. • Public health as key partners in planning.
The City's Productive Landscapes	Embrace urban forestry and urban food growing <ul style="list-style-type: none"> • Continue to promote allotments. • Facilitate community food growing and orchards. • Promote the multiple benefits of urban forestry.
The City's Greenways	Change gear - to a walking and cycling City <ul style="list-style-type: none"> • Create walkable/cyclable neighbourhoods. • Citywide signed routes linked to public transport. • Link healthcare activities and prevention programmes.
The City's Ecosystems	Birmingham as a biophillic City <ul style="list-style-type: none"> • City to adopt an ecosystem services approach. • Partners to lead on District NIA continuation plans. • Birmingham to join global Biophillic Cities network.
The City's Green Living Spaces	Birmingham an international City of Green Living Spaces <ul style="list-style-type: none"> • Adopt the 7 principles across Planning Framework. • Green Infrastructure and Adaption Delivery Group. • Work with business partners on green economy.

Table 2. GLSP seven principles. Source: BCC (2013a: 10)

6.1.4. Ecosystem services and natural capital workstream

Key outputs from recent ecosystem and natural capital research across Birmingham include the ecosystem services evaluation study for Birmingham (Hölzinger et al., 2013a); the Birmingham multi-layered challenge map (Hölzinger et al., 2013b; Figure 2) and the Natural Capital Planning Tool (NCPT) (RICS, 2015). The NCPT was developed in collaboration with planners, developers and industry consultants to help mainstream nature into (urban) development decision making⁹.

There are, however, still major challenges to mainstreaming this environmental informed and focused agenda within a rapidly changing political landscape of the West Midlands as new layers of governance emerge at different scales with the creation of a combined (regional level) authority.

⁹ <http://www.rics.org/uk/knowledge/research/research-reports/natural-capital-tool-planning/> [last accessed 24 December 2016]

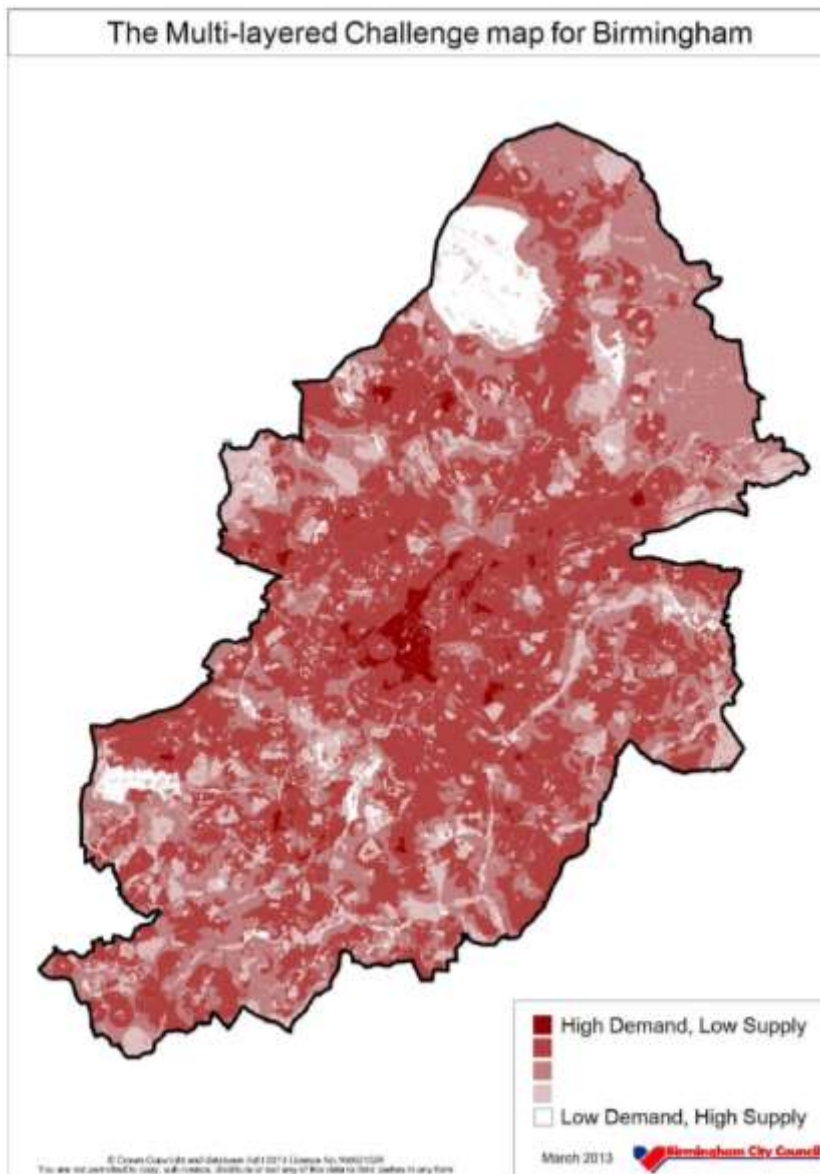


Figure 2. Multi-layered challenge map for Birmingham (Source: Hölzinger et al., 2013b: 7).

6.1.5. Policy analysis

In order to better understand the general framework and policy landscape in which the GLSP is operating, an analysis of GI related policies has been conducted both at the local and national scale. The core policy documents examined were the National Planning Policy Framework (and National Planning Policy Guidance (DCLG, 2012), in the same column within Table 3); the Birmingham Development Plan (BCC, 2013b); the Supplementary Planning Document *Places for the Future* (BCC, 2012a); the Strategic Economic Plan (SEP) for the Greater Birmingham and Solihull LEP (GBSLEP, 2016), and the first programmatic documents of the West Midlands Combined Authority (WMCA, 2015a, 2015b, 2016).

A Supplementary Planning Document (SPD) that BCC were working on, called *Places for the Future* and which was published in 2012 for consultation, has currently been put on hold until the official approval

of the BDP, which has now been secured (December 2016). Thereafter the SPD will be revised / updated and renamed *Your Green and Healthy City*¹⁰ to better reflect the key focus of the policy document. Therefore, at present, we only refer to the *Places for the Future* SPD, and highlight the challenges that the *Your Green and Healthy City* might address.

Table 3 and Table 4 map the core GI policies noting any explicit reference to the GLSP. The headline results for Table 2 to Table 4 can be summarised as follows:

1. There is no reference to natural capital in any of the examined documents even though within the GLSP and subsequent BCC commissioned research/work it is a core concept. This disconnect is somewhat surprising as Birmingham is at the forefront in the UK in developing ES and NC planning and decision-making tools which is addressing a key UK government agenda (25-year Natural Capital Plan) within the wider framework of the national plan supported by the Natural Capital Committee.
2. There is only partial reference of the NPPF in the BDP relating to paragraph 109 on recognising the value of ecosystem services. The word “recognise” has limited priority however.
3. Although the GLSP is listed as part of the evidence base of the BDP¹¹, there is only partial reference to its specific content in the BDP text, and no references to ecosystem services or natural capital. There are, however, dedicated GI policies.
4. There is a full recognition of the GLSP in SPD *Places for the Future*, but the delivery of the GLSP will depend on the way in which its principles and the ES Assessment will be incorporated in the new SPD *Your Green and Healthy City*;
5. There are no references to GI in the GBSLEP (SEP) and WMCA launch statements and no reference to the GLSP.
6. There are no references to the seven principles of the GLSP in any of the other policy documents (BDP, GBSLEP and WMCA).

¹⁰ This information is in the public domain and has been published on the BCC website. See online at https://www.birmingham.gov.uk/info/20054/planning_strategies_and_policies/304/places_for_the_future [last accessed 22 December 2016].

¹¹ GLSP is listed as ES13 in the Environmental and Sustainability section. For the full list see https://www.birmingham.gov.uk/directory_record/1360/environment_and_sustainability [last accessed 22 December 2016].

Theme / policy	NPPF / NPPG	BDP
Ecosystem services	<p>NPPF Par. 109 Recognition of the wider benefits of ecosystem services</p> <p>NPPG Par. 013 Reference to "Biodiversity 2020, A strategy for England's biodiversity and ecosystems services" and to an introductory guide to valuing ecosystems services by Defra along with a practice guide to inform plan-making and decision-taking on planning applications.</p> <p>NPPG Par. 028 Recognition of ecosystem services as benefits provided by green infrastructure.</p>	no reference
Green Infrastructure	<p>NPPF Par. 114 Local planning authorities should set out a strategic approach in their Local Plans for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.</p> <p>NPPG Par. 027-032 Par. 28: Green infrastructure as a key consideration in both local plans and planning decisions. Par. 29: Where appropriate, supplementary planning documents can set out the green infrastructure strategy for the area. The strategic approach to green infrastructure may cross administrative boundaries involving Local Nature Partnerships (LNPs) and Local Enterprise Partnerships (LEPs) (meet the Duty to Cooperate). Par. 32: Where appropriate, planning proposals should incorporate green infrastructure in line with local and neighbourhood plan policies.</p>	<p>Policy TP7 Green infrastructure network: The integrity of the green infrastructure network will be protected from development and where possible opportunities will be taken to extend and enhance the network and to improve links between areas of open space. Any development proposal that would adversely affect the integrity of the network will be refused. New developments will be expected to address green infrastructure issues in an integrated way and to take advantage of new opportunities such as green and brown roofs.</p> <p>Policy PG3 Place Making, Policy TP2 Adapting to climate change, Policy TP26 Sustainable neighbourhoods, Policy TP9 Open space, playing fields and allotments also mention green infrastructure.</p>
Natural Capital	no reference	no reference
GLSP reference	<i>not applicable</i>	Policy TP7 Green infrastructure network and Policy TP2 Adapting to climate change pay direct reference to GLSP strategy (see also table 4)

Table 3. Comparison of GI related policies in different documents (NPPF/NPPG; BDP).¹²

¹² Due to space constraints we summarised the contents. For a full version of chapters or paragraphs, see original documents.

Theme / policy	SPD Places for the Future (2012)	SEP	WMCA
Ecosystem services	The City's Ecosystem The proposed GI network has a role to play in conserving and enhancing existing landscape features in and around the site, and any historic features (buildings or structures, or landscapes) on or adjacent to the site. Maintaining, enhancing and restoring sites of importance for biodiversity along with the habitats and corridors between designated sites is a crucial aspect of sustainable development.	no reference	no reference
Green Infrastructure	The City's Green Infrastructure In providing new GI the developer should consider the scale and type of GI needs that their development will generate and consider these needs against the existing network of GI in the locality. However, developers should also pay particular attention to the benefits that GI can provide for climate change adaptation in terms of flood storage, climate cooling and habitats creation.	no reference	no reference
Natural Capital	Emerging Core Strategy Policy SP7: New residential development must comply with design requirements set out in the Code for Sustainable Homes and BREEAM standards. Developers need to demonstrate how their proposals accord with the above standards through their Design and Access Statement and will need to undertake a post construction review certificate. (SPD includes requirements for planning application on sustainable construction)	no reference	no reference
GLSP reference	Explicit reference to the seven principles of GLSP (at that time called GI strategy Draft) (see also table 4)	no reference	no reference

Table 4. Comparison of GI related policies in different documents (SPD; SEP; WMCA).¹³

In particular, the BDP has a specific section for GI policies (Policy TP7; BCC, 2013b) and the introduction states:

*“The City Council will seek to maintain and expand a green infrastructure network throughout Birmingham. The integrity of the green infrastructure network will be protected from development and where possible opportunities will be taken to extend and enhance the network and to improve links between areas of open space. **Any development proposal that would adversely affect the integrity of the network will be refused.** New developments will be expected to address green infrastructure issues in an integrated way and to take advantage of new opportunities such as green and brown roofs. It is important that **all new green infrastructure features and assets are designed to help the City adapt to a changing climate.** The City Council will also seek to conserve and enhance Birmingham’s woodland*

¹³ Due to space constraints we summarised the contents. For a full version of chapters or paragraphs, see original documents.

resource (collectively known as ‘The Birmingham Forest’). Particular attention will be given to protecting the City’s ancient woodlands as irreplaceable semi-natural habitats. All trees, groups, areas and woodlands will be consistently and systematically evaluated for protection and all new development schemes should allow for tree planting in both the private and public domains. The importance of street trees in promoting the character of place and strengthening existing landscape characteristics will be recognised.” (BCC, 2013b: 76, our emphasis on the text in bold)

In order to analyse to which extent this purpose is evident in policies, we provide Table 5 which maps any references to the GLSP in BDP and the SPD *Places for the Future* as these were the core policy documents which the GLSP sought to influence.

GLSP	BDP (2016)	SPD Places for the Future (2012)
General reference	Policy TP2 Adapting to climate change: "Urban greening can make a significant contribution to reducing the effects of urban heating. Birmingham’s Green Living Spaces Plan sets the priorities for creating a green network covering open spaces and parks and green roofs to help cool the City." (p. 70)	"Developers will need to consider Birmingham’s Draft Green Infrastructure Strategy (2012) which identifies the City’s existing GI networks and seeks to strengthen them through protection, restoration, enhancement and creation of green infrastructure." (p. 19 SPD Detailed Policy Guidance)
Ref. to seven principles	Policy TP7 Green infrastructure network and Policy: "The City Council’s approach to the maintenance and improvement of the Green infrastructure network throughout the City reflects the seven key principles which are set out in the Green Living Spaces Plan. [...] A more detailed analysis of this network together with a strategy for managing and enhancing it is provided in the Green Living Spaces Plan." (p. 76)	Seven principles of GLSP (at that time called GI strategy Draft) are explicitly listed. Guidance on how applicants can incorporate Birmingham’s seven GI principles into their development, are provided. (pp. 22-33 SPD Detailed Policy Guidance). "Developers will need to ask some key questions about GI as they develop their design that include: [...] - How can the development address each of the City’s seven GI principles?" (p. 23)
Ref. to ES Assessment	No reference	<i>Not applicable (ES Assessment was conducted after the SPD publication)</i>

Table 5. Specific reference to GLSP in BDP and SPD.

6.2. Interviews analysis

From a contents analysis of the eleven semi-structured interviews, four broad themes emerged:

- Deliverability
- Governance
- Partnerships
- Ecosystem services / value of nature.

These are summarised in Table 6 and subsequently unpacked in turn.

Themes	Description
Deliverability	The processes by which the objectives declared by the City Council are actually achieved (or not) in practice. Different tensions between statutory and non-statutory plans and power relations between different actors emerged. Deliverability also refers to different timescales and individual (or social) perceptions.
Governance	Governance can be characterised as the processes, institutions and tools in which a group of people manage policy and decision-making. In this analysis, with special regard to the GLSP, we centre governance around those institutions and actors who make decisions and the spaces those decision affect.
Partnerships	How partnerships are managed in the wider context of the city and with special regard to BCC and the GLSP. Barriers have been highlighted through the different stakeholders' point of view, in relation to organizations, business and community.
Ecosystem services and the value of nature	The subtle nuances in the way environmental sustainability is defined and operationalised by the council provides an important theme. Whilst there are national definitions of sustainable development (SD) goals, these expressions often carry tensions between local and national priorities and the way the environment is viewed as a SD 'pillar' given the other priorities the council has.

Table 6. Themes that emerged from the 11 semi-structured interviews.

6.2.1. Deliverability

Deliverability was evident within three subtly different strands in our analysis. First, discussions focused around the processes by which the objectives declared by the City Council and Green Commission are actually achieved (or not) in practice. Second, there were various tensions between the statutory and visionary plans produced and power relations between different actors involved. Third, attention was paid to different timescales and individual (or social) perceptions.

1. Mismatch between high level of aspiration and lack of achievement on the ground

This theme had two distinctive strands: one related to a perceived strategy-delivery gap within the work and resources of the Council, whilst the other concerned the efficacy of the Green Commission as a delivery body. Respondents generally recognized and valued the efforts of the Council in producing an overarching GI strategy which contained appropriate aspirations and policies for the city and its citizens. However, the strategy was perceived as disconnected from the actual messy reality on the ground.

I think one of the key things from my perspective is taking their broad principles, of what their overarching vision is trying to achieve, and then focus down on deliver it on the ground, how you can then translate that overarching aspiration into tangible outcomes on the ground. I think there is sometimes potentially a mismatch, sometimes, between high level aspiration and the vision you're trying to achieve, and then the deliverables on the ground, which translate into tangible outcomes you can see. (BCC, R2)

Unpacking this further, responses highlighted the importance of the vision in driving the change (connecting the dots) but in so doing needed both time and behaviour change to happen to be successful.

Yes, not because connecting the dots isn't important, but the dots will never get connected if there isn't a strategic vision of why it's important to connect the dots and what's happening everywhere at the moment on a national, international scale, if you still got very very slow incremental change joining dots. Which is fine except the fact that we're massively behind the curve in terms of the impact of climate change and so there's a need to accelerate that change. If you can't do it from business as usual you have to do it through a new way doing things. (BCC, R1)

Additionally, some respondents felt that the Council did not invest or do enough to progress from a vision to specific actions on the ground. For example:

I'm very aware that Birmingham city is an exemplary UK first, world first using the National Ecosystem Assessment tools... and it's fantastic! But, there is a kind of big gap between their claims about it and what then happened. If you assess what is needed to do, but you are actually not able to do any of it... (NGO, R3)

The Green Commission attracted both positive and negative comments on its role and work. Positively it was seen by some respondents (mostly from BCC environment) as a vital platform with the necessary political support to start a significant dialogue on sustainability in Birmingham across all departments.

Conversely, other respondents (mainly external to BCC) perceived the Commission as being relatively impotent, citing that it was not able to influence directly the day-to-day work of the City Council due to its rather high level and strategic visioning fix.

I think that as a partnership, I don't get the impression that it has influence over the real policies and real decisions that much. I think it has just ended up in a sort of networking, or advisory role. Maybe it's not what was intended but I think it's what happened. (NGO, R3)

2. Relationship between the Birmingham Development Plan and Green Living Spaces Plan (statutory vs. visionary)

The decision for the GLSP to be a non-statutory 'visionary' plan can be viewed as an advantage in terms of providing a more flexible baseline for other policies and plans across the Council but may also help explain its perceived impotence as evident from previous quotes.

The Green Living Spaces Plan is more a carrot. The Birmingham Development Plan is more a stick, and there's somewhere in between. It's how much the stick can bring some carrot to particular areas of work, or where development is going to be located or what it's going to be like, or how much green space, or how much benefit to the natural environment is a development going to bring, is a new initiative going to bring. It's getting how much influence really, and I think the Green Living Spaces Plan – whilst it says all the right things, it's how effective it's going to be implemented. And that won't come down to the plan. It'll come down to those implementing development, whether it's the planners, the developers, us commenting from the outside. It's difficult to say how much influence it's going to be really. (NGO, R1)

The quote above encapsulates both the opportunity and tension between the GLSP and the statutory development plan. Many respondents were concerned over the limited extent to which the GLSP was able to influence the BDP and its core policies. Here it was felt that the NPPF policies may override some of the innovative thinking therein. So whilst the NPPF provides powerful national guidance on GI and general environment-related opportunities and challenges for local plans and their associated policies and implementation, when taken with viability considerations, tensions and contradictions become evident. These tensions are not only relevant to the development of the BDP but are inherent tensions that exist within the NPPF and thus affect planning and decision-making from the local to the national scale. On the one hand the NPPF encourages local planning authorities to define and adopt a strategic approach to GI (paragraph 114¹⁴), while on the other hand it places strong emphasis on: enabling development (e.g. paragraph 140), economic growth (e.g. paragraphs 18-21) and attention to (economic) viability (e.g. paragraph 173).

¹⁴ NPPF paragraph 114 states: "Local planning authorities should: set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure" (DCLG, 2013: 26).

Six out of the eleven participants viewed the GLSP as a sound plan setting a comprehensive vision for the future. Crucially, however, they viewed its non-statutory status as preventing it from having necessary clout and impact on policy and decision making. Others viewed political good will and partnership as powerful forces which could unite and progress ecosystem science without the unnecessary bureaucracy that characterises statutory processes. However, it was also recognised (with hindsight) that under prolonged austerity such arguments were weaker to sustain.

The BDP is at the top level, it is the overarching plan. Then you have any Supplementary Documents that sit below that and provide additional guidance. [...] The GLSP is city-wide and is more about the aspiration and how you can translate some broad policies into... not into reality, but more into guidance about what development could look like, or should look like. (BCC, R2)

It is a really positive document in terms of setting out what the sort of multi-disciplinary benefits of a green living space are. It's very much a visionary document rather than a sort of directive document. (BCC, R4)

Current guidance provided by national government to local authorities is to avoid producing many additional supplementary planning documents and instead provide clear and concise policies in the main planning document (i.e. the BDP). This means there is little likelihood for the GLSP to change its status to formal Supplementary Planning Guidance (as, for example, in Bridgend¹⁵ in Wales). Even if such change in status was pursued, the Council would need to endorse this at the Cabinet level and there may be resistance given its perceived impact on future development opportunities. However, the proposed SPD *Your Green and Healthy City*, which was put on hold until the examination of the BDP was recently completed, might play a fundamental role in translating the GLSP principles into explicit statutory guidance for city development within the framework of the BDP. This might contribute to fill that gap between visionary and statutory that many respondents mentioned; however, it still leaves the question of how such policies are then translated and delivered in practice as terms like integrity, viability and significance are all subjective.

For the natural environment part of the Development Plan, [there are some strong GI policies applied to protecting the integrity of the GI network] it's not too bad, it's quite good. The difficulty is how well those policies, even in a statutory plan, are going to be delivered. How developers are going to be required to do those policies... (NGO, R1)

The interview questions also prompted the participants to reflect critically on how a plan evolves and who is involved in its creation and refinement and who is consulted and made aware of it in terms of its potential impact in practice. Significantly, some respondents dealing with planning and housing matters were unfamiliar with the GLSP plan, using NPPF /NPPG policies, the BDP and the Big City Plan (a visionary non-statutory document for the regeneration of Birmingham with a strong focus on the city centre; BCC, 2011) as the principal drivers for their work. Given the stated intent of the GLSP to inform the statutory planning process, this does reveal a disconnect in terms of communication and knowledge exchange within other departments of the council. The GLSP does not appear to be on the radar in planners' and

¹⁵ <http://www1.bridgend.gov.uk/media/227718/final-green-infrastructure-spg-for-web.pdf> [last accessed 22 December 2016]

developers' mindsets with other development priorities and visions effectively competing against the GLSP's vision. This then raises questions whether the NPPF and the NPPG can and should be used to help promote a stronger GI vision for the benefit of nature and its direct and indirect benefits for current and future generations (even if at the expense of some profitable development and continued economic 'growth') through increasing ecological connectivity and enhancing ecosystem services.

3. Conflict between long-term vision of planning and short-term vision of politicians and developers

The conflict between long-term and short-term visions and interests reflects a well-documented challenge in decision-making and development. This emerged in two main ways. First, a tension was noted between the types of concerns and issues raised by researchers / scientists and the political actors (e.g. councillors); and second, between the public and developers.

The first conflict emerged because researchers and scientists tend to adopt a long-term perspective on planning / management actions and predicting consequences on the environment and wider society. On the other hand, politicians have to deal with immediate economic situations and short-term political mandates. Thus they end up cutting budgets for longer term sustainability investments, in favour of immediate and tangible return on investments (e.g. housing provision).

I'm not convinced this is effective because the political system we have, which is just changing itself with this current vote, it's too short-term. They want to save money now, without looking at what the consequences of that will be, and any plan anywhere about open spaces and about long-term investment and the political world we are living at the moment, has no concept of long term investment. So, I think it's great, but the political will is "we have to cut budget now, which budget shall we cut now" that's what they do. [...] So it's a battle between the researchers and the people with the view and the vision, and conflict that comes into with the politicians which is "I'm up for election next year!" (NGO, R2)

The second conflict is between those publics concerned with wider societal needs and maintaining some kind of environmental integrity versus developers who tend to focus on maximising profit.

[...] although the plan can set what might be called the land use parameters, in terms of the parks, the green spaces, the urban spaces, when it then comes to enforcing change through the planning process, it can be really quite difficult because, you are always at the mercy of the developers or the owners of a land saying "no, we are not agreeing to that"[...]. Because what happens now is really a process of voluntary negotiation with developers in building the space, and a lot of compromises are made. (BCC, R3)

This power imbalance with developers aided by NPPF policies limits negotiation and thus represents a significant barrier for the mainstreaming of ecosystem thinking in general, and for the implementation of the GLSP in particular. One of the major problems of the public sector in the UK at present is the difficulty, if not the inability, to drive sustainable development for the long term against the pressure of developers pushing for short term economic gains through business-as-usual investments. This is compounded by the way the NPPF uses the concept of economic viability to trump other social and

environmental limits. This led to calls from some of our respondents for a different economic model for engaging with business. The negative environmental impacts and social inequalities associated with the current economic development model was seen as key for the city to drive a substantial change towards more ecologically informed and conscious development. Regarding the GLSP, different respondents suggested the need for a different business model that can help translate its principles into actual deliverable outcomes. The concept of multiple benefits became important here as a hook to achieve this.

Actually we need to create a business plan for our green spaces. And we need to find a way of actually placing a real value against particular interventions or policies, and it might well be that we do it in the context of air pollution or we do it in the context of obesity [...]. A big way forward is that, in terms of our planning framework, we will now be moving to get sustainability standards written into the core parts, and green space has a core requirement in terms of sustainable development in the city. If the Green Living Spaces Plan enables me to understand the asset that is our green space in the city for the benefit of our citizens, then it has value. If it is not capable of showing how I can benefit the citizens, then it has no value. (BCC, R4)

For example, this theme of developing a business plan explicitly factoring in GI and environmental concerns is central to the Zero Emission City (ZEC) project for Smithfield, which is a large exemplar pilot project that started in 2014 in partnership between the City Council and the UK Business Council for Sustainable Development (UKBCSD). The principal question here was how to develop an economic model that can be at the same time respectful of sustainability principles and attractive for private investors and developers.

[...] So we are now translating it into the Smithfield Masterplan, we are talking very specifically about the isolation of roof space, the greening of that, potentially productive landscape, using that space. [...] But we always come up against the big challenge of the viability, the deliverability of those aspirations, and one of the pieces of work of the ZEC has been looking at and is yet to report on, has been around how you value those outputs, the cost of, but also the benefits of, how you then embed them in any financial appraisals, the development community or investor market, would they undertake? (BCC, R2)

The main aim of the ZEC is to go beyond the visioning stage and to trial a different way through an effective public-private partnership including high level / important investors and decision-makers to regenerate a big and high value area in the city centre. However, whilst the strategic aspirations were applauded by several of the interviewees, two out of three interviewees closely familiar with the project observed that ZEC is struggling to operationalise this beyond the visioning stage, due in part to City Council downsizing and associated budgetary problems and also because of weak business engagement with the green aspects of the project. This raises the issue of forging effective and inclusive partnerships representing the diverse interests of the city; a theme we explore later in this report.

6.2.2. Governance and managing change

Governance can be characterised as the processes, institutions and tools in which a group of people manage policy and decision-making. In this analysis, with special regard to the GLSP, we centre governance around those institutions and actors who make decisions and the spaces those decisions affect.

1. Birmingham City Council

BCC is a key agent in shaping and delivering urban development at the city-scale. The innovative vision within the Green Commission and the policies proposed in the GLSP signal vibrant and forward thinking ideas with significant thought leadership. It also heralds the arrival of a new awareness of natural capital in the political domain.

There is a number of pressures. One is that Birmingham is quite an active local scene, so for example there are Birmingham Friends of the Earth, and they've been very active in the city for a long time, even going back to their summit and around then, the Friends of the Earth they are various people... and they put continually pressure to the local politicians, you know, asking "why are you not doing anything for the air quality?", "why can't you promote cycling?", "why don't you take care of the natural environment?" Now if you look at the typical profile, the employee background profile, or the politicians profile back in the 1990s, it was an older profile, and lot of them were very rooted in the field of car manufacturing, engineering, so any criticism of cars ... you know! So, what has been gradually happened, from the 1990s, it's that there has been a change in the profile of the politicians, and the politicians are now actually much younger, and also they have a much stronger social environmental awareness, much broader. So the political shift helps to drive that agenda. (BCC, R3)

Another respondent highlighted what they saw as a significant shift in planning practice from a narrow development management function to a more positive and holistic spatial planning perspective. GI is now seen by them as an integral part of planning, rather than the "icing on the cake". In this case, the respondent underlined the importance of a general awareness rather than some specific achievement.

What I would say is that it's in the last sort of four to five years, there's not one specific major initiative but what I would say is that we have finally started to understand that when we talk about space or we talk about place, we actually aren't just talking about roads or pavements, we're actually looking about the total space and we understand that it's people who shape space to make place. [...] we actually understand that our green space, and our canals, our rivers, are as much part of that overall planning infrastructure as the roads the cars move on. So it's very much actually seeing the green space as an integral part of the planning framework of the city and I would say that is probably the biggest change. (BCC, R4)

However, several challenges are evident in the way policies have been managed by BCC. Of particular significance here are internal relationships between different departments within the Council and the

relationships between the Council and external actors (such as NGOs, business and industry, researchers, universities).

Regarding the internal relationships, many departments through individual representatives were directly involved in shaping the GLSP covering transport, housing, water management, parks and recreation, economic development and regeneration, planning and public health areas. However, the plan seemingly has had no immediate impact on these departments as a whole and therefore shows few signs of its principles actually informing day-to-day practice and delivery of the GLSP.

What we haven't been able to achieve are substantial step changes yet in the delivery of services being different on the ground in relation to health (for example), so although they understand the strategy, they felt constraint, about engaging with changes to their own service practice and delivery on the ground [...]. (BCC, R1)

Furthermore, some respondents from within BCC, whilst being aware of the GLSP's existence, did not appear to have knowledge of its specific content or recommendations. This highlights a lack of integration that the plan itself supposedly champions and suggests that the way the plan is communicated internally needs attention. This becomes particularly important when staff turnover is high.

External relationships (see also section 6.2.3 on Partnerships) were defined as very open and supportive by some third sector participants. However, other respondents noted that BCC was too big, amorphous and difficult to build effective partnerships for long-term projects. In particular, the vulnerability of key individuals who make things happen was seen as a crucial factor; respondents highlighted that the positive work by BCC is often driven by key individuals, who become instrumental and essential to the success of initiatives. This creates an internal vulnerability if they were to leave or retire. This raises wider issues of teamwork and resilience at a time of rapid staff change and turn over.

I think the main obstacle when working with BCC, and it is so well known, is that it is very very big, and traditionally quite badly managed, and traditionally extremely slow moving, so we have worked with one key individual who was just about to be able to make things happen, just because of the sort of person they are. If that person then leaves, or moves on, or loses interest in that project, nobody else can do anything with it, really, and it fades away. And there are very few wilful individuals who can actually make things happen. (NGO, R3)

2. Green Commission

The Green Commission is the institutional body which prepared and is responsible for the Green Vision for Birmingham. It has operated since 2013 with the specific aim of delivering urban sustainability across the Council and its wider partners. However, some interviews revealed a lack of knowledge about the Green Commission's specific work together with a perception that the public were not really aware of its existence.

I know a little bit about the Green Commission [...]. But how that translates into real projects and real change, I'm not too sure. (NHS, R1)

This apparent lack of understanding and familiarity with the Green Commission and its role raises important questions as to how it presents itself; its public face and what kind of body / organisation it needs to become as well as its relationship with the GLSP evolution.

[...] the Green Commission itself doesn't have a public identity, so there is a website, it produces reports... but, I mean, try to ask anyone "Do you know about the Green Commission?", and they will say "Oh, the name sounds good, but what does it do?", because the Green Commission doesn't make statements on its behalf. It has been a frustration for some of the members of the Green Commission themselves, because they said "what are we here for? Why we were given this tie?" [...] and I think one of the failure is that we've never given the Commission any teeth, first to scrutinize properly, secondly to have a public identity, which means they could stand up and say "Actually this is not good enough", and for that voice to be listened to [...]. (BCC, R3)

Another interviewee observed how the Green Commission has lost support by not being more implementation/action-based, becoming too focused around meetings and dialogue and lacking teeth in terms of actually initiating or influencing projects on the ground.

[...] it started being a very good mix of businesses and public sector and academics, but I think people found it very frustrating, because the city wants to manage it, but they won't, because they haven't got resources to manage it, so it's just really meetings [...]. (Independent research centre, R1)

While there is a general agreement among respondents that the Green Commission provided some good policies relating to climate change and GI (as detailed in the GLSP), its lack of public identity and change-maker role on the ground were perceived as significant limitations. Furthermore, the lack of a specific budget makes delivery more complex and elusive.

3. The changing nature of West Midlands governance

In England the reorganization of administrative boundaries as part of a wider devolution agenda is currently being debated and shaped with some rapidity. At present, Birmingham is a metropolitan unitary authority set within its neighbouring local authorities. Since 2010 it has been part of the Greater Birmingham and Solihull Enterprise Partnership (GBSLEP), and has recently (2016) committed to becoming a member of the West Midlands Combined Authority (WMCA). Furthermore, the city is part of the Birmingham and Black Country Local Nature Partnership (B&BC LNP) and the B&BC Nature Improvement Area (B&BC NIA). Each of these institutions or partnerships has different spatial boundaries and actors and/or partners which cumulatively create a messy landscape to understand and work within. In this complex and changing governance architecture the role and position of the Green Commission is not completely clear. Although, according to the official website, the Green Commission is defined as *"a partnership that acts as an advisory body to the City Council and the Greater Birmingham*

and Solihull Local Enterprise Partnership"¹⁶, during the interviews it emerged as a confused and misunderstood entity not fitting into or actively influencing the geographical and functional dimensions of ongoing governance changes.

The difficulty, also, with the Green Commission, was its own geography; what it related to. When it was formed, it related to Birmingham. Then suddenly, once the Local Enterprise Partnerships came on the scene, who's going to function as the Greater Birmingham and Solihull Green Commission? And then they wanted the Black Country to be involved, and then there was this big geography identity location problem. But I think, now, this year, it's gone back to just covering Birmingham because of the difficult geography. I think there's a Solihull councillor that sits on it. [...] If that Solihull person still wants to come that would be great. And likewise for the Black Country. If the Black Country wants to send a representative there, then that's good, because it helps the links. [...] There's no reason why if a natural capital investment strategy is one of the outputs that comes from the Local Nature Partnership, there's no reason why the Green Commission can't be there. (NGO, R1)

There are 9 authorities within the GBSLEP. Birmingham City, obviously is an influential member but it is just one member. So the Green Commission activity originated through Birmingham City Council. It has relationships with the LEP, and the LEP helps feed into it, but it's not something that all authorities are embedded into, and spend a lot of time, helping to deliver. They will help to deliver certain aspects. (LEP, R1)

4. Language and time

Within this changing governance framework, two issues become critical: disciplinary language and time. Interviews revealed the existence of significant language barriers which affect the mainstreaming and embedding of new urban environmental policies.

I think one of the main obstacles is usually a language barrier. It's more about which kind of terminology you use, so I think it's very important to adjust to the language people speak; so for example if I'm talking to someone from an environmental organisation I would probably talk about living landscapes and if I talk to a planner I'd probably talk about green infrastructure and if I talk to a business person I would probably talk about natural capital. [...] I mean there are always champions in the city council who know all about it, but for example the planning officers, most of them may have heard about ecosystem services but they are not really familiar with the concept; so it's really important to pick such people up where they are at the moment to introduce them to these concepts we apply to value nature. (Independent research centre, R2)

The GLSP process was considered a good starting point for overcoming disciplinary boundaries and language barriers and highlighting how environmental assets and quality affect social and economic realms.

¹⁶ <http://www.makingbirminghamgreener.com/about/> [last accessed 22 December 2016]

[Talking about greening cities] ... *our argument is that, it is not really just an environmental issue, and seeing it as just an environmental issue is a mistake, because it has massive implications socially, it has massive implications economically in terms of the future of the city and what it needs to happen is people saying they need the change about the message and the argument behind the importance of green spaces in city. So if you like the way in which the Green Living Spaces Plan for Birmingham is constructed, the way in which is deliberately constructed is for effectively a new audience; so it's trying to get the message across to people that aren't in the environmental sector. (BCC, R1)*

Time also emerged as an important strand when discussing decision-making processes within a democratic framework. Different perceptions and priorities regarding long-term and short term among actors have already been highlighted (see section 6.2.1 on Deliverability). In the quote below the respondent also underlined the importance of the learning process within institutions which is going to be key to any behaviour change.

[about GLSP] *So there is some impact but it's not changing the whole system from today to tomorrow. You know, three years in decision making, it's quite a short time to be honest. I think it's an institutional learning process. (Independent research centre, R2)*

6.2.3. Partnerships

The partnership theme unpacks both the process and outcomes of partnerships in the wider context of the city and with specific regard to BCC and GLSP examples. Key barriers and opportunities are highlighted through the different stakeholders' experiences and points of view.

1. Complexities of partnership working - Barriers and bridges

The quote below highlights the importance of taking a more holistic approach in dealing with environmental issues at the urban scale reflecting a clear aspiration by some BCC staff to adopt a culture change in thinking and approach. Some positive steps are evident in this direction as demonstrated by producing the GLSP, but also within emerging areas of work across the council. In some areas, improved connections have been made across different departments. This was most evident in the BCC interviews which recognised the need for more holistic thinking and collaborative working both within and outside the BCC environment.

[how to fund and finance green cities] *it's no longer just a public authority responsibility, it's a multiplayer, multisectoral operation, that may or may not sit within a public responsibility, but addresses global planetary boundaries and generational timescales, that's the difference, and the way in which you can measure progress and success, is through ecosystem science. If you can take the public with you into that journey, then you are into a pretty strong new model. (BCC, R1)*

The nature of the relationships with external stakeholders was a significant consideration given the difficulties encountered by some third party respondents in trying to establish long-lasting productive partnerships with BCC. Austerity and cuts were seen as a key factor in changing priorities for certain agendas which then impacted negatively upon partnership working and reduced the focus to (more narrowly framed) statutory duties.

I think we had a couple of member who was doing interesting things in showing a bit of leadership on environmental issues, but now I got the feeling that is no longer seen as that much a priority, and of course that is largely influenced by austerity and the policy decisions of our current national government, and what they will fund. So, for example, [name of project with BCC], came to end because the funding and the policy change at national level was no longer viable, so that wasn't really a decision of Birmingham, Birmingham is one of the hardest hit by austerity, they don't have much funding left for [the environment]. (NGO, R3)

Other respondents talked about difficulties related to the size of the Council itself (see also section 6.2.2 on Governance), but also to a perceived reluctance of some staff to engage in a partnership relationship if the benefit stream that might occur was not explicit and immediate.

I think [...] the council is such a big organisation at the moment, it has got quite a lot of staff. In the past it had double the amount of staff it has now. By 2021, it's going to have a lot fewer staff, so that does raise problems for us. I think the other thing as well is, sometimes it's difficult to get staff to buy in to, to take ownership of some of these projects. I think when they see they're going to get benefit, when they see there's funding, when they see there's going to be something on the ground that will benefit them, they're usually quite supportive. But you have to get to that point first to convince them that it's worth making the effort. (NGO, R1)

This view makes clear the need for different interests to be more explicit and to identify upfront potential synergies and opportunities for partnerships to deliver positive outcomes in line with organisations' priorities. Also, special efforts may be required for public bodies to use different channels and opportunities to communicate their work and priorities to stakeholders and the public in a two-way exchange as part of wider knowledge exchange functions which are seen as underused, thus perpetuating missed opportunities.

I would make a huge number of assumptions about the way urban planning happens for example, and just by the same token, I think there must be lots of people that work in that space with urban and environmental issues all the time that make massive assumptions about the way the NHS works and is funded. And I think unless the two work much more closely together, there'll be lots of barriers and hurdles that don't need to be there. (NHS, R1)

However, respondents also highlighted examples of where multi-stakeholder partnerships had worked really well and can serve as national if not global exemplars. There was recognition that more could be done to promote these as important learning opportunities within the Council and the wider city.

That's what this organisation has been all about, it's trying to get others doing what we would do, so we deliver a lot more. That's where the [name of initiative within the West Midlands¹⁷] has been successful, because this organisation hasn't done all that delivery. We've enabled it, and facilitated it, but we've only done some of that. And it's for the other partners in the [initiative] who should feel very pleased about those achievements because they've all been part of it. That's what we need to do. (NGO, R1)

2. Engaging with third sector and community

Another significant barrier related to community engagement set within two different narratives. First, there were perceived to be major obstacles in securing effective community engagement and second, there is a perceived power imbalance between the institutional environment and some third sector / community organizations.

Regarding community development, the key issue appeared to be the difficulty of maintaining an engagement process beyond its initial inception. This is further nuanced by the setting within which engagement occurs; the perceived priority of the issue in question and the formal nature of meetings which can make people feel excluded and reduce attendance/engagement. Those experiences may lead to participatory disinterest / fatigue and a growing trust deficit between the citizens and their local authority.

We've targeted deprived neighbourhoods, and once you've engaged a community in one of those discussions, the last thing they want to talk about is their local park, because it is not n.1 of their priorities! They haven't got a job, or they can't go from A to B because there's no bus, they have issues with crime, whatever... there are many issues they are worried about, and the last thing is their local environment; and politically, from the governments point of view, they don't see those things being addressed, so why would they turn out to a meeting or have any interest in talking about the local environment? (BCC, R1)

[about community] they are somewhat disappointed that they haven't seen significant changes on the ground, [...] if this is developing a new thinking, why don't things changed on the ground, and why haven't they as community groups been given new tools, new abilities, new money or whatever. So, that's an issue and there is kind of raised expectation and it's not delivered in their eyes, so they are the main sort of assessment of current state of play. (BCC, R1)

An interesting issue about maps, for example, was raised in interviews with NGOs. They reported that they would like to have access to the GIS maps of the Ecosystem Services Assessment, but hitherto the maps have only been available for download at the whole city scale and in PDF format which makes them unsuitable and inflexible for local purposes.

We haven't used it yet, [...] in some of the earlier meetings that we went to for the Green Commission, we were asking if there was a tool coming out from this that we can use for

¹⁷ This has been inserted to preserve anonymity

community groups. Yes, we've been invited to that stage, which is ... you know, "what is the value of that piece of land?" It would be nice to be able to use that map, to do that. (NGO, R2)

Regarding the power relations between institutional bodies and the third sector, some NGOs felt they have expertise in community work but were not seen by the council as an established or legitimate voice. This raised fundamental questions about how those NGOs' experience and skills could be better recognised and used. At present some considered that they were only tokenistic members fulfilling a tick box exercise.

We are invited into things like the Green Commission, but [...] we are... not quite a "tick box" exercise, but most of the work has been done by the time we get there, [...] but in terms of planning, and strategies, it tends to feel like that we come along and I'm not sure how much we actively contribute to the process beyond being the voice of the community; which is good in respect of what it used to be, which is when we were not involved at all. And it's partly due to the capacity to contribute rather than all of those organization are not welcome. (NGO, R2)

Furthermore, some respondents saw community engagement as a form of manipulation; it was perceived as a way for the Council to discharge its responsibility in terms of open spaces care.

I've seen some efforts to engage with communities in things like ensuring that parks and allotments sites are looked after, but this is really about trying to transfer some of the liability for services onto the community, as much as it is about a genuine commitment to community involvement; so it becomes problematic. (NGO, R3)

This imbalance extends beyond simple power relations to issues of trust and self-efficacy and different spatial and temporal objectives. This affects how the GLSP is seen and valued.

I've seen it. I suppose from the point of view of an organization like ours, we are very focused on the day to day, and a strategy that is looking at 5- 10 years ahead... we are interested in it, but it feels like... we are fighting hard just to keep standing still. So the idea of a strategy that lasts 10 years, I know it's interlocutory... but it's not again within our capacity to have a role and concentrate on that. We work very hard to stay where we are. (NGO, R2)

The same NGO respondent also commented on their organisation's work over the long-term, reflecting on the change that they have made over time rather than the difficulties of the day to day running of the organisation.

I tend not to see things in terms of "one of the achievements", it's more an incremental... you know, the achievement of our organization is that it is approaching its twentieth birthday, for our community organization to stay active, recruiting new people, doing more things, after twenty years, it's an achievement! [...] but actually my thought on development work is that it's a long slow slope! (NGO, R2)

2. Fragmentation of partnerships across city

The increasing fragmentation of partnerships across the city reflected what we see as a fallacy of 'creeping incrementalism' with successive waves of government-funded and other initiatives creating a complex jumble of different partnership initiatives with duplication and sometimes conflict between the different actors and beneficiaries.

In Birmingham they've got a big programme [name of the programme], but they are not joined up, you see we've got a network here, a network there, so that's not helpful [...]. They are redoing a waste strategy currently but until recently the planning has seemed to be done separately, and so we are not getting the benefits if we don't do things in a holistic way, [...] and you are not seeing any benefit, so if you are an officer in the city, why do you want to deal with that? (Independent research centre, R1)

This fragmentation problem became evident in interviews in which respondents were asked about projects or programmes directly related to their specific field of interest / action, and they were barely (if at all) aware of them.

[About a project] Yes, it is interesting. So who's trying to develop that? That makes me very curious, because I think there's a massive amount of naivety, if there's an assumption that you can save money, because downstream the NHS for example would save money by keeping people healthier, that that money could then be used to reinvest into spaces, because my belief is for the NHS to survive we've got to do those things anyway. That money has to be saved in the NHS, not saved so then it can be spent somewhere else. I think it genuinely has to come out of public purse as well. (NHS, R1)

Furthermore, in some interviews, a respondent reported about an initiative where the Green Commission was involved, but then its contribution stalled.

So there was a project [...], and it was supposed to be identifying challenges within Birmingham City Council [area ...], but because of work load pressures, or whatever, the Green Commission element of it wasn't able to be taken forward, so we would have got more exposed to it then. (NHS, R1)

It seems self-evident that with limited time and resources partnerships have to develop new ways to be strong, inclusive and resilient. There is emerging evidence of a culture of new initiatives using more flexible or open partnerships, rather than building on a body of existing work, to be more efficient.

6.2.4. Ecosystem services and the value of nature

The subtle nuances in the way environmental sustainability is defined and operationalised by the council provides an important theme. Here, the twin concepts of natural capital and ecosystem services dominate the environmental narrative in the GLSP and wider research within BCC to help shape progress towards sustainability. Whilst there are national definitions of sustainable development (SD) goals, these expressions often carry tensions between local and national priorities and the way the environment is framed in land use decisions given the competing priorities the council has.

1. Economic value of nature

One of the key aspects of the GLSP approach is the Ecosystem Services (ES) assessment and the explicit reference to the Ecosystem Approach (EA). The EA is defined as "a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way" (Secretariat of the Convention on Biological Diversity, 2004: 6). This more holistic systems thinking positions the economic and social within the wider environmental sphere in order to establish comprehensive policies for sustainable development. So within the EA, the value of the environment is not only considered in its intrinsic biological dynamics; on the contrary it becomes strongly connected with other values and benefits. This therefore opens a question about how best to value nature in relation to the economic and social aspects.

So we call them "Ecosystem Services", people don't understand that, but they understand benefits and values, so you can actually show that then that is the way of engaging with these other audiences and making different sets of arguments. And what's been interesting is that is those calculations that have made, the financial world set up and listen on a global scale, because they thought it wasn't possible to put a value on nature; so "don't put a value on nature, leave out of the accounts, and try and preserve it in the best way you can". The Ecosystem Approach is "no, there is a value, let's try to having an integrated approach", and it's taking a while, but it is speaking a language that is understandable. Because almost all cities and all government for that matter, now in the Western world, take decisions based on economic value not on social value and not on environment value. So if you can have an economic debate showing the economic connectivity between the consequences of the unintended consequences of doing something, you're much likely to get supported in those actions. (BCC, R1)

Putting an economic value on nature became one of the key strands of the GLSP so as to translate the benefits nature can provide into understandable financial terms. In so doing it spoke the same language of politics and business to inform decisions. The GLSP ES Assessment (Hölzinger, 2013a, 2013b) proposed the multi-layered challenge map showing supply and demand of ES against local population and the economic evaluation of green spaces. The map provided an evidence base to help target new policy interventions and as part of a wider mitigation.

[...] the multi-layered map: when someone wants to buy a piece of a land, to build houses on, they have to pay for the consequences to take that particular land out of our ecosystem services, not just how much money can be made building houses on it, but they now have costs like this much more for flood alleviation, this much more for people around who don't have somewhere to walk for getting health. And then, that's marvellous! To develop that map and to see that map being used to say "Yes you can buy that piece of land, it can cost you a hundred thousand plus another hundred thousand for what we are going to lose!" I would love to see it! (NGO, R2)

The other GLSP Appendix is an assessment in monetary terms of the benefits people gain from ES, which are provided for free. This document aims to help decision-makers understand the economic value of nature as an asset rather than as a constraint.

The rationale was, mainly, to convince other people who are usually not involved in environmental management, or better, to reveal the value of nature to them, because the actors who are usually involved in environmental management, they know the value of a tree for example, but many other decision makers or planners or any other actors within the city council for example or other stakeholders, they just don't know because they are not involved in this kind of management, but they know the value of a pound, so it's really about translating the value of nature into a metric everyone can understand, which is money. (Independent research centre, R2)

The advantage of such a method is seen by those advocates as a way to make benefits from nature comparable with other financial benefits and costs (even though the methods used to calculate specific values for environmental assets and processes is highly controversial). However, some respondents felt distinctly uncomfortable with both the principles and the assumptions involved in natural capital accounting.

[...] they have an attractive area, and the developer would say "well, I know that this ancient woodland, is in the natural capital accounting, has got this financial value, of course we will recompense", because the money doesn't need to be spent there, they will spend it miles away. That's the problem when you reduce everything purely to money, because money is totally mobile, is not fixed, and once you have converted something into monetary value, you are extracting the social value, the ecological value, and from a capital perspective you can just put them anywhere you live, it doesn't matter! I've converted it to money, and I'm giving you the money, you can spend it where you are in your market place, and that's not what nature is about. (BCC, R3)

2. Predominance of economic growth priorities on development

It is important to recognise the way national priorities may distort local practice and decision making even under the guise of a new localism ethic. At present a strong economic growth narrative dominates government policies and debates. It is important that policies and decisions relating to the environment fit that particular narrative. This anthropocentric ethic frames nature and the environment solely in terms of the human benefits they give rather than the intrinsic and potential value they have in their own right. The economic growth narrative is therefore shaping and reflecting society's dominant worldview; the kind of nature we currently value. The use of ecosystem services is a pragmatic response to try and bring ecosystem considerations back into policy and decision-making. However, the ecosystem services language and associated economic valuation methods commonly used in ecosystem services assessments are vulnerable to what may be seen as a false sense of objectivity and robustness.

Furthermore, day-to-day planning practice relies on the NPPF, NPPG and government key performance indicators (KPIs) that shape our economy. Government-led discourses generally do not include natural capital or other expressions of ecosystem services (see also section 6). This means that the environment is consistently trumped by economic performance indicators which poses a serious challenge to more holistic decision-making.

I think, in a planning context, [the main obstacle in dealing with environment issues] is probably... it is an attempt being made to try and balance economic development with concerns about the environment, because that is what planning is about, when you're trying to balance the three pillars of sustainability. So when we're producing our plans and we're making decisions about planning applications, each individual authority, within the LEP, has statutory responsibilities, to comply with National Planning Policy Guidance and produce plans which are reflecting that sort of balance. When you raise that up to the strategic level, with the LEP involved, the LEP board is charged with delivering the SEP [LEP's Strategic Economic Plan]. And the SEP talks about high level economic growth, job targets, increases in GDP. Those sorts of KPIs and what the LEP is about. It's less concerned about the impact on the environment, and it knows that, and I think that's probably where every LEP is at the moment. In due course, you would hope that they start to understand their environmental responsibilities and that you, if hard decisions need to be made about whether you go into the greenbelt, then those decisions have to be made, recognising the implications of losing greenbelt. And the impact upon other forms of green infrastructure (LEP, R1).

It is significant that in the context of the devolution debate and the combined authority discussions the focus has been on housing and economic growth. The environment and GI have not featured in any substantive way. Politically it is not generally on the radar except when for example a flood event occurs; as evidenced by the recent flash flooding this summer (2016) in Birmingham. This shows that the inclusion of the environment in political and planning decision-making has a long way to go but there are hooks that can grasp public attention.

"I have to say that the priority is very much that of the LEP, which is jobs, wealth creation, provision of infrastructure to promote and support sustainable growth. Being honest with you, I think the environment and the quality of the environment, promotion of the environment has been less of a concern and I think that probably is the reflective of many LEPs. Their priority when they were set up was to bring forward jobs and wealth creation, and to promote and sustain economic development. The focus has been less on the role and function of the environment and promotion and protection of the environment. Certainly the focus from my group has been on the planning of the area, but with the focus very much on jobs and housing"(LEP, R1).

A further strand to this argument related to concerns expressed by interview participants over how individual planning applications were being managed in terms of their sustainability impacts with the environment. Adherence to NPPG guidelines meant that economic growth and economic viability concerns dominated responses by officers and elected members. This was seen to be at odds with the Birmingham City Council's declaration to be a leading green city in Europe.

3. Perceived costs of sustainability

An important theme emerging from the interviews related to the way the environment is considered in the real world of property investment in urban development. Although there is a green vision which puts the environment at the centre of BCC policies, questions and doubt remain about how this can be

delivered in the face of public and private investment which is perceived as being driven primarily by economic interests.

When you look at the majority, the way development comes from, how it is driven and delivered, it comes from the private sector. I suppose they see the value of environment, but I think across the board it's the very last thing that is discussed, it's the last thing that is talked about, from their perspective, it is seen as a cost, it is a burden, rather than an intrinsic value, I think that came back to two things: one is that we are kind of "tied" by national regulations and guidance on what planning can or can't do. And equally, this is the focus of the ZEC [Zero Emission City] programme, there is the financial viability aspect, and how traditional models are very much focused on those elements of construction phases, profit, any additional thing is seen as an extra. [...] And I think the other one probably is: well, there are principles about the importance of the environment, the importance of the resilience, but ultimately are we absolutely clear about what that looks like? (BCC, R2)

The quote above encapsulates multiple challenges in terms of the predominance of private prerogatives in driving development; the supremacy of financial appraisals in which environment is seen as an extra cost; and a relative unpreparedness of the public sector to embrace sustainability models and policies without an economic prefix. This view was confirmed in many interviews, and applies also to the 'negotiation' between public sector and developers that was previously highlighted (see section 6.2.1 on Deliverability).

Unless you can demonstrate to the big developers, and the big house builders, that they are going to make additional, at least equal or additional returns, they are not going to do it. (Independent research centre, R1)

However, there is an emerging evidence from the responses which reflects a more positive outlook, emphasizing a change in the global understanding of what sustainable development actually means and should look like.

There is a beginning of a realization by some politicians, not necessarily by some of our investment officers, but it starts with some politicians, but actually some of the business people, they are beginning to talk about their corporate behaviour towards the planet, and therefore that is something that they are going into, so that is a way of standing up on a global scale, and it's important... (BCC, R3)

Even developers are now recognising the fact that these global pictures are starting to influence them as companies and in turn to their company outlook, and there's money to be made from creating a climate proof development, because you can sell it as a climate proof development, so it's an added value to it. [...] you're right at the watershed moment where major developers are crossing the line and wanting to look at these calculations, because they're available to them to do it, so it potentially changes the whole development equation. Because it's not what you can achieve for the cheapest price it's... what's best for the businesses future which is a subtly different set of thoughts. So not all developers are there but surprisingly quite a lot of them are engaging in that debate. And I think it's a kind of surprise for planners, because I don't think planners thought that would

happen. The Ecosystems Approach has that potential to be quite a transitional tool for development. (BCC, R1)

This view reflects for instance the engagement of the World Business Council for Sustainable Development in the aforementioned project of a Zero Emission City (ZEC), where Birmingham is one of the pilots.¹⁸ However, this serves to highlight the difference between global trends and local dynamics: even if at a global level there is a debate increasingly involving developers, this is perceived to have had little influence on the majority of private investors at the local level.

¹⁸ <http://www.wbcd.org/zec.aspx> [last accessed 22 December 2016]

7. Discussion

This research has revealed two key issues: one relating to the strategic profile and actions of BCC and the ways in which it drives and manages urban change through its governance frameworks; whilst the second is focussed on the extent to which the GLSP has informed policy and plan interventions within and across Birmingham with particular attention to the statutory planning framework. This discussion addresses these issues drawing on the results from both the policy analysis and interviews in order to consider how BCC can best move forward to achieve its vision to be a leading green city in Europe.

7.2. Building and enhancing BCC partnerships

There is clear convergence from the Kerslake Review and our interviews relating to how BCC approaches and delivers on partnerships, partly as a function of the council's size but also a reflection of its largely top down culture. *"Birmingham City Council's size acts as both a badge and a barrier: it has led to a not invented here, silo-based and council-knows-best culture. These characteristics are not an inescapable feature of Birmingham City Council's size but they need to be acknowledged and addressed. There is much to learn here from other large authorities"* (Kerslake, 2014: 7). The silo-based culture has been recognized as a recurring theme in our evaluation; we found it expressed in the lack of internal communication on plans' development and content between departments, and also in the work of BCC in environmental innovation associated with GLSP appears to be driven by key individuals but not embedded across the range of council departments.

Some respondents highlighted that, within specific partnerships, BCC staff had been very supportive and open-minded, but collaborative work can be prevented by the attitude of a few dominant individuals. Kerslake also underlined: *"While there are some good partnerships, particularly operationally, many external partners feel the culture is dominant and over-controlling and that the council is complex, impenetrable and too narrowly focused on its own agenda"* (Kerslake, 2012: 4). This emerged in interviews, for example in cases where people highlighted that the Council would dip in and out of partnerships dependent on current short term priorities rather than invest in longer term, capacity building partnerships with longer term goals. There was also a tension between the resources available to manage and deliver on partnerships versus the raised expectations from other participants. The statement on the role of the Green Commission by one of the participants from an independent research centre (see section. 6.2.2, p.29) is typical here emphasising that its mix of participants and sectors

represented was appropriate, but that it lacked the resources and voice to make a real difference on the ground.

Despite its perceived shortcomings, the Green Commission was valued for its ability to generate collaboration and dialogue at a senior level across different departments and with elected members as a foundation for future initiatives.

"Tackling climate change does require long term efforts and only through a strategic, co-ordinated approach by all stakeholders will we achieve our ambitions. The collaboration across the Commission and its 100 plus stakeholders continues to be the key to driving our efforts and the Commission has proven itself as an effective cross sector network for raising issues, creating plans and beginning to make the necessary long term changes that Birmingham needs" (Green Commission, 2015: 1).

The challenge then becomes one of securing the necessary up-front investment of resources and time to maximise the skills and experience within the partnerships themselves rather than the traditional managerial approaches the interview respondents were so critical about. A related point emerging from the interviews was the predilection on establishing new partnerships at the expense of building on what was already in place; perhaps with some re-energising and looking for stronger integration. This was leading to increased fragmentation within a complex landscape of different groupings each making demands on participants across the city. Thus securing the necessary commitment to make partnerships viable and joined up became a critical challenge.

7.2. Moving out of silos to adopt more joined-up working

This research has been undertaken at a time of significant and rapid change in the governance of the West Midlands. There are new players who form part of a messy and complex institutional architecture. Moreover, the power relations affect the type and nature of collaboration among the established and new bodies. For example, relationships between BCC, GBSLEP and the WMCA are key at the present time. This new devolution landscape, as seen through our respondents interview's and policy analyses, appear to be dominated by economic growth considerations; providing jobs and houses and attracting and encouraging private investments. Within this framework, environment and sustainability appear to be relegated from active consideration despite the re-framing of nature as an asset that contributes significantly to growth strategies and the holistic principles for city living co-developed within the GLSP (BCC, 2013a: 10).

The silo mentality is not helped by the creation of specialised partnerships where economic affairs and environmental issues are largely kept separate. The national policy focus on local 'enterprise' on the one

hand and local 'nature' partnerships on the other hand hinder more integrated perspectives for sure. Although the main aim of LEPs is to promote local economic development,¹⁹ it is equally true that par. 29 of the NPPF clearly states that LEPs may collaborate with local neighbouring authorities to build a strategic approach to green infrastructure.²⁰ This provides an important opportunity space to engage LEPs and the WMCA in discussions on the role of GI and ES at a wider scale than the city, and move towards more vertical integration of policies. This area of work and making connections would be ideal for the Green Commission to aid the transformation to more joined-up perspectives and policy interventions. It is no coincidence that Birmingham is a pilot in the Research Council UK's Urban Living Programme²¹ which is an interdisciplinary project to help improve the way the city plans for the future (while a forward-looking and exciting research project its actual impact in practice is less clear at this stage). At the heart of this is the move away from the silo culture which also impacts negatively on the way problems are diagnosed through the data that is collected and addressed within a narrow (predominantly sectoral) framing.

Regarding the WMCA, its main aim is *"to create the most effective Combined Authority in the country in order to propel our economy to further growth than can be achieved at present"* (WMCA, 2015: 7). In the Launch Statement (WMCA, 2015) there is a strong emphasis on collaborative work between the three LEPs and other local authorities forming the WMCA. The challenge is to mainstream the environment into such discussions rather than its appearance retrospectively as a bolt-on. This becomes an issue of civic leadership which is also a key criticism arising from the Kerslake review.

However, it must be recognized that integration between policies and collaboration among institutions are long-term processes requiring clear principles and time for capacity building with up-front investment within a managed and deliberative process. Such endeavours may seem counter-intuitive

¹⁹ In the document "The Coalition: our programme for government", published by the conservative government in 2010, Local Enterprise Partnership are defined as "joint local authority-business bodies brought forward by local authorities themselves to promote local economic development" (p. 10).

²⁰ Par. 29, NPPF: "This strategic approach to green infrastructure may cross administrative boundaries. Therefore neighbouring authorities, working collaboratively with other stakeholders including Local Nature Partnerships (LNPs) and Local Enterprise Partnerships (LEPs), may wish to consider how wider strategies for their areas can help address cross-boundary issues and help meet the Duty to Cooperate".

²¹ The Urban Living Programme is a Research Councils UK and Innovate UK funded programme for 5 pilot cities across England. The Urban Living Birmingham consortium is identifying improvements to urban services by combining top-down urban governance with bottom-up lay and expert knowledge to provide an environment that emphasises and encourages innovations that generate a step change in urban service provision. It is doing this by bringing together, developing and applying end-user and open innovation processes (from business disciplines) and participatory and cooperative design principles (from urban design disciplines) to selected urban services and systems to co-create a resilient Birmingham that provides 'better outcomes for people' (BOP).

<http://www.birmingham.ac.uk/schools/business/research/research-projects/urban-living-birmingham-project.aspx> [last accessed 22 December 2016].

and difficult to realise when the government agenda is about devolved agreements and (ad hoc) locally specific negotiations. Therefore, there is an emerging need to diagnose cross-cutting challenges and identify concepts, policies and interventions that can help to build common understandings and goals across different sectors and departmental and political boundary divides. The GLSP attempts to do this through its demand-and-supply maps; so the challenge becomes one of communication and knowledge exchange. It is interesting here how Birmingham's innovative approach to natural capital and ecosystem services is seen as an exemplar *outside* the organisation but there was evidence that the material was not understood or even recognised *within* other key BCC departments. There does seem to be an imperative about improving internal communications and to celebrate new ways of facilitating more holistic thinking and joined-up working.

One way of helping BCC move out of silos is to use statutory guidance in more creative ways that maximises attention to the environment as a base of social and economic wellbeing. This ability to translate new ways of thinking into existing policy priorities is key to successful engagement and acceptance by (often economically oriented) decision-making stakeholders. For example, the Duty to Cooperate was introduced by the Localism Act in 2011 and the NPPG (par. 001) states that "*local planning authorities should make every effort to secure the necessary cooperation on strategic cross boundary matters before they submit their Local Plans for examination*". This provides an opportunity space for GI to become a strategic cross-boundary matter; reinforced by development pressures on the existing Green Belt which forms part of the GI for Birmingham. The Duty to Cooperate is an important test of assessing the soundness of new local plans, so it could become a key mechanism in promoting integration and mainstreaming GI, NC and ES concepts for cross-boundary and cross-sectoral planning. For example, the South Downs National Park published a Duty to Cooperate statement (SDNPA, 2015: 4.2) where the following strategic principles are identified for collaborative work with the surrounding 15 district authorities. This provides a statutory model to help secure better strategic environmental outcomes as envisaged in the GLSP.

- *"Conserving and enhancing the natural beauty of the area*
 - *Conserving and enhancing the region's biodiversity (including GI issues)*
 - *The delivery of new homes, including affordable homes and pitches for Travellers*
 - *The promotion of sustainable tourism*
 - *Development of the rural economy*
 - *Improving the efficiency of transport networks by enhancing the proportion of travel by sustainable modes and promoting policies which reduce the need to travel".*
- (SDNPA, 2015: 4.2)

Some concepts, that are understood across multiple audiences and publics, might also facilitate joined-up working and address perceived language / jargon barriers; for example, the GI concept. GI is generally understood and used in planning and ecology and has found traction amongst non-academics (e.g. the third sector). However, it is concerning that GI is not discussed or used, and thus not recognized as an effective integrating concept or tool, in LEP's and WMCA's published documents and strategies.

Another integrative tool in theory are ecosystem services assessments. The ES Assessment conducted for the GLSP might be seen as an effective instrument as it provides an evaluation of the ES not only in terms of the supply of services for people, but also in terms of their approximate monetary value, which has become the denominator most commonly used and universally understood. However, there are implicit risks connected with the reduction of nature's value to monetary terms as highlighted in section 5.2.4. However, the Appendices of the GLSP (Hölzinger, 2013a, 2013b) might present a common ground to start an important discourse with GBSLEP and WMCA members, and extending the ES assessment to beyond the city's boundary.

Similarly, the concept of natural capital is increasingly gaining attention in public debate, and for this reason it might be considered as another 'bridge' to widen participation and then build awareness about how to value nature. A first step towards this direction is certainly the partnership between BCC, the Consultancy for Environmental Economics and Policy (CEEP) and the UK Business Council for Sustainable Development, around the trial of the Natural Capital Planning Tool (NCPT). This project aims at *"devis[ing] a reliable and acceptable assessment methodology based on ecosystem services to better assess and manage the long-term impacts of proposed major developments and plans on natural capital and ecosystem services"* (RICS, 2015: 5). Bringing together Natural Capital and Ecosystem Services concepts, NCPT provides a tool for easily assessing the environmental impact and performance of a proposed development within a time frame of 25 years. It is currently being tested in a range of different planning projects at different scales across the country including Birmingham as part of a wider NERC (Natural Environment Research Council) research project led by the University of Birmingham.²² Moreover, NCPT is potentially a useful tool in order for the City to frame its Natural Capital Plan within the national framework. Thus the NCPT and Urban living research projects together with the forthcoming Natural Capital Plan provide important opportunity spaces for Birmingham to exploit, to extend its stakeholders' network and improve its innovative work in this field.

²² By BCC about a major urban housing development in Birmingham; by the Environment Agency on a Flood Alleviation Scheme in Rugeley, Staffordshire; by Skanska on a re-development of their manufacturing facilities in Doncaster. (RICS, 2015: 6)

7.3. Mind the gap: strategy and delivery

A key finding from the interviews was the perception of a significant strategy-delivery gap between the intent and vision of the Green Commission and the GLSP and the reality on the ground in terms of what is delivered and actually happening. This raises wider issues about the sufficiency of resources on the ground to translate the policy into practice and also the extent to which the policies are communicated to the delivery teams. At the heart of this appears to be a tension between the flexibility and informality of a non-statutory plan and the benefits of a statutory plan in terms of its legal requirements. There is also an issue of how the GLSP is presented. For example,

"This Plan should not be seen as just an ideas document; although it does offer a fresh perspective on the city, this Plan is also about changing the way we do things; joining up agendas, agencies, services, users and funding; and re-positioning the importance of Parks. This Plan's seven principles will help shape all future development in the city as they will be enacted through the draft Your Green and Healthy City SPD" (BCC, 2013a: 3).

The policy analyses showed that there was little explicit connection between the GLSP's seven principles and the policies in the draft local plan. Indeed, interviews revealed that the NPPF was the primary determinant of policies in the BDP. This raises the vexed issue of whether the current non-statutory basis of the GLSP could be enhanced by it becoming a SPD within the local plan itself. This theme is crucial, especially considering the status of SPDs; even though it is not part of the development plan, it is *"capable of being a material consideration in planning decisions"*²³. In fact, Birmingham's SPD *Places for the Future* (BCC, 2012: 9) stated:

"The document includes advice on:

- How the planning process will ensure sustainable development and what is required of developers*
- Throughout the planning process, including the submission of Sustainability Statements, Design and Access Statements and Carbon Budget Statements.*
- Guidance for developers on how to plan and deliver sustainable developments to comply with the Council's policies and standards on sustainability."*

As previously shown, the SPD *Places for the Future* endorses the principles in the GLSP but it doesn't take into consideration the ES Assessment, as it was published later. Therefore, at present, this represents a big challenge to be addressed in the new SPD *Your Green and Healthy City*: the effective role of GLSP in urban development will depend on the way in which the seven principles and the ES

²³ Definition of Supplementary Planning Document, Glossary of NPPF. In general SPDs have to be in line with par. 153 of NPPF, and they are specifically regulated by the The Town and Country Planning (Local Planning) (England) Regulations 2012 (reg. 11-16).

Assessment will be incorporated into the SPD, and translated into specific requirements for planning applications.

7.4. Mind your language

Questions about language have also arisen in this research. In engaging with concepts within ecosystem science, as well as the specialist terminology and procedures within any discipline / sector, there is an inevitable 'language' barrier related to people's understanding and familiarity with the jargon and reference points that, if not carefully managed, can alienate some participants. In the environmental planning and management context, the use of ecosystem services and natural capital is widespread but it is not readily used or worked within the built environment or in wider public discourse. This might be a constraint both within BCC departments and with external stakeholders (e.g. business and the third sector). Indeed, the specialised jargon and language that different professions use helps to perpetuate the silos culture discussed previously. This becomes a significant obstacle to mainstreaming the environment in general and GI in particular as presented in the GLSP.

Using different types of communication streams can be an important tool to disseminate concepts and knowledge relating to ecosystem science. For example, the lack of familiarity with GLSP and its attendant language amongst the planners was a key finding. So the action becomes how to translate that material into the priorities that planners have. Here we argue that mapping the GLSP to the NPPF paragraphs provides an important means of engagement. The same argument applies to other departments; for example, in public health the Marmot Review offers a similar hook for engagement. The report *Fair Society, Healthy Lives*, the strategic review of health inequalities in England post-2010, by the Marmot Review (2010), recommended the creation and development of healthy and sustainable places and communities as key means of reducing health inequalities. The recommended policies required to achieve this included: improving active travel; improving the availability of good quality open and green spaces and improving local food production and food growing (all important to GI concepts). The review informed the Health and Social Care Act (HM Government, UK Parliament, 2012) which transferred the responsibility for public health to local authorities, enhancing opportunities in theory for greater linkages between health and planning via GI provision. It therefore has the potential to liberate budget lines and policy working. In Erdington a five-year pilot project has been established to address explicitly the connection between well-being, spatial planning and provision of green spaces within two marginal urban neighbourhoods.

Questions about language have emerged as evident not only in interviews, but also in the policy analysis. For example, as already shown, the absence of references to ecosystem services and natural capital in the BDP must be noted. The NPPF clearly indicated that the planning system should recognize the benefits of ecosystem services (par. 109). Also, the Duty to Cooperate function in current national government policy for England can help tap into the strategic aspects of the GI network and its multiple benefits to the city. These and others offer real opportunities for the GLSP evidence to point a way forward as to how BCC can help shape more holistic thinking, policies and development. In many ways GLSP has the 'right' vision and principles; the challenge is to communicate these across all the departments using policy and legislation to guide this process.

8. Conclusions

This chapter aims to sum up the main themes which emerged from this analysis - both from the interviews and the desk study – and to highlight key challenges and actions.

Each challenge represents a critical point to be addressed by BCC and its partners, but also reflects wider issues and questions at the national and international level.

The proposed actions are practical suggestions specific for BCC, separated into 3 time ranges.

8.1. Key challenges and opportunities for mainstreaming the environment in planning and decision-making

- **Translate new ways of thinking into existing policy priorities at multiple scales set within locally established inclusive and deliberative processes.** In this regard, long-term processes and visions are needed, but some policies (e.g. cited NPPF paragraphs or Duty to Cooperate) or concepts (GI or ES assessment, see section 7.2 of this report) help mainstreaming environmental benefits in spatial planning.
- **Find the appropriate space and place for environmental policies and considerations in the rapidly changing governance framework.** There is a need for the environment to be valued for its multiple benefits at a range of scales and as an asset in economic development and quality of life strategies and to enable collaboration between neighbouring local authorities on key issues such as climate change, biodiversity and water management.
- **Understand the multiple values and benefits of nature as an asset to reframe the economic growth narrative set within a wider framework of societal and quality of life benefits using the 12 principles of the Ecosystem Approach as a potential mechanism for improved policy and decision making.** This does not relegate economic development considerations but rather deals with a more social ecological perspective which will deliver greater and longer term benefits for society.
- **Foster different communication streams** utilising hooks and bridges in order to:
 - mainstream environmental language to non-environmental sectors (e.g. planning, health care);
 - improve language and knowledge exchange;
 - enhance participation of all the relevant stakeholders (public, private and third sector);
 - mainstream environmental awareness, considerations and care into the public debate (with professionals and non-professionals).

8.2. Actions

This section is presented to act as a discussion point from which BCC and its partners need to agree an action plan.

Short term (0-1 year)

- The Green Commission to reconvene and openly discuss the findings / challenges as identified in this report, taking ownership and using it as a basis for change and evolution of the GLSP and Green Commission.
- To urgently promote the GLSP outputs in the current discussions concerning devolution in the West Midlands (WMCA). Councillor involvement and representation is key here.
- To utilise the opportunity in the Urban Living Research Programme involving BCC and the West Midland Universities to embed ecosystem thinking in the wider economic agenda of the city. Again the work in GLSP and Green Commission has a key role to play in setting an innovation agenda.
- To ensure that the GLSP principles and ES Assessment are communicated to planning policy and decision making staff. Here, both development management and impact assessment procedures could be strengthened by cross departmental working and knowledge exchange. To assist in this the following actions are recommended:
 - To provide GIS maps of ES for public download
 - To improve and implement the use of NCPT in evaluating planning applications
 - To embed ecosystem services assessments into SEA and EA procedures
 - To use new and different channels to communicate BCC's work and priorities to stakeholders and the public
 - To discuss the role of the Green Commission.
- Ensure that the GLSP principles and ES assessment informs the SPD *Your Green and Healthy City*.

Medium term (1-5 years)

- Reframe the role of Green Commission in light of current governance changes.
- Engage in / stimulate discussions on the value of the environment and the role of GI with LEPs and WMCA, especially in light of NPPF section 109 and the Duty to Cooperate.
- Foster communication of success across departments and partners to promote internal best-practices.
- Enlarge the circle of partners in delivering the GLSP principles on the ground and encourage third sector engagement.
- Improve community participation and sustain it over time.
- Promote pilot projects with specific focuses drawn from the GLSP.
- Engage with developers who have embraced sustainability principles in business.

- Establish information and working sessions to foster better awareness and knowledge of the relevance of nature as a base for social and economic health (not 'greenwash' but stimulate social-ecological systems thinking and socially and environmentally respectful actions).

Long term (5-10 years)

- Review the GLSP and feed directly into the evidence base of the local development plan and its revisions and delivery.
- Utilise research findings from the Urban Living Project to improve innovation and integration of policy and service delivery across the city.
- Develop and maintain working / effective partnerships to build upon the platform of the GLSP.
- Engage in research and knowledge exchange with cities and projects that champion good practice and effective delivery mechanisms relating to the GLSP principles.

9. References

- B&BC LNP (2015), Programme of Action 2015 - 16, <http://www.bbcwildlife.org.uk/LNP> [last accessed 04 November 2016].
- B&BC NIA (2016), Ecological Strategy 2017 - 2022, <http://www.bbcwildlife.org.uk/what-is-the-nia> [last accessed 04 November 2016].
- Bassett R., Thornes J.E., Cai X. & Rees R. (2011), The BUCCANEER Project. An Overview. Technical Report.
- BBC (2011), *City Centre Masterplan: Birmingham Big City Plan*. <http://bigcityplan.birmingham.gov.uk/> [last accessed 04 November 2016].
- BBC (2012a), Supplementary Planning Document *Places for the Future*. Birmingham: Birmingham City Council.
https://www.birmingham.gov.uk/info/20054/planning_strategies_and_policies/304/places_for_the_future [last accessed 22 December 2016].
- BBC (2012b), SPD *Places for Future* Detailed Policy Guidance. Birmingham: Birmingham City Council.
- BBC (2012c), Climate Change Adaptation Action Plan. Birmingham: Birmingham City Council.
http://www.makingbirminghamgreener.com/wp-content/uploads/2013/11/BCCAAP.final_.pdf [last accessed 22 December 2016].
- BBC (2013a), *Green Living Spaces Plan*. Birmingham: Birmingham City Council.
https://www.birmingham.gov.uk/downloads/download/208/green_living_spaces_plan [last access 28 October 2016].
- BBC (2013b), Birmingham Development Plan, Pre-submission version, *Planning for sustainable growth*. Birmingham: Birmingham City Council.
https://www.birmingham.gov.uk/directory_record/467/submission_plan [last accessed 22 December 2016].
- DCLG (2012), National Planning Policy Framework. London: DCLG.
<http://planningguidance.communities.gov.uk/blog/policy/> [last accessed 22 December 2016].
- DCLG (2012), National Planning Policy Guidance. London: DCLG.
<http://planningguidance.communities.gov.uk/blog/policy/> [last accessed 22 December 2016].
- GBSLEP (2016), *A Greater Birmingham for a Greater Britain*, GBSLEP Strategic Economic Plan 2016–2030, draft for consultation <http://centrefenterprise.com/wp-content/uploads/2016/07/GBSLEP-SEP-2016-draft-for-consultation.pdf> [last accessed 3 November 2016].
- Green Commission (2013), *Building a Green City*, Green Commission Vision Statement.
<http://www.makingbirminghamgreener.com/useful-information/> [last accessed 22 December 2016].
- Green Commission (2015), *Carbon Roadmap Update - Autumn 2015*.
<http://www.makingbirminghamgreener.com/2015/commission-publishes-latest-roadmap-update/> [last accessed 22 December 2016].
- HM Government (2010), *The Coalition: our programme for government*, Cabinet Office, London. online at www.hmg.gov.uk/programmeforgovernment [last access 04 November 2016].
- HM Government (2011), Natural Environment White Paper. London: The Stationery Office Limited.

- HM Government, United Kingdom Parliament (2008a), Climate Change Act. London: The Stationery Office Limited. <http://www.legislation.gov.uk/ukpga/2008/27/contents> [last accessed 22 December 2016].
- HM Government, United Kingdom Parliament (2008b), Energy Act. London: The Stationery Office Limited. <http://www.legislation.gov.uk/ukpga/2008/32/contents> [last accessed 22 December 2016].
- HM Government, United Kingdom Parliament (2008c), Planning Act. London: The Stationery Office Limited. <http://www.legislation.gov.uk/ukpga/2008/29/part/11> [last accessed 22 December 2016].
- HM Government, United Kingdom Parliament (2012), Health and Social Care Act. London: The Stationery Office Limited. <http://www.legislation.gov.uk/ukpga/2012/7/contents> [last accessed 22 December 2016].
- Hölzinger O., Coles R., Christie M., Grayson N. (2013a), Ecosystem Services Evaluation for Birmingham's Green Infrastructure. Report prepared for Birmingham City Council. Birmingham City University, Birmingham.
- Hölzinger O., Tringham N., Grayson N., and Coles R. (2013b), Multiple Challenge Map for Birmingham: Ecosystem Services Supply and Demand Maps. Appendix 2 to Birmingham's Green Living Spaces Plan 2013, Birmingham City Council, Birmingham.
- Hölzinger O., van der Horst D., Sadler J. (2014), City-wide Ecosystem Assessments—Lessons from Birmingham, *Ecosystem Services* 9, pp. 98–105.
- Kerslake B. (2014), The way forward: an independent review of the governance and organisational capabilities of Birmingham City Council.
- Lawton, J.H., Brotherton, P.N.M., Brown V.K., Elphick C., Fitter A.H., Forshaw J., Haddow R.W., Hilborne S., Leafe, R.N., Mace G.M., Southgate M.P., Sutherland W.J., Tew T.E., Varley J., and Wynne G.R. (2010), Making Space for Nature: a review of England's wildlife sites and ecological network. Report to Defra.
- NEAT (2014), National Ecosystem Approach Toolkit. <http://neat.ecosystemsknowledge.net/> [last accessed 22 December 2016]
- RICS (2015), Planning for Sustainable Land use: the Natural Capital Planning Tool (NCPT) project, Report November 2015.
- Scott, A.J., Carter, C., Hölzinger, O., Everard, M., Raffaelli, D., Hardman, M., Baker, J., Glass, J., Leach, K., Wakeford, R., Reed, M., Grace, M., Sunderland, T., Waters, R., Corstanje, R., Grayson, N., Harris, J., and Taft, A. (2014), Tools – Applications, Benefits and Linkages for Ecosystem Science (TABLES), Final Report to the UNEPWMC Research Councils UK, Welsh Government and Defra. June 2014, UNEP-WCMC, LWEC.
- SDNPA (South Downs National Park Authority) (2015), Duty to Cooperate Interim Statement. <https://www.southdowns.gov.uk/wp-content/uploads/2015/09/Duty-to-Cooperate-Interim-Statement-final.pdf> [last accessed 24 December 2016].
- Secretariat of the Convention on Biological Diversity (2004), *The Ecosystem Approach*, (CBD Guidelines), Montreal.
- The Marmot Review (2010), *Fair Society, Healthy Lives*. <https://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-executive-summary.pdf> [last accessed 12 December].
- UKNEA (2011), The UK National Ecosystem Assessment Technical Report. UNEP-WCMC, Cambridge. <http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx> [last accessed 12 December].

- West Midlands Combined Authority (2015a), *Growing the UK Economy through a Midlands Engine*, WMCA Launch Statement, online at <https://westmidlandscombinedauthority.org.uk/about/documents/> [last accessed 04 November 2016].
- West Midlands Combined Authority (2015b), *Devolution Agreement*, on line at <https://www.gov.uk/government/publications/west-midlands-devolution-deal> [last accessed 04 November 2016].
- West Midlands Combined Authority (2016), *Investment Prospectus*, on line at <https://westmidlandscombinedauthority.org.uk/> [last accessed 04 November 2016].

10. Appendix 1: Interview Structure and Questions

Interview structure / BCC staff

General framework

1. What is your job/ role(s)? Include any internal /external partnerships.
2. Which projects or programmes related to the landscape, the environment of the green spaces led by the City Council have you (or your department) been involved in, during the last 10 years?
3. In particular, which have you had responsibility for? Focus on only two that you feel the most important.
4. Please highlight strengths and weaknesses of them in relation to your experience.
5. Did the National Planning Policy Framework and Guidance have any influence on how you deal with environmental issues?
6. Did your department apply for some specific funds for projects about natural environment and green spaces? What are your thoughts on this avenue of funding post-Brexit?

Green Commission and Green Vision

7. What is your knowledge of the Green Commission?
(if the case:
 - a. What is your role in the Green Commission?
 - b. What do you think were the key drivers or catalysts that gave rise to the Green Commission?)
8. How would you evaluate the work of the Green Commission in the last three years?
9. Have you been involved in the making of the Green Vision?
10. In which way the Green Vision has influenced the work of your department?
11. What do you think are the strengths and weaknesses of the Green Vision?
12. What is your knowledge of the GLSP and its vision?
 - a. What do you think were the key drivers or catalysts that gave rise to the GLSP?
 - b. What are the strengths and weaknesses of the GLSP?

Conclusion

13. Broadly speaking, what are the obstacles in dealing with environmental issues at the urban scale?
14. What are the main opportunities and challenges?

Interview structure / non BCC representatives

General framework

1. What is your job/ role(s)? Including internal and external partnerships.
2. Could you please tell something about your organization, in terms of aims, objectives and work?
3. Have you been involved in projects focused on the improvement of natural environment or green spaces? Could you tell about the two most influential or successful projects in this field in the last 10 years?
4. Has your organisation been partner in any projects involving BCC? If so, which?
5. Have you, independently from your organization, been involved in any projects with BCC?
6. Were there any common obstacles to overcome in working on those projects? How have they been managed?
7. Has your own organisation applied for EU funding? What are your thoughts on this avenue of funding post-Brexit?

Green Commission and Green Vision

8. What is your knowledge of the Green Commission and its vision?
 - a. How would you evaluate the work of the Green Commission in the last three years?
9. What is your knowledge of the GLSP and its vision?
 - a. What are the strengths and weaknesses of GLPS?
10. Is there any evidence of the impact of the Green Vision on projects led by your organization?
11. Have you any comments on the way BCC deals with environmental issues?

Conclusion

12. Broadly speaking, what are the obstacles in dealing with environmental issues at the urban scale?
13. What are the main opportunities and challenges?