

ADVANCED GREEN INFRASTRUCTURE STUDY: PART A

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1.0 Introduction:

Birmingham City Council wish to appoint suitably qualified consultants to undertake a green infrastructure study for Birmingham.

This commission will form part A of a wider suite of further evidence-based studies (B & C) to inform and propose new policies, projects, and green infrastructure interventions across the City. It is anticipated that Parts B & C will both be further individual commissions.

For parts A & B there will be a geographic focus on the three central renewal areas of the city namely:

- Highgate and Balsall Heath,
- Smithfield & the Rea Valley, and
- Digbeth & Bordesley.

It would also include a further 6 wards identified as “Red Wards” in the Cities Environmental Justice assessment (see Map in Appendix) namely:

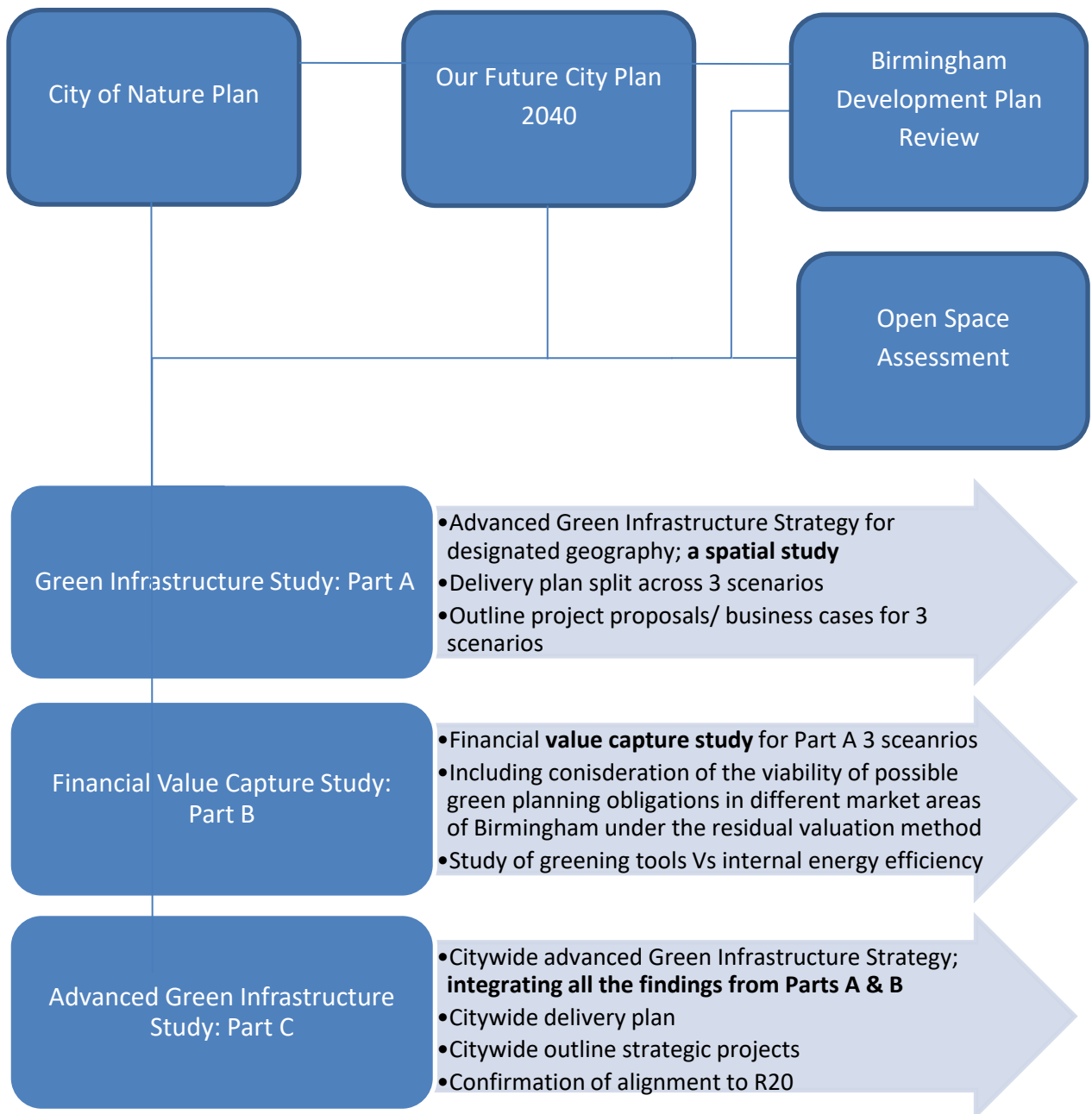
- Balsall Heath West,
- Bordesley & Highgate,
- Nechells,
- Gravelly Hill,
- Pype Hayes and
- Castle Vale).

Environmental Justice is about ensuring that there is an equal distribution of environmental benefits, resources and opportunities across society and the natural world. This can be achieved when the natural world is used to create quality environments that both support our health and wellbeing and help to mitigate the effects of climate change.

Part C will be for the remainder of the city informed by studies A & B.

2.0 Study Structure

The diagram below sets out the relationship between the relevant plans and studies that inform the Council's strategies in this area.



Green Infrastructure Study: Part A (*This Commission*)

This study will focus on identifying the optimum greening potential for central Birmingham and develop an advanced green infrastructure strategy and delivery plan, which must include outline project proposals that demonstrate how environmental justice can be delivered across the study areas.

In the context of this study, there should be an initial audit of the study areas, based around the data from the Council's Environmental Justice work and other sources, to identify gaps and opportunities to optimise provision for green spaces.

The strategy and delivery plan should propose outline interventions, projects and business cases that are bespoke and address the issues identified in the local geographic context.

It should be recognised that these proposals need to be considered collectively across data indicators for environmental justice to be achieved.

For each proposal in the delivery plan the study should provide an analysis of the wider benefits based on an ecosystem services approach, the potential cost savings to the public sector, the proposal score against the Thriving Places Index (see [here](#)), how the action meets the UN Sustainability Development Goals (see [here](#)), under the following three categories.

1. Business as usual- meeting the current Birmingham Development Plan Policies
2. Best Practice - maximising quality delivery with the tools available within the current local national policy and strategy environment
3. Global ambition – equalling or going beyond the aspirations of the emerging Our Future City Plan 2040 and national ambitions in strategy and policy

As part of the development of the work a set of access and quality standards for blue amenity infrastructure and disability provision should also be produced, along with a green/blue street index developed to help support targeting of future funds.

Financial Value Capture Study: Part B

This study will consider the financial value capture potential from all 3 categories. It is acknowledged that the returns on investment come through the wider benefits of climate resilience, particularly at scale. This study must therefore set green infrastructure within this broader context. The study must pitch its results against known examples of global best practice whereby cities are able to go above and beyond the constraints of their national planning and climate policies.

It will consider the financial viability mechanisms for the possible green planning obligations that could be used in different housing markets in Birmingham such as the urban greening factor, the WELLS 2 Biophilic Standards, mandatory biodiversity net gain, open space standards, intensive green roofs, and green walls. It will examine the impact of these tools on housing densities and delivery numbers on SHLAA (Strategic Housing Land Allocation Assessment)/ Urban Capacity Sites within the study areas.

It will test the viability of these tools individually and cumulatively against the need to deliver other planning obligations such as affordable housing and energy efficient homes.

It will consider where obligations may overlap with others in order to maximise environmental justice.

It will review other planning considerations within financially viable parameters, using the residual valuation model.

This study will also explore a comparison between the WELLS 2 biophilic standards and a target of a 31% increase in the energy efficiency standard applied to individual homes against building regulation's part L.

This will help us to decide what planning obligations are most important for us to take forward as a Council against the backdrop of development viability.

Advanced Green Infrastructure Study: Part C

This study will build on parts A & B to develop a wider advanced green infrastructure strategy, which will still applying the 3 categories, and produce a delivery plan, and outline project proposals for the rest of the city.

The strategy will consider how best to deliver strategic green infrastructure on a regional scale. The delivery plan will outline proposals for supporting the enhancement of the emerging local nature recovery networks and wildlife corridors, and it will also show how green infrastructure could be served further through the development of a new Climate Policy for Birmingham; that could sit above the existing Birmingham Development Plan. At this point the study must illustrate this idea through examples of global best practice, such as the Toronto Green Standard.

It will consider how the strategy and projects proposed to date under the three categories of Business as Usual, Best Practice, and Global Ambition are shown to contribute to the delivery of net zero neighbourhoods and how best to deliver Environmental Justice at the city scale.

3.0 Strategic Context

City of Nature Plan

Birmingham City Council has developed a City of Nature Plan that will embed and promote the value of green infrastructure in a systemic way across the Council and with its delivery partners. The Plan has 5 key themes through which the City of Nature approach is intended to be delivered.

- A Green City
- A Healthy City
- A Fair City
- A Valued City
- An Involved City

The Council developed an Environmental Justice Tool which identified locations in the city where it was most important for new or enhanced public green space to be delivered to improve the outcomes for the city's residents in relation to each of the 5 themes.

The high-level environmental justice tool took account of factors such as the Urban Heat Island effect, flood risk, access to green space, excess years life lost, all laid on top of the baseline of the index of

multiple deprivation. From these weighted factors a scoring index was produced which ranked the city's wards in terms of their severity, effectively showing where environmental justice was most lacking in the city.

The ranking identified the wards of Bordesley and Highgate, Balsall Heath West, Nechells, Gravely Hill, Pype Hayes and Castle Vale as forming a strategic corridor within the city where green investment most needed to be targeted, and for which a range of greening scenarios needed to be developed.

The emerging Our Future City Plan 2040

The Council is developing the Our Future City Plan Document 2040 (OFCP 2040) which is a strategic non statutory development framework that will be used as leverage to attract external investment and inform a review of the Statutory Birmingham Development Plan (BDP). The key themes of the OFCP document are.

- City of Centres
- City of Growth for All
- City of Nature
- City of Layers
- City of Connections
- City of Knowledge and Innovations

The City of Nature theme is considered key to tackling climate change, creating places that bring people together and improving health and wellbeing. It has specific goals to deliver: -

- A connected and diverse network of green and open spaces.
- Spaces that connect children and young people to nature and provide opportunities for all to be active.
- Nature-based solutions to improve our city.
- Environments that support nature and wildlife.
- Restored urban waterways that attract investment and are open to the community.

The Council appointed consultants in November 2021 who will work alongside planning officers working on the Our Future City Plan document. The consultants will have a specific remit around the central renewal areas of OFCP and support the team in the development of planning activities and deliverability of project proposals whilst acting as a critical friend and ensuring that the Route to Zero is at the heart of all proposals. Specifically, the OFCP Consultants work will input to and create up to date plans and delivery strategies for the Central Renewal Areas of Change, including detailed feasibility and viability studies and potential concept/outline designs for key development sites that demonstrably meet the OFCP vision. This work will include the following.

- To consider constraints and identify routes to overcome them to maximise opportunities for delivering new homes, green spaces, improved connectivity, and a step-change in employment space aligned with the WM Industrial Strategy.
- To provide clear and robust outputs in terms of numbers of new homes, areas of commercial space, and areas for new/improved greenspaces that support more densely developed areas.

- Liaise and negotiate directly with BCC (Birmingham City Council) colleagues, developers, and other partners on major proposals to ensure that they best 'fit' the emerging framework & delivery plan.
- To draft strategic outline business cases for next stages of programme/project development (in partnership with the Core OFCP planning and design team).
- To ensure the Delivery Plan/Programme is aligned to relevant Government funding opportunities to support project delivery; and
To provide advice on the Central Renewal Area opportunity sites to be included the Birmingham Property Prospectus.

A new Local Plan

Local authorities are required by legislation to review local plans at least every 5 years and update them where necessary. A review of Birmingham's Local Plan was undertaken in June 2020, and it was determined that the plan required updating due to changes in national planning policy and local priorities and circumstances. The new Birmingham Plan will set out a new vision and framework for future development in the city, replacing the Birmingham Development Plan (2017), Longbridge Area Action Plan (2009) and Aston, Newtown, and Lozells Area Action Plan (2012) when it is adopted.

The plan is still in initial stages of the process with evidence gathering ongoing. The timetable for the preparation of the new Birmingham Plan is set out in the latest Local Development Scheme.

As part of the evidence gathering exercise and to inform the new plan, an Open Space Assessment is being undertaken in accordance with the NPPF (National Planning Policy Framework) and NPPG (National Planning Practice Guidance) and associated government policy such as the 25 Year Environment Plan. The aims of the study are to provide a robust assessment of the quality, quantity, and accessibility in publicly accessible open spaces to establish local provision standards and create an up-to-date evidence base which can be used to inform new policy.

4.0 Green Infrastructure Study: Part A (the commission)

Birmingham City Council wish to appoint suitably qualified consultants to carry out an audit of appropriate evidence to develop a green infrastructure strategy and delivery plan that will address the implications of green infrastructure delivery under the following three categories in terms of achieving Environmental Justice

- Business as usual- meeting the current Birmingham Development Plan Policies
- Best Practice - maximising quality delivery with the tools available within the current local & national policy and strategy environment
- Global ambition – equalling or going beyond the aspirations of the emerging Our Future City Plan 2040 and national ambitions in strategy and policy.

The target areas for the study are the Central Renewal Areas of Highgate and Balsall Heath, Smithfield & the Rea Valley, and Digbeth & Bordesley; together with the 6 'Red Wards' as identified in the Environmental Justice Assessment; (Balsall Heath West, Bordesley & Highgate, Nechells, Gravelly Hill, Pype Hayes and Castle Vale).

The output will be a comprehensive GI (Green Infrastructure) strategy for the whole geography with an accompanying delivery plan organised under the three categories above, which must also be realisable in the discreet boundaries of each individual ward and central renewal area.

The delivery plan should include a set of outline proposals and business cases for strategic intervention projects for the whole geography, and its individual sub-zones.

Each proposition must assess the policy implications of the action/project, its deliverability and viability; together with a robust and evidenced based methodology behind the proposals that will support new policy development in the Birmingham Development Plan (Review) or an associated City Climate Resilience Policy.

Additionally for each action/project it should be recorded how they are supported by existing national and local policy, guidance, and legislation, how they meet the UN Sustainable Development Goals, their value in terms of ecosystem services, their potential cost savings to the public sector and their score against the thriving places index. The proposals in the delivery plan should also be in a format that is readily usable to promote to private investors.

Finally, all the projects/ proposals should be aggregated in terms of the indicators referred to above under the three scenarios of business as usual, best practice, and global ambition.

Regarding the Thriving Places Index, the consultant should propose a more realistic way of measuring health impacts, as opposed to using the current assumption-based approach, and further adjust the methodology to develop more objective standards to reach the Council's Climate Change Objectives.

Additionally, the methodology for culture within the Thriving Places Index should be modified to be more future facing, considering factors such as new green spaces, removal of barriers to access, and participation in activities which will occur in that space. It should consider broader aspects of culture such as the involvement of local artisans, and identify what is unique, distinctive, and cherished in places.

The methodology should also be amended to include the effect that proposed interventions would have on biodiversity in terms of improving corridors and stepping-stones for nature within the emerging nature recovery networks and further develop green infrastructure indicators.

In developing the scope of outline project proposals that will support this work, the appointed consultants will be expected to work with the appointed OFCP Consultants and the appointed Consultants working on the Councils Open Space Assessment, to ensure that all relevant proposals are taken into account.

Strategy and Delivery Detail

The work should include a baseline audit of the central renewal areas & 6 Red Wards based on the data from the Council's Environmental Justice work but enhanced to include as a minimum -

- Heat loss mapping
- Air quality
- Noise pollution
- Wildlife mapping

Transport projects

- Blue infrastructure
- Green Corridors
- Tree coverage
- Access to allotments
- Community growing spaces
- Surface water flooding.

As a minimum the results of the audit, strategy, delivery plan, outline business cases, and work to date by the OFCP/ Open Space Assessment Consultants should be used to inform a gap analysis resulting in the following work and recommendations.

- Overarching Strategic environmental gain offsetting zones, which then lead into a masterplan and outline projects proposals under individual data themes from the audit and collectively to maximise delivery of Environmental Justice.
- Specifically, A Green/Brown/Blue Roof Masterplan for existing and new roofs – identifying roofs through a desktop study and site visits which could be retrofitted in principle for intensive/ extensive green roofs, and clusters that could be connected. Looking at Green/Blue/Brown, roofs/walls with reference to the Council's previous Environmental Justice work, and additional data sets individually and cumulatively, highlighting the roof solution that is best to tackle issues bespoke to those identified in the local geographies, and where multiple issues arise propose green roof solutions to those collective issues. (This does not include structural assessment for retrofitting as this would be considered if project proposals are taken forward.)
- Specifically, identification of sites/ areas for new open spaces, and green corridors (including green roofs) based on robust criteria in reference to the audit.
- Specifically, identification of sites and spaces (including green roofs and green walls) for new wildlife spaces & corridors in reference to the audit.
- A green/blue street retrofitting plan in reference to the audit and the green/blue street index score (see below). This should include evidence-based examples of best practice of how green and blue infrastructure can be successfully retrofitted into existing primary, secondary, and tertiary streets with outline costs and ongoing maintenance costs, while accommodating cyclists and pedestrians.
- A tree coverage plan in reference to the audit that in addition ensures cover from precipitation /shade on key routes/ in open spaces, and access to dense urban woodland within a 15-minute walk, including best practice examples. This work should support the emerging Urban Forest Masterplan for Birmingham and the development of access and quality standards).
- Key route and open space lighting strategy that is sensitive to biodiversity but also brings open spaces and routes alive. E.g., Westonbirt Arboretum, including best practice examples with associated costs and maintenance details.
- A blue infrastructure plan for amenity, play, and relaxation and embedding this in existing and future development, key routes, and open spaces. Suggesting new blue infrastructure and retrofitting of blue infrastructure, including best practice examples, costs and maintenance costs. This should consider the effect of introducing a 20m river easement policy across the areas.

- Disability strategy to improve access and inclusive use of open spaces and its facilities, including best practice examples of landmarks, path design and width, seat design, flower colours and scents etc, resulting in a set of disability access and use standards. This should include costs for capital and ongoing maintenance of suggested interventions.
- Transport Plan ensuring that open spaces promote the use of sustainable transport methods and that residents all have access to open spaces within a 15-minute walk. This should have regard to existing and new proposals as part of the Birmingham Transport Plan and the Local Cycling and Walking Infrastructure Delivery Plan.
- Outline business cases for interventions should include a delivery strategy/plan, indicating details on outline costs where available and informed by costings on similar projects, information on who the key stakeholders should be, legal issues to consider, insurance, funding, expertise, maintenance costs and provision, and phasing matters as appropriate.

As part of the development of the strategy and delivery work, this commission includes three other complementary elements that should be developed as part of the production of the strategy and delivery plan.

Access and Quality Standards

A set of access and quality standards should be developed as part of the study for:

- Access to blue amenity infrastructure
- Disability access standards
- Quantitative Open Space access for Planning Residential Use Class C2, similar to current Birmingham Development Plan Policy TP9.

Green/Blue Street Index

A green/ blue street index should be developed (similar to the healthy streets index) for the areas based on a robust methodology with reference to the audit findings.

5.0 **Outputs**

- A report in Word and Adobe pdf format demonstrating a robust audit and based on this audit a green infrastructure strategy for the central renewal areas and the 6 city of nature wards in relation to improving Environmental Justice, and based upon a robust methodology
- A report in Word and Adobe pdf format containing a delivery plan for the green infrastructure strategy arranged by geography, and an examination of proposed actions/projects/ business cases in the delivery plan under the three categories of Business as Usual, Best Practice; and Global Ambition, based upon a robust methodology and supported by national and local policy, strategy, and legislation
- A report in Word and Adobe pdf, adobe/ illustrator format that contains a project portfolio of outline business cases that the Council can promote to private investors.
- A report in word and adobe pdf format containing an executive summary of the green infrastructure strategy and how it will deliver against the 5 themes of the City of Nature Framework.

- A disability access and quality standard in Word and Adobe pdf format
- A blue infrastructure access and quality standard in Word and Adobe pdf format
- An open space access standard to planning use class C2 residential in Word and Adobe pdf format
- Individual and collective GIS Maps of proposed intervention/ project areas overlaid with data from the audit in Adobe, Arc GIS, and Map Info format with associated Shapefiles

6.0 Timescales

The anticipated timetable would be 12 weeks from commission to completion.

7.0 Requirements

- For the Consultant to defend the work as required at Public Examination
- For a draft of the work to be produced for comment before final sign off
- For a workshop session to be held with relevant council officers at draft publication stage, with representation from the Councils Parks, Housing Management, BMHT (Birmingham Municipal Housing Trust), and Planning Teams
- A presentation to the relevant locally elected members on the findings of the work