From: [redacted]
To: R&R External Information Requests
Subject: FOI Request re biodiversity
Date: 03 June 2020 16:22:51

To whom it may concern,

Under the terms of the Freedom of Information Act 2000, please provide me with full copies of the assessments of promoting biodiversity in the Parliamentary restoration works, as referred to in the below written question.

Please respond within 20 working days.

The House of Commons has already told me it does not hold the information, and requested I contact you instead.

Thank you,

[redacted]

[ ]
Q

Asked by **Andrew Percy**
(Brigg and Goole)
Asked on: 07 May 2020

Parliamentary Works Sponsor Body
Palace of Westminster: Repairs and Maintenance

45120

To ask the Right hon. Member for East Hampshire representing the Parliamentary Works Sponsor Body, what assessment he has made of the merits of including (a) swift bricks, (b) bird boxes, (c) beehives, and (d) others in the refurbishment of the Palace of Westminster.

A

Answered by: **Damian Hinds**
Answered on: 19 May 2020

The Restoration and Renewal Programme has conducted preliminary assessments of the potential benefits of promoting biodiversity as part of the restoration works, including the introduction of swift bricks and bird boxes, and the desirability of such measures will be subject to the requirements of both Houses. The potential inclusion of beehives will require more careful consideration, including the health and safety implications, while other measures could include ensuring that all planting is pollinator friendly. The Sponsor Body has also agreed a strategic objective for the Programme to optimise the environmental impacty of the Palace in its construction and operation, which has been endorsed by the Commissions of both Houses and will be kept under review as the Programme progresses.

HOUSES OF PARLIAMENT
RESTORATION & RENEWAL

10 June 2020

[redacted]

By email.

Freedom of Information Act 2000 Request Acknowledgement

Reference: F20-003

Dear [redacted],

Thank you for your email of 3 June 2020 which we received on 3 June 2020.

You requested the following information: *full copies of the preliminary assessments of the potential benefits of promoting biodiversity as part of the Parliamentary restoration works, and as referred to in the question asked by Andrew Percy MP (Brigg & Goole) on 7 May 2020 and responded to by Damian Hinds MP on 19 May 2020. This also includes whether an assessment has been made of the merits of including (a) swift bricks, (b) birdboxes, (c) beehives, and (d) others in the refurbishment of the Palace of Westminster.*

Your correspondence is being treated as a request for information under the provisions of both the Freedom of Information Act 2000 (FOI) and, because it contains reference to environmental information, the Environmental Information Regulations 2004 (EIR)

You should expect to receive a response to your request no later than 20 working days following the date of receipt. This means that you can expect a response from us no later than 2 July 2020.

I wish to advise you that details of all non-personal FOI requests, and any associated information or documents released will be recorded on an FOI disclosure log which will be published on the Renewal & Restoration of Parliament's website in due course.

There are some limited situations under both the FOI and EIR Acts, where a final decision may take longer than 4 weeks. If this occurs in the case of your request, we will advise you promptly and in writing, setting out the reason and the new decision date.

Section 27 of the FOI Act, provides for the charging of fees in relation to costs associated with search, retrieval and copying of records. You will be advised shortly if any such fee applies in this case.

If you have any complaint about the handling of, or response to, your information request, or if you do not hear from us within the allotted time, then please contact us in the first instance by sending an e-mail to foi@r-r.org.uk. If it is not possible to reach and informal resolution then you may request an internal review of your case. If you are seeking an internal review under the provisions of EIR then this must be made within 40 working days of either the response deadline or your receipt of our response. You may, if

you remain dissatisfied with the outcome of the internal review, complain to the Information Commissioner (ICO) who can issue a Decision Notice. The ICO can be contacted in this regard via the 'Making a Complaint' section of their website or by phone on 0303 123 1113.

If you have any queries about this request do not hesitate to get in touch. Please remember to quote the reference number above in any future communications.

Yours sincerely,

Freedom of Information
Restoration and Renewal
Houses of Parliament Restoration and Renewal Programme
First Floor, 7 Millbank, London SW1P 3JA

HOUSES OF PARLIAMENT
RESTORATION & RENEWAL

Freedom of Information Team
Houses of Parliament
Restoration and Renewal
e: foi@r-r.org.uk

29 June 2020

By Email

Freedom of Information Act 2000 Request Response
Reference: F20-003

Dear [redacted],

Thank you for your email of 3 June 2020, which we received on 3 June 2020.

You requested the following information: *full copies of the preliminary assessments of the potential benefits of promoting biodiversity as part of the Parliamentary restoration works, and as referred to in the question asked by Andrew Percy MP (Brigg & Goole) on 7 May 2020 and responded to by Damian Hinds MP on 19 May 2020. This also includes whether an assessment has been made of the merits of including (a) swift bricks, (b) birdboxes, (c) beehives, and (d) others in the refurbishment of the Palace of Westminster.*

Your correspondence was treated as a request for information under the provisions of the Freedom of Information Act 2000 (FOI) and, because it contains reference to environmental information, the Environmental Information Regulations 2004 (EIR).

The Programme holds some of the information that you have requested.

The assessments of promoting biodiversity in the Parliamentary restoration works were completed as part of a Design Strategy Report on Sustainability. Not all of the information within this document was relevant to your request. Therefore an 'Information Digest' has been provided at Annex 1 which contains the information from that report which is relevant to your request.

The information that the Programme has regarding the installation of beehives can be found at Annex 2.

The Programme does not hold any information specifically about swift bricks or birdboxes.

HOUSES OF PARLIAMENT
RESTORATION & RENEWAL

Freedom of Information Team
Houses of Parliament
Restoration and Renewal
e: foi@r-r.org.uk

The information provided as part of the response was correct as of 29 June 2020, however work on the Restoration and Renewal of Parliament Programme continues and any outcomes may ultimately differ from those presented herein.

If you are unhappy with the response or level of service that you have received in relation to your request please contact us in the first instance and we will seek to reach an informal resolution.

If you remain dissatisfied then you may ask for an internal review. If you ask for an internal review of the decision we will acknowledge this request and inform you of the date by which you might expect to be told the outcome. The following outcomes are possible:

- The original decision is upheld; or
- The original decision is reversed or modified.

If you wish to exercise you right to an internal review then you should contact us within two months of the date of this letter, and within 40 working days for information provided under the provisions of the Environmental Information Regulations. There is no statutory deadline for undertaking internal reviews and the timescale for completion will depend upon the complexity of the matter. We would normally endeavour to complete such reviews within 20 working days of acknowledgement; and exceptionally within 40 working days. We will keep you informed of the progress of the review. If you wish to request an internal review you should contact foi@r-r.org.uk.

If you are not content with the outcome of the internal review then you may apply directly to the Information Commissioner for a decision. The Information Commissioner can be contacted via the 'Making a Complaint' section of their website or by phone on 0303 123 1113.

Please cite your reference number F20-003 in any future correspondence with us.

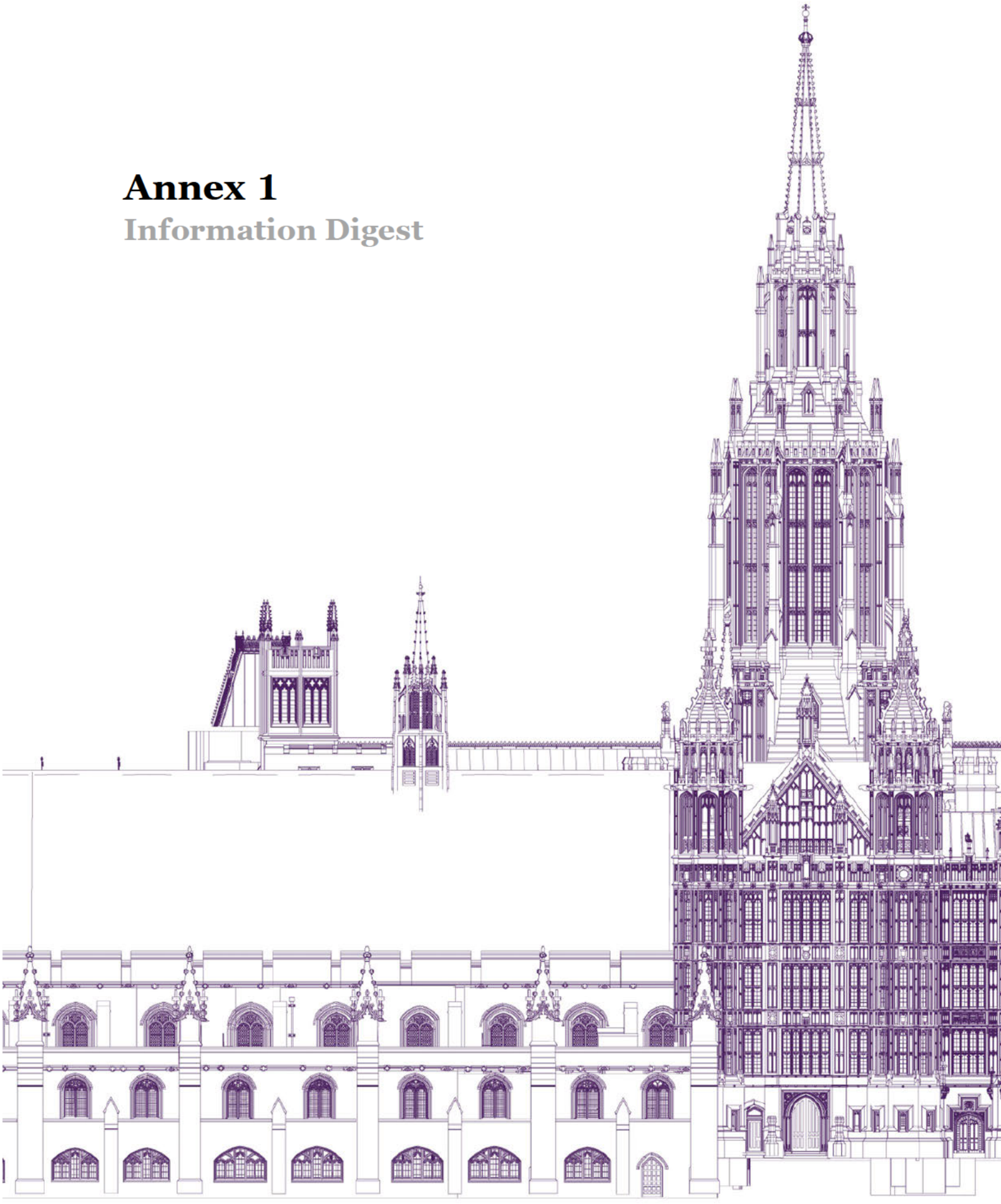
Yours sincerely,

Freedom of Information Team
Houses of Parliament
Restoration and Renewal

HOUSES OF PARLIAMENT
RESTORATION & RENEWAL

Annex 1

Information Digest



Houses of Parliament
Restoration and Renewal

Task Order 7

DESIGN STRATEGY REPORT SUSTAINABILITY
TASK TYPE 4

RESTRICTED ACCESS – SECURITY

Document No: 00POW-4107-BDP-XX-XX-Z-XX-RG-10034
Status: S4
Security Grade: 3

INTRODUCTION

A series of Restoration and Renewal Programme level sustainability aspirations and objectives (00POW-4107-CHM-XX-XX-Z-XX-SG-00261) have been established that focus on six key areas that will guide the design, construction and operation of the Palace of Westminster. These sustainability aspirations and objectives support the programme's vision and strategic themes.

The aspirations and objectives are set to intentionally and clearly encompass the three pillars of Sustainability; environment, social and economic, with the aim of ensuring that the project provides holistic benefits to people, communities and nationwide.

The sustainability design strategy sets the approach for achieving the sustainability aspirations and objectives at the project level, defined in the brief, through a series of indicators and targets that have been informed by feasibility studies, research, and internal and external stakeholder engagement.

The scope of this strategy applies to the design, construction and operation of the refurbishment of the Palace of Westminster project and forms one of the 12 RIBA Stage 1 Design Strategies.

The strategy details how the requirements of the programme level sustainability strategy will be implemented at project level. The Sustainability Design Strategy proposes indicators that will be used to measure performance against the aspirations and objectives. The strategy will be refined further during RIBA Stage 2 as more is known about the emerging trends, opportunities and interventions achievable on the basis of the extent of the wider project interventions.

This document articulates the project sustainability strategy to ensure relevance to the Palace and includes details of the context around why specific areas of focus for the project are important, covering social value and environmental impacts including climate change, resource scarcity, air quality and biodiversity.

FEASIBILITY STUDIES

Nine feasibility studies (detailed in Section 2) have been undertaken to explore the opportunities and constraints around the achieving the aspirations and objectives defined by the sustainability brief. Further work is required across a number of these studies as the concept designs emerge to ensure that indicators and targets remain achievable.

Each feasibility study is structured broadly as follows:

Methodology
An overview of the approach taken to explore the subject matter and its application to the Palace.

Analysis
Qualitative and quantitative assessment of issue, including literature review, precedent examples and identification of relevant indicators and metrics.

Conclusions
Findings from sub-studies and analyses undertaken.

Assump ions, Design Risks and CDM Hazards and Risks
Any applicable assumptions relevant to feasibility studies along with Design Risks and CDM analysis for future consideration.

CDM OVERVIEW

Designer's duties under the CDM Regulations include taking into account the general principles of prevention and eliminate, reduce or control foreseeable risks that may arise during construction and the maintenance and use of the building. As designers, we provide information to other members of the project team to help them fulfil their duties, including the principal designer, principal contractor and client, where appropriate.

The Sustainability Strategy proposes to enhance ecological value, habitats and biodiversity. This will, where possible, involve the creation of habitats that encourage species of local conservation priority. The encouragement of bats, birds and pollinators may increase the risk of stings, bites and exposure to allergens. The location of new plant species introduced will be carefully considered to reduce potential harm.

The development of a planting strategy that considers alternatives to pesticides, such as companion planting, will reduce risk of harm to the environment and health. The maintenance strategy for high level planting, including green roofs and living walls, will need to mitigate risk of falling from height. The specification of hardy plants where suitable will reduce the frequency of maintenance.

CDM HAZARD AND RISKS

Designer's duties under the CDM Regulations include taking into account The top three significant hazards and risks to health and safety for this strategy are listed below:

1. The encouragement of bats, birds and pollinators may increase the risk of stings, bites and exposure to allergens
2. The potential use of pesticides within the planting strategy could cause harm to the environment and health
3. The maintenance of high level planting increases risk of falling from height

INTRODUCTION
PROGRAMME OBJECTIVES

The shadow Sponsor Board has set out the Vision for the Palace of Westminster Restoration and Renewal Programme **"to transform the Houses of Parliament to be fit for the future as the working home for our parliamentary democracy, welcoming to all and a celebration of our rich heritage"**

In so doing, the Programme will:

- Repair the services in the Palace of Westminster in a comprehensive and strategic manner.
- Be mindful of demands on public expenditure, apply high standards of cost-effectiveness and demonstrate value for money.
- Include a full and timely decant of the Palace of Westminster, representing the most cost-effective option for delivering the programme.
- Guarantee in legislation that the historic Palace of Westminster is the home of Parliament and that the two Houses should return to their historic chambers, as soon as possible following the works.

This is the Programme Vision defined by the shadow Sponsor Board which sets the overarching direction for the development of the Outline Business Case and all the project activity that supports it.

To support this Programme Vision the shadow Sponsor Board has developed six Strategic Themes and related goals as set out in the table opposite. It is intended that targets for these goals will be defined in due course.

HEALTH, SAFETY AND SECURITY	Ensure high standards of health, safety and wellbeing and provide appropriate protection for the building and those in it.
FUNCTIONALITY AND DESIGN	Deliver a building which supports Parliament's core function as a working legislature, both now and in the future using high-quality design and technology.
ACCESSIBILITY AND INCLUSION	Open up the Houses of Parliament, improve access and encourage a wider participation in the work of Parliament.
SENSE OF HISTORY	Conserve and enhance the fabric of the Houses of Parliament and build appreciation of its rich history.
SUSTAINABILITY	Deliver a refurbishment programme that minimises but also facilitates future maintenance and improvement, that ensures efficient and responsible resource consumption, and that provides for the development of national construction and craft skills.
TIME AND VALUE FOR MONEY	Deliver on time and maintain a relentless focus on delivering value and being on budget through the control of costs.

STRATEGIC THEMES	HEALTH, SAFETY AND SECURITY	FUNCTIONALITY AND DESIGN	ACCESSIBILITY AND INCLUSION	SENSE OF HISTORY	SUSTAINABILITY	TIME AND VALUE FOR MONEY
GOALS	1.1 **Fire:** Protect the Palace from the risk of fire during construction and subsequently in-service. 1.2 **Safe build/operate:** 'Everyone goes home safe': commit to preventing injury and proactively managing risks during design, construction and in-service operation with 'smart solutions' for operational delivery. 1.3 **Health:** Proactively manage the health and wellbeing of all those involved in the programme to the highest standards. 1.4 **Safe/secure for users:** Deliver safe and secure facilities by design for all Palace users. 1.5 **Asbestos:** Achieve an asbestos risk-free Palace of Westminster and safe disposal of any asbestos removed.	2.1 **Logistics:** Provide sustainable logistic solutions to support modern construction methods and the effective long-term operation of the Palace on completion. 2.2 **Legacy:** Develop flexible legacy uses for acquired decant buildings which reflect the changing needs of Parliament. 2.3 **Working Environment:** Create a flexible, effective and enjoyable working environment in the Palace. 2.4 **Procedure:** Help facilitate any procedural changes that may be requested by either House. 2.5 **Technology:** Mitigate the constraints that the Palace places on the use of technology. 2.6 **Innovation:** Deliver operational efficiency and longevity: an exemplar for heritage, best in class refurbishment, and the built environment.	3.1 **EDI:** Equality, diversity and inclusion is central to the programme: provide opportunities for all, recognising differences in an open and safe environment. 3.2 **Workspace:** Create flexible and accessible workspaces, fit for now and future proofed as far as possible. 3.3 **Shared spaces:** Provide space in the Palace for Members of both Houses to meet constituents, the public and the media. 3.4 **Connecting:** Reconnect people from across the UK with their Parliament through improved education and visitor facilities, physical and digital access. 3.5 **Access:** Provide exemplary standards of access for everyone. 3.6 **Participation:** Ensure the building enables public engagement with the proceedings and wider activities of the two Houses.	4.1 **Accretions:** Remove unsightly accretions to the Palace, providing alternative facilities elsewhere as needed. 4.2 **Heritage:** Acknowledge the significance of Parliament's heritage, while embracing the opportunity for change and flexibility. 4.3 **Icon:** Maintain the status of the Palace of Westminster as one of the world's iconic buildings and its role as the universally recognised home of the UK's Parliament. 4.4 **Value:** Recognise the value of the building and conserve and enhance it. 4.5 **Conserve:** Conserve and safeguard heritage collections, taking into account the needs and requirements of both Houses. 4.6 **People:** Help Parliament to connect people with the past, present and future of parliamentary democracy through engagement with its rich heritage.	5.1 **Environment:** Optimise the environmental impact of the Palace of Westminster in construction and in operation, including efficient and responsible energy usage and waste recycling. 5.2 **Skills:** Develop the required knowledge and skills and inspire talent nationwide in traditional and emerging professions and trades to deliver a successful programme and secure a legacy for future generations. 5.3 **Economic impact:** Create economic opportunity across all the regions of the UK and improve UK export potential. 5.4 **Procurement:** Procure in a manner that drives sustainable approaches to natural resources and economic opportunities throughout the supply chain. 5.5 **Resilience:** Minimise the possibility of the critical loss of any dependencies within the scope of the programme.	6.1 **Outcome:** Achieve a reliable and timely programme which delivers benefits and efficiencies and minimises adverse impact on stakeholders. 6.2 **Governance:** Put in place substantive governance: a Sponsor Body and Delivery Authority. 6.3 **OBC:** Deliver Outline Business Case on time. 6.4 **FBC:** Deliver Full Business Case on time. 6.5 **Palace planning:** Deliver successful Palace planning application on time. 6.6 **Palace use:** Minimise the time that the Palace is out of use. 6.7 **Palace completed:** Complete Palace facilities and hand over on time. 6.8 **Palace cost:** Ensure cost of Palace restoration & renewal is achieved on budget. 6.9 **Operating/capital costs:** Optimise operating and capital costs through a focus on whole-life costing; and achieve operating cost targets.

The Programme will...

The Restored Palace will...

Strategy Alignment

1.1.1 CONTEXT

Global, national and local legislation and policies for sustainability are all relevant to the Palace of Westminster.

Global
At a global scale, global mega trends strongly influence the sustainability agenda. Currently significant mega trends include: demographic change, shifts in economic power, rapid urbanisation, climate change and resource scarcity and technological changes.

These megatrends are driving more than half the worlds' population to live in urban areas and cities, including London, putting pressure on the way cities function and evolve to support this growth without damage. Growth in global population and prosperity is increasing the demand for clean water, energy, minerals, metals and food at a rate that is fundamentally unsustainable.

In relation to technological change, trends incorporate the implementation of artificial intelligence, application of nanotechnology, use of big data (data in excesses of one terabyte (TB)) and the roll-out of 3D printing. These mega trends are relevant to how we plan for the future and shape the requirements for the Palace of Westminster Project.

Figure 1 - The 17 Sustainable Development Goals

This Sustainability Design Strategy has been developed in accordance with the United Nation's Sustainable Development Goals (SDGs) (figure 1). These were developed by the United Nations General Assembly in 2015 to set a framework for tackling the world's most significant problems, including climate change, pollution, equality, health and education. Each issue has a list of targets (169 targets for the 17 goals) that are measured by a series of indicators.

Governments are required to translate the SDGs into national legislation, develop a plan of action, and establish budgets to support implementation. In order to demonstrate how the 17 SDGs relate to the Restoration and Renewal Programme and the Palace of Westminster project, these have been mapped to the sustainability aspirations and objectives in the Sustainability Strategy Brief (00POW-4107-BDP-XX-XX-Z-XX-DO-00014).

National
European Union (EU), national (UK) and local legislation and policy is applicable to the Palace of Westminster. Currently, it is primarily EU legislation has been laid down in directives that the UK enacts into law by creating acts and regulations for environment and sustainability. Those that are of particular relevance to the Project have been summarised in the Review of Relevant Standards & Legislation report (000POW-4107-BDP-XX-XX-Y-XX-RG-00004).

It should be noted that in light of potential forthcoming changes as a result of the UK leaving the EU, how EU Directives are taken forward in UK legislation is yet to be determined.

Local
On a local level there a number of relevant sustainability requirements for the Project, including those laid out by the Greater London Authority (GLA) and Westminster City Council (WCC).

The following section outlines the application of policy, regulation and legislation on a global, national and local level against eight themes; environmental impact, resource scarcity, biodiversity, inclusive growth and social value, equality/inclusivity, health and wellbeing, education and careers. These have contributed to shaping the sustainability strategy to maximise the opportunity to deliver across the three pillars of sustainability: environment, society and economics.

1.1.2.4 **Biodiversity**

Global

Biodiversity relates to the variety of plants and animals and other living things in a particular area or region. It encompasses habitat diversity, species diversity and genetic diversity. Increased pressure on biodiversity from human activity has led to what is currently considered to be a biodiversity crisis, with biodiversity declining at the highest rates ever recorded. In
the first global biodiversity assessment since 2005, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services IPBES' 2019 Global Assessment Report (prepared by 150 leading international experts from 50 countries), identifies that nature is declining globally at rates unprecedented, with up to 1 million species threatened with extinction; more than at any other time in human history.

Human activities have significantly altered around three-quarters of all land and two-thirds of all oceans on the planet according to the report. The report also identifies how the issues of sustainable development, climate change and biodiversity are all interrelated and that an integrated approach is required.

National

The EU Directives around biodiversity are implemented in the UK via the Wildlife and Countryside Act 1981 (since amended), which is the primary legislation covering the protection of animals, plants and habitats. Additionally, the Habitats Regulations 1994 and subsequently the Conservation of Habitats and Species Regulations 2017 also provide further legal protection of species and habitats.

The United Kingdom Biodiversity Action Plan (UK BAP) was also the UK Government's response to the Convention on Biological Diversity, opened for signature at the Rio Earth Summit in 1992. The UK was the first country to produce a national Biodiversity Action Plan. The UK BAP defines the most important species and habitats that it identified as requiring action. These are referred to as 'priority species' and 'priority habitats'. This was replaced in 2012 by Biodiversity 2020, A strategy for England's wildlife and ecosystem services'. The priority habitats and species agreed as part of the UK BAP remain important to focus biodiversity work at a regional and local level.

Public authorities in England also have a duty to show regard for conserving biodiversity or integrate biodiversity as part of decision making. This also includes development of infrastructure such as building and any procurement decisions made. Conserving biodiversity can include restoring or enhancing a population or habitat.

In line with the EU Biodiversity Strategy, there is increasing emphasis on creating a net gain for biodiversity through development. The UK government via DEFRA is also consulted on mandating biodiversity net gain for developments and is due to enact this into law. Developers will be required to deliver a 'biodiversity net gain' when building new housing or commercial development, meaning habitats for wildlife must be enhanced and left in a measurably better state than they were pre-development.

The National Planning Policy Framework (NPPF) states that local planning authorities should set out a strategic approach to their Local Plans by planning positively for the creation, protection, enhancement and management of networks for biodiversity and green infrastructure. This identifies the important role of the built environment (including all new and existing buildings, structures and public realm developments).
Following successful pilots, a number of authorities, including London, have begun to introduce the requirement for a minimum Urban Greening Factor. This is calculated by assigning a factor of between 0 and 1 for various surface cover types, with sealed surfaces given 0 and the most natural cover, 1. The higher-value the surface cover type and the more prevalent it is, the higher the score.

Local

On a local level the Greater London Authority (GLA) states that London's wildlife is in decline, in common with nationwide trends, which show a continual decrease in England's wildlife. It also identifies that urbanisation has had a big impact on the ecology of London, with increased use of concrete, tarmac, glass and steel having replaced natural habitat and also changed local hydrology and created unique urban microclimates.

Current best-practice promotes the need to reduce fragmentation of natural areas by protecting priority species and areas and create new spaces and structures. This includes wildlife corridors in the form of living roofs and green walls, which are reflected in the Westminster Biodiversity Action Plan. Greening is particularly important in inner city locations where it can provide a range of benefits including amenity space, enhanced biodiversity, addressing the UHI effect, and sustainable drainage. The Urban Greening Factor has been included within the GLAs draft New London Plan to quantify the value of green infrastructure incorporated into developments. The London Environmental strategy also committed London to becoming the world's first National Park City, including improving green infrastructure. Further detail on incorporating green infrastructure into the Restoration and Renewal Programme can be found in the Green Space Feasibility Study.

1.2

VISION, ASPIRATIONS AND OBJECTIVES

In line with the Restoration and Renewal Programme vision and strategic themes, high level Sustainability aspirations and objectives have been established for the programme that focus on six key areas, as shown in figure 3, setting out the ambition in support of the vision and strategic themes. The Sustainability aspirations encompass the three pillars of Sustainability, environment, social and economic; with the aim of ensuring that holistic benefits are provided to people, communities and nationwide.

The Restoration and Renewal Programme aspirations and objectives form the framework for Sustainability and inform the areas of focus for the Palace Design Strategy. These aspirations and objectives have been used to develop the Palace sustainability indicators and targets.

Figure 3 - Restoration and Renewal Programme sustainability aspiratons and objectives

FEASIBILITY STUDIES
STUDY 1 - GREEN SPACE

EXECUTIVE SUMMARY

Scope
The Green Space Feasibility Study looks at the quantification of existing green space and identification of opportunities for maximising greening in urban and heritage environments. This indicates the level of intervention required to bring the Palace of Westminster in line with industry standards and emerging local policy around biodiversity, greening and Sustainable Urban Drainage Systems (SUDS).

Analysis
A literature review of research carried out to quantify the benefits of greening in urban spaces, section 2.1.2, illustrates their importance in reducing the Urban Heat Island (UHI) effect and flood risk, and improving air quality and wellbeing.

As a public authority, Parliament has a duty in regards to conserving biodiversity within its decision making and estates. Another driver for enhancing green space includes the government aspiration to use the forthcoming Environment Bill to mandate biodiversity net gain. This will require developers to ensure habitats for wildlife are enhanced and left in a measurably better state than they were pre-development.

A number of local greening strategies in place around the Palace of Westminster, including the Government Estate Strategy, Pedestrianisation of Parliament Square and Wild West End have plans to increase green space via stepping stone habitats and creation of green infrastructure. This will create improved connections to the river, parks, and blend nature with the urban environment, while improving air quality and wellbeing in Westminster.
The Draft New London Plan states that delivering more than 50% green cover across London is key to its designation as a world National Park City (1). The Draft Plan expects major development proposals to contribute to the greening of London, and for boroughs to develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in developments (1). This is currently the most established method of quantifying the provision and quality of green space.

The generic UGF model developed by the Mayor assists in determining the appropriate provision of urban greening in developments, based on a review of UGFs applied in other cities, with minimum UGF targets of 0.3 (2).
While this target is particularly challenging for existing buildings to achieve, heritage refurbishments including 50 Victoria Embankment and St Dunstan's Court, detailed in section 2.1.6, demonstrate listed buildings and those in Conservation Areas that have achieved UGF's of 0.27 and 0.31, in 2011 and 2012 (3).

The identification of existing green space at the Palace of Westminster has been carried out through a desk based study and review of survey images with the masterplan team, taking measurements from AutoCAD plans.
The baseline UGF was calculated following the Mayor's UGF model, which established an existing UGF of 0.040, based on the Outcome Level 1 site boundary, or 0.175 where there is opportunity to go beyond the immediate boundary of the Palace of Westminster, due to neighbouring green space.

Conclusions
The low existing UGF highlights that to achieve the minimum UGF of 0.3 increasingly being adopted into policy, the Restoration and Renewal Programme would in an Outcome Level 1 scenario, need to introduce a further 12,000m² – 30,000m² of green space (up to 66% of the current area) depending on its quality, and 10,400m² – 26,000m² green space (up to 31% of the current area) in an Outcome Level 3 scenario. Figure 7, in section 2.1.9 demonstrates what this 31% additional greening would look like, compared to the existing in Figure 2. The advantages at Outcome Level 3 are that the wider existing area already encompasses a higher ratio of green space and river to hardstanding, and there is a greater potential area within which interventions can take place.

As noted above, the amount of green space required to achieve an UGF target will depend on the quality of the green space introduced. Surface cover considered to be of a higher quality, based on the Mayor's UGF model, tends to provide enhanced habitats for biodiversity, alleviate flood risk, the UHI effect and improve air quality (2).

Section 2.1.2 details studies carried out in Lisbon and Athens city centres that demonstrated urban greening to reduce the UHI effect by up to 7°C (4). Research by Matthew Maimaitiyiming et al. also describes how optimising the configuration of green space to increase the patch density and edge density in sustainable urban planning and development also mitigates UHI effects (5). This indicates that in addition to the amount and quality of cover, the landscape design should start to consider how these areas of greening are positioned to maximise their benefit.

The different types of green infrastructure can have varying benefits, so it is also important to consider the priorities for the project and its locality when planning the planting strategy. Tree canopies have been described to provide the greatest benefit for reducing the UHI effect and flood risk, while green roofs are also particularly effective for reducing surface water run-off (6). Vertical greening by comparison is demonstrated to be more effective for improving air quality, particularly when situated close to traffic (6).

The Flood Risk Assessment (00POW-4107-BDP-XX-XX-Z-XX-RG-001058) (7) and Air Quality Assessment (00POW-4107-BDP-XX-XX-Y-XX-RG-00007) (8) for the Palace of Westminster highlight that there is significant risk of surface water flooding and that air quality is poor. It is therefore recommended that these begin to inform the prioritisation of the type of planting strategy applied.

Assumptions, Risks, Gaps
At Outcome Level 3 it is assumed that the Restoration and Renewal Programme will have the opportunity to increase its reach to incorporate the northern end of Victoria Tower Gardens and connect to other local urban greening initiatives including the potential pedestrianisation of Parliament Square and Government Estate Strategy proposed public realm improvements.

Some of the greatest challenges to encouraging a significant increase in valuable green space is not to interfere with planned increases in occupancy and functions such as logistics that may also benefit from utilising spaces such as courtyards, where covering them over could provide additional accessible space. Enclosing new green space however, will mean that the project and local site will not benefit from many of the benefits of outdoor greening such as the alleviation from flood risk, improved outdoor air quality and the provision of new habitats for biodiversity.

Studies to determine the suitability of incorporating green roofs and walls will also need to be carried out, to ensure the structure is not compromised and that there are no planning issues with regard to proposals being in keeping with their heritage surroundings.

There are still a number of gaps, therefore further work is required to understand:

- Which of the existing roofs and walls within the estate have the potential to be greened
- Which courtyards will be available and could be transformed into green space
- Planning constraints for the introduction of the above
- Priorities for local biodiversity
- Considerations around the introduction of new plant species and habitats through a habitat/biodiversity survey
- The optimal arrangements of Urban Green Infrastructure (UGI) in street canyons and the wider urban landscape to provide the benefits described in section 2.1.2
- The most vulnerable areas within the Palace of Westminster and its environs that may especially benefit from green cover to alleviate flood risk and improve air quality

2.1.1 SCOPE

Quantification of existing green space (m²) and identification of opportunities to maximise greening in urban and heritage environments.

This study identifies existing areas of green space to establish the baseline Urban Greening Factor (UGF) for the Palace of Westminster Restoration and Renewal Programme site, opportunities for maximising greening and the potential to link to local initiatives. It is driven by London Policy requirements for urban greening and the aspiration to combat the impacts of climate change, flood risk, poor air quality, the Urban Heat Island (UHI) effect and deficiencies in green space.

The findings of this study will continue to inform the landscape design and masterplan requirements for the Restoration and Renewal Programme, including the additional provision of green space needed to align with current policy direction and improve the public realm. It will also feed into design considerations around (but not limited to) wellbeing, drainage, logistics and biodiversity.
The identification of green space was carried out through a desk based study and review of survey images with the masterplan team, taking measurements from AutoCAD plans. The baseline UGF was calculated following the Mayor of London's generic UGF model.

2.1.2 BENEFITS OF URBAN GREENING

Green space and infrastructure, including street trees, parks, green roofs and facades can deliver diverse benefits and ecosystem services, as outlined in sections 2.1.2.1 – 2.1.2.4, including pollution reduction, biodiverse habitat, noise reduction, flood alleviation and reduction of the UHI effect (6,9,10).

Incorporating UGI should form a key component to any urban climate change adaptation strategy because of the multiple benefits it provides to the community and local ecosystems (6).

2.1.2.1 UHI

It has long been recognised that cities exhibit their own microclimate and are typically warmer than the surrounding rural areas. This 'mesoscale' influence is known as the Urban Heat Island (UHI) effect and results largely from modification of land leading to greater absorption of solar radiation, reduced convective cooling and lower water evaporation rates (11).

Green areas in the urban environment can contribute to the mitigation of the UHI. In a context of climate change, with the expected increase in temperature, dryness and intensity of heat waves, green areas assume even higher importance as they can create a cooling effect that extends to the surrounding areas. Green spaces lower surface and air temperatures by evapotranspiration due to its lower thermal inertia compared to impervious surfaces and bare soils (5).

A study carried out in Lisbon, 2011, analysed the thermal performance of a small green space (0.24 ha) and its influence on the surrounding atmospheric environment of a densely urbanised area. It was found that the garden was cooler than the surrounding areas, either in the sun or in the shade. These differences were higher on hotter days, particularly in relation to the mean radiant temperature (Tmrt). The highest difference found was of 6.9 °C in relation to air temperature (4). A similar study was conducted by Vartholomaios et al (2013) (12). M Santamouris and D N Asimakopoulos (2001) (13) are cited for having studied Athens city centre, finding it to experience a difference in temperature from its surroundings of up to 10°C due to the UHI effect. While within parks with dense tree coverage, a considerable decrease of air temperature of 4°C to 7°C has been observed during hot days in Athens, the effect is less pronounced in small city parks. In addition, E Alexandri and P Jones (2008) found the combination of green walls and roofs can lead to a reduction in local air temperature of up to 6.5°C in Athens centre (14). This highlights not only a need to increase the amount of urban greenery, but also to distribute vegetation more evenly, and as close as possible to buildings.

Another study published in the International Society for Photogrammetry and Remote Sensing (ISPRS) Journal of Photogrammetry and Remote Sensing demonstrates that continuous green space produces stronger cooling effects than that of several smaller pieces of green space, even where the total area is equal to the area of the continuous green space (5).

In contrast, the increase of total patch edges may enhance energy flow and exchange between green space and its surrounding areas, and provide more shade for surrounding surfaces, which leads to a decrease in land surface temperatures (5). The paper recommends optimising the configuration of green space to increase the patch density and edge density in sustainable urban planning and development (5).

Diana E. Bowler et al. in 2010 carried out a systematic review of evidence on the effectiveness of urban greening as a strategy to reduce urban air temperatures, with a focus on the benefit of specific greening types (15). This may be used as a design guide for programmes integrating urban greening.

Despite the increasing amount of research on how UGI can prevent climatic extremes in urban areas, the level of 'take up' by urban planners is still currently low (6). In order to provide a useful decision making tool, a paper on planning for cooler cities, 2015, examines the relationships between urban geometry, UGI and temperature mitigation (6). This information was then used to develop broad guidelines for UGI implementation that maximises urban surface temperature cooling at a neighbourhood scale. The paper also quantifies the cooling benefits of four types of UGI: green open spaces (primarily public parks), shade trees, green roofs, and vertical greening systems (green walls and facades) (6). Table 1 outlines the modes of cooling provided by these UGI types and priority locations.

2.1.2.2 Air quality

Recent studies have estimated that 9,500 people die each year in London due to long-term exposure to air pollution, primarily particulates (PM2.5) and carcinogenic gas nitrogen dioxide (NO_2). The biggest source of NOx emissions in the UK is transport, responsible for 45.5% of national NOx emissions (16). As a result, the areas most affected by NOx emissions are inner city urban areas, due to the number of people exposed, the high levels of traffic and the tall urban buildings which create 'street canyons'. These canyons trap traffic pollutants and limit their dispersal into the atmosphere (16).

Other significant urban air pollutants with known detrimental effects on human health include Particulate Matter (PM10 and PM2.5), Ozone (O^3), Benzene, 1,3-butadiene, Carbon monoxide (CO) and Volatile organic compounds (VOCs) (17).

Due to baseline levels of NO_2, and PM10, and the potential for improvement, the Westminster Hall side of the Palace of Westminster sits within the Whitehall and Parliament Square Air Quality Focus Area, as identified by the Air Quality Assessment carried out by AECOM (8).

Tackling pollution at its source is the most efficient pollution management strategy, however, interventions that can actively remove pollutants from the air have high value in improving air quality. Vegetation slows air flow and provides a surface for depositing pollutants. It can create an efficient urban pollutant filter, providing rapid and sustained improvements in street-level air quality in dense urban areas. New research published in a London Forum for Science and Policy briefing paper (16), has shown that vegetation may be even more effective than previously thought, in particular in reducing common urban pollutants such as NO_2 and particulate matter. Models have shown that planting vertical vegetation in street canyons can reduce street level concentrations by as much as 40% for NOx and 60% for PM (16).

Trees also provide significant benefits. In a US study, 2006, it was suggested that removal of pollutants through deposition on US urban trees amounted to 305,100t of ozone and 97,800t NO_2, in addition to significant reductions in CO, SO_2 and PM32 (18). In highly polluted street canyons, trees can serve to trap vehicle emissions near street level, potentially outweighing their benefit of capturing CO_2. Modelling results suggest that vertical greening on building walls could remove nearly 10 times as much NO_2 and nearly 12 times as much PM10 from street canyon air as horizontally grown rooftop vegetation (19).

It is important to consider the effects of different types of green infrastructure when planning for planting, to maximise the benefit (16). Policies to reduce urban air pollution through urban greening recommended by the London Forum for Science and Policy study include encouraging the construction of green walls as a mitigation method for developments in areas with high concentrations of NOx (16).

2.1.2.3 Flood Risk Alleviation

The Flood Risk Assessment (00POW-4107-BDP-XX-XX-Z-XX-RG-01058) (7) carried out by BDP highlights that exposure to flooding has increased, particularly in urban areas, due to a rising proportion of sealed/ impermeable surfaces, which increases pressure on drainage systems. This work is being supported by further investigations by HR Wallingford.

Table 1 – B.A. Norton et al. Modes of cooling provided by different urban green infrastructure options and priority locations to optimise their cooling benefits (6)

UGI	Green open spaces	Trees	Green roofs	Vertical greening
Shades canyon surfaces?	Yes, if grass rather than concrete	Yes	Shades roof, not internal canyon surfaces	Yes
Shades people?	Yes, if treed	Yes	No, only very intensive green roofs	No
Increases solar reflectivity?	Yes, when grassed	Yes	Yes, if plants healthy	Yes
Evapo-transpirative cooling?	Yes, with water No, without water	Yes (unless severe drought)	Yes, with water when hot No, without water	Yes, with water when hot No, without water
Priority locations	• Wide streets with low buildings – both sides • Wide streets with tall buildings – sunny side	• Wide streets, low buildings – both sides • Wide streets, tall buildings – sunny side • In green open spaces	• Sun exposed roofs • Poor insulated buildings • Low, large buildings • Dense areas with little available ground space	• Canyon walls with direct sunlight • Narrow or wide canyons where trees are unviable

UGI networks can be used to reduce surface water run-off and store flood water(20) as illustrated in Figure 4 of the Civil and Structural Stage 1C Report (00POW-4107-BDP-XX-XX-S-XX-RG-00002) (21). Enhanced green infrastructure in urban areas, such as green roofs and parks can make a significant contribution to flood risk alleviation in addition to enhancing the provision of fundamental ecosystem services. Increased vegetation cover increases interception capacity, storage capacity and infiltration of the soil, reducing stormwater runoff, to produce substantial improvement in the urban drainage system, where infrastructure is very difficult and expensive to modify (7,22). This is of particular concern to the Palace of Westminster, with its historic drainage system located within flood Zone 3, an area described as land having a high probability of flooding without its local flood defences (the Thames Barrier and Embankment Wall). The Palace of Westminster's vulnerability to flooding is discussed further in the Operational Resilience to Weather Events feasibility study, section 2.4 and Flood Risk Assessment (00POW-4107-BDP-XX-XX-Z-XX-RG-001058) (7).

An article by the Commission for Architecture and the Built Environment outlines recommendations for catchment strategies and drainage design, stating that natural drainage processes should be mimicked wherever possible. Green infrastructure strategies should be used to incorporate the management of water quality, flood risk and water resources into wider networks, with open space planning integrating multi-functional use of public space with flood water attenuation (20).

Research by the University of Manchester has shown that increasing the green space cover in urban areas by 10% reduces surface run-off by almost 5%, increasing tree cover in urban areas by 10% reduces surface water run-off by almost 6%, and adding green roofs to all buildings in town centres can reduce surface water run-off by almost 20% (20). By comparison, a study analysing the role of urban green space in runoff reduction in central Beijing, 2012, indicated that a total 97.9 million m^3 of excess surface runoff was retained by urban green space, and that adding nearly 11% more tree canopy was projected to increase runoff retention by as much as 30% (23).

The Green Streets project in Portland, US, involved designing and managing

public space to cope with change. To manage run-off and protect water resources, the city uses curbside planters that absorb flash flood water run-off. The planters provide a Sustainable Urban Drainage System (SUDS), capturing almost all of the street's run-off, preventing flash flooding and reducing the amount of water that the city's drainage system has to deal with. They also hold attractive shrubs and trees that provide shade, air-cooling and biodiversity benefit to streets (20).

An article in the Journal of Environmental Planning and Management argues that conventional, separately-sewered first-generation and alternative second-generation SUDS alone cannot provide a fully sustainable surface water management approach for urban catchments. An extended approach based on the introduction of micro-and meso-vegetative SUDS systems into a wider green infrastructure framework is advocated to effectively address on-site and catchment urban surface water issues. The approach is based on the integration of street 'greening', with optimisation of existing biofiltration SUDS solutions, together with green roofs, downspout disconnection and sub-catchment interfaces between land and water bodies, to achieve a minimum 25–30% canopy cover level (24).

Based on an urban flood risk reduction study quantifying the impact of UGI on rainwater runoff, applied on future projections for an urban basin located in the north of Rosario city, Argentina, UGI allows for increases in population and urbanisation without an increase in runoff. More traditional waterproofing strategies modelled indicated an increased risk of flooding of up to four times by comparison. It was concluded that improving the UGI constitutes a strong strategy to adapt to climate and urban changes, to cope with upcoming increases in precipitation and urbanisation (22).

2.1.2.4 Wellbeing

There is an increasing wealth of evidence that urban green space can provide health benefits including psychological relaxation and stress reduction, improved social cohesion, and immune system benefits through engagement with nature and exposure to natural microbes (9,10). Associations have been demonstrated in Japan between visiting forests and beneficial immune responses, including expression of anti-cancer proteins (10). Increased biodiversity in the environment around homes is also linked to a reduced risk of allergy (10). The pathways leading to beneficial health effects from green space are diverse and complex. Various models have been formulated to explain the relationship between green space and health. Hartig et al. (2014) suggested four interacting pathways through which green space can affect health and wellbeing (9); improved air quality (17), enhanced physical activity (25), stress compensation (16) and greater social cohesion (9,10).

Many epidemiological studies have demonstrated various positive health effects of urban green spaces, including reduced depression and improved mental health, reduced cardiovascular morbidity and mortality, improved pregnancy outcomes and reduced rates of obesity and diabetes (9,10). There is accumulating evidence that physical activity in green space ("green exercise") is more restorative and beneficial for health than physical activity in non-natural environments. Villanueva et al. (2015) also link the benefits of reduction of the UHI effect from green spaces to protection from heat-related health hazards (9,10).

The evidence of health benefits due to mental restoration and relaxation from having contact with nature and green space is well documented. It has been suggested that contact with nature (e.g. views of green space) can trigger positive effects for persons with high stress levels by reducing neural activity in the subgenual prefrontal cortex to alleviate depression symptoms (Bratman et al. 2015) (9,10). Stimuli in natural settings helps to restore a sense of wellbeing in persons suffering mental fatigue (9,10). This is a concept also discussed in the Occupant Wellbeing feasibility study 9.

A multicity study in Europe linked greater time spent in green spaces with improved self-reported health and vitality; the effects were consistent in all four study areas in Spain, Lithuania, The Netherlands and the UK, suggesting that the health benefits are independent of cultural and climatic contexts (9,10).

Social relationships have a well known protective effect on health and wellbeing, while social isolation is a predictor of morbidity and mortality (10). Green space can play an important role in fostering social interactions and promote a sense of community that is essential for social cohesion (5).

2.1.3 BASELINE

A review of existing information for the Parliamentary Estate and the immediate surroundings has been carried out with the Masterplan design team and ecologist, to establish areas of existing green space and potential ecological value. As illustrated in the satellite map, Figure 1, existing green spaces within the Parliamentary Estate are relatively limited to New Palace Yard (NPY) and Cromwell Green Lawn (CG). Depending on the reach and Outcome Level agreed for the Restoration and Renewal Programme, Victoria Tower Gardens (VTG) (in part) and Abingdon Street Gardens (ASG) could also be considered within the baseline.

2.1.3.1 Urban Greening Factor

An increasingly prevalent method for quantifying green space in urban areas is the Green Space Factor (GSF). GSF schemes have been applied in several cities throughout the world, beginning with Berlin in the 1990s (2). The model has since been replicated in Scandinavia and a number of US cities(3). The City of Southampton was the first UK planning authority to develop a GSF scheme(3). Following a stakeholder consultation workshop at City Hall, May 2017, on whether a GSF would be a suitable mechanism for delivering green infrastructure, the opportunities and challenges, and how it might fit in a London context, the concept was received positively(3). A GSF framework for London, called the Urban Greening Factor (UGF) has since been adopted into the Draft New London Plan and City of London Local Plan in 2018. The measurement of the UGF will also form one of the outputs of GREENPASS in 2019, an evaluation tool for green infrastructure and micro-climate simulation.

While GSFs start to reward surface cover types of a higher functionality by assigning them a higher factor, they do not fully encompass the quality of green cover. A Green Points System, as adopted in Malmö, Sweden, was designed to improve the quality of landscape design and include interventions also grouped according to 11 benefits identified by the Natural Economy Northwest England project; economic growth and investment, land and property values, labour productivity, tourism, products from the land, health and wellbeing, recreation and leisure, quality of place, land and biodiversity, flood alleviation and management, and climate change adaptation and mitigation (3). The intention is that green points will be

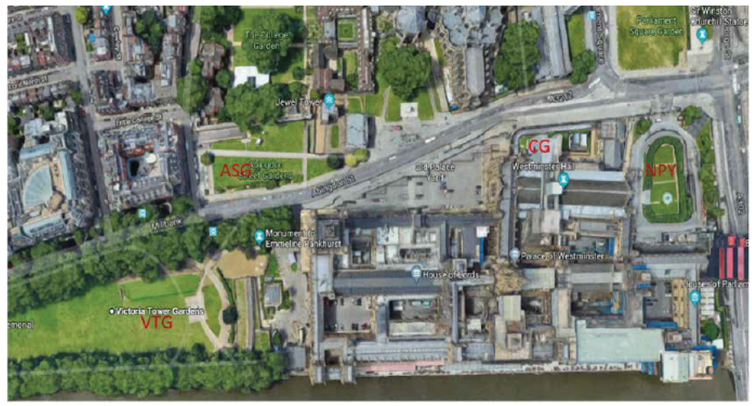


Figure 1 - Satellite map of the Palace of Westminster site and surroundings

integrated into the GSF in the future so that a separate points system is not required, the new Malmö GSF will consider biodiversity as well as social qualities and stormwater management (3). Recommended features include; bird and bat boxes and climbing plants on walls. A number of Green Points System features for consideration are outlined in section 2.1.9 (Opportunities).

Stockholm's GSF is differentiated from other examples by the addition of more detailed factors on biodiversity, social use of green space and climate adaptation (3). For example 'butterfly restaurants', fruit-bearing flora, nesting boxes, lawns suitable for ball games and play, food cultivation on balconies, multi-layered green roofs, trees and pergolas shading playgrounds (3).

The Mayor recommends that the assignment of a particular factor to a particular surface cover should be subject to local determination to provide maximum benefit (1). For example, authorities with lower levels of tree cover can award more points for the planting of trees, or where drainage is an issue, emphasis can be placed on rain gardens and other SUDS features. However, the challenges of climate change, poor air quality and deficiencies in green space need to be tackled now (1), so while each borough develops its own bespoke approach, the Mayor sets recommended standards.

The City of London UGF Study 2018 ranks various benefits provided by green infrastructure in order of priority for the City of London, to indicate the relative importance that should be given to each when determining the factors used. These were amenity/recreation, health/wellbeing, air quality, rainwater attenuation (surface water management), biodiversity, temperature/shade (summer cooling) (3).The study also suggests how it might have been possible for a number of case studies in the borough to achieve UGFs of 0.4, 0.6 and 1 (3).

2.1.3.2 **UGF methodology**

Table 2 – GLA New London Plan Proposed UGF Scores (1) (Urban Greening Factor Study, City of London, July 2018)

Surface Cover Type	Factor
Semi-natural vegetation (e.g. woodland, flower-rich grassland)	1
Wetland or open water (semi-natural; not chlorinated)	1
Intensive green roof or vegetation over structure. Vegetated sections only. Substrate minimum settled depth of 150mm – see livingroofs.org for descriptions	0.8
Standard trees planted in natural soils or with a minimum of 25 cubic metres soil volume per tree	0.8
Extensive green roof with substrate of minimum settled depth of 80mm (or 60mm beneath vegetation blanket)	0.7
Flower-rich perennial planting	0.7
Rain gardens and other vegetated sustainable drainage elements – See CIRIA for case-studies	0.7
Hedges (line of mature shrubs one or two shrubs wide) – see RHS for guidance	0.6
Standard trees planted in individual pits with less than 25 cubic metres soil volume	0.6
Green wall –modular system or climbers rooted in soil – see NBS Guide to Façade Greening for overview	0.6
Groundcover planting – see RHS Groundcover Plants for overview	0.5
Amenity grassland (species-poor regularly mown lawn)	0.4
Extensive green roof of sedum mat without substrate or other systems that do not meet GRO Code (2014)	0.3
Water features (chlorinated) or unplanted detention basins.	0.2
Permeable paving - see CIRIA for overview	0.1
Sealed surfaces (e.g. concrete, asphalt, waterproofing, stone)	0

The mayor of London has developed a generic UGF model to assist in determining the appropriate provision of urban greening in developments, based on a review of UGF's applied in other cities, with minimum UGF targets of 0.3 (1).

The UGF for a proposed development is calculated in the following way:

(Factor A x Area) + (Factor B x Area) + (Factor C x Area) etc. divided by Total Site Area

E.g. on a site of 1,000m², an office development with a 600m² footprint including a green roof, 250m² car parking, 100m² open water and 50m² of amenity grassland would score the following:

UGF = (0.7 x 600) + (0.0 x 250) + (1 x 100) + (0.4 x 50) / 1000 = 0.54

NB: green roof has a Surface Cover Type Factor (SCT) of 0.7, hardstanding has a SCTF of 0. The full list of proposed Surface Cover Type factors are displayed in Table 2.

2.1.3.3 **Results**

Prior to an agreed Outcome Level being established, approximate measurements have been taken of anticipated site area boundaries and areas of existing green and blue infrastructure at Outcome Levels 1 and 3. These indicate a minimum (≈ 45,580m²) and maximum (≈ 82,580m²) area that the Palace of Westminster Project will have the opportunity to influence in terms of greening, as illustrated in figure 2. As the majority of green cover consists of amenity grassland with areas of trees, their SCTF range from 0.4 – 0.6 respectively. The area of open water considered at Outcome Level 3 has a factor of 1.

The areas measured indicate, based on the boundary at Outcome Level 1, that the site currently has an UGF of 0.040. Where there is opportunity to go beyond the immediate site boundary (Outcome Level 3), the baseline UGF is approximately 0.175.

As the methodology for establishing a standard site area continues to be developed, the UGF will be updated and refined. In the interim, the above baseline UGF's serve to illustrate the level of intervention required to bring the UGF in line with emerging policies and precedent projects outlined in

Figure 2 - Anticipated site area boundaries that can be influenced by the Masterplan Vision in terms of greening (OL1 left, OL3 right)

sections 2.1.4 and 2.1.6.

To achieve the minimum UGF of 0.3 increasingly being adopted into policy, the Palace of Westminster Project would in an Outcome Level 1 scenario need to introduce a further 12,000 – 30,000m² of green space (up to 66% of the current area) depending on its quality, and 10,400m² – 26,000m² green space (up to 31% of the current area) in an Outcome Level 3 scenario. The advantages at Outcome Level 3 are that the wider existing area already encompasses a higher ratio of green space and river to hardstanding, and there is a greater potential area within which interventions can take place.

2.1.4 POLICY REVIEW

Following a consultation on mandating biodiversity net gain in development, it was confirmed in March 2019 that the government will use the forthcoming Environment Bill to mandate Biodiversity Net Gain (26). This will require developers to ensure habitats for wildlife are enhanced and left in a measurably better state than they were pre-development. In the rare circumstances that improvements are not possible, developers will need to pay a levy for habitat creation or improvement elsewhere.

The revised National Planning Policy Framework has also been strengthened to include reference specifically to a measurable net gain and a British Standard for biodiversity net gain is currently under development (27). This is being led by the British Standards Institute, Natural England and Defra, in collaboration with a wide range of industry, Non-Governmental Organisation and land management bodies, due for publication in 2019/2020.

2.2.10.1 Draft New London Plan 2018

The Draft New London Plan states that delivering more than 50% green cover across London is important in its designation as a world National Park City (1). As outlined in Policy G5: Urban Greening, The Draft New London Plan expects major development proposals to contribute to the greening of London, and for boroughs to develop an UGF to identify the appropriate amount of urban greening required in new developments. This should be tailored to local circumstances, however a target score of at least 0.3 is recommended for predominantly commercial development (1).
Policy G6: Biodiversity and access to nature, encourages proposals that introduce measures to reduce deficiencies in access to wildlife sites and create new or improved habitats that result in positive gains for biodiversity (1).

2.2.10.2 Westminster City Plan 2016

The city council is currently in the process of refreshing and updating its City Plan with new consideration being taken over aspects which pertain to open spaces and biodiversity. New policies will provide the necessary legal backbone to enable the protection, development and enhancement of Westminster's open spaces and wildlife (28).

Policy S35: Open Space, commits Westminster Council to protecting and enhancing Westminster's open space network, and working to develop further connections between open spaces (28). It seeks to address existing public open space deficiencies by protecting open spaces, their quality, heritage and ecological value, and mitigating pressure on spaces by securing new improved public open space from under-used land.

Policy S37: Westminster's Blue Ribbon Network, seeks to protect and improve the network, by enhancing biodiversity and waterside habitats, enhancing the waterside location and improving access to and enjoyment of the Waterfront (28).

Policy S38: Biodiversity and Green Infrastructure, also looks at protecting and enhancing biodiversity and green infrastructure, extending and creating new habitat, to increase the resilience of ecosystems, particularly in the Areas of Wildlife Deficiency and where species and habitats are a local conservation priority (28).

2.2.10.3 Westminster Open Spaces and Biodiversity Strategy, Draft 2018

The council's strategic approach to open spaces and biodiversity shares connections with a wide range of its other policies and strategies, including the Greener City Action Plan, City Plan and NPPF, Active Westminster Strategy, Air Quality Strategy, Area Regeneration Programme and Joint Health and Wellbeing Strategy. These align with the City for All vision. Priorities of the Strategy are to deliver more Green Infrastructure, Space for Play, Walking Routes around Open Spaces, and Biodiversity (29). The accompanying Action Plan outlines how the council intends to achieve these. A number of local partnerships collaborating to achieve these goals are also outlined, including the Grosvenor and Crown Estates, the GLA and Royal Parks.

2.2.10.4 Westminster Biodiversity Action Plan 2008

The Westminster Biodiversity Action Plan, delivered by the Westminster Biodiversity Partnership, although written in 2008, aims to prevent the decline of - and improve conditions for - species and habitats that are a conservation priority (30), as listed below. These will be considered and supported throughout the delivery of the Restoration and Renewal Programme:

- Built Environment (living roofs and walls)
- Churchyards and Cemeteries
- Parks and Green Spaces
- Private Gardens
- Standing Open Water
- Tidal Thames
- Bats
- Buttoned Snout Moth
- Hedgehog
- House Sparrow
- Tawny Owl

2.2.10.5 **Greener City Action Plan 2015 – 2025**

The Westminster Greener City Action Plan recognises that over half of the City's open spaces have a heritage designation, with 85 London Squares and 21 English Heritage listed parks and gardens (31). The Greener City Action Plan presents a 10-year vision for the City of Westminster, working with communities and partners to maintain, protect and improve the local environment through flood, noise and air pollution mitigation, sustainable energy and transport, making better use of the city's waste and water resources and encouraging people into environmental action. Theme 6, seeks to make best use of open spaces and improve local biodiversity (3). It includes planned actions such as planting an additional 1,000 new trees by 2020 and updating and adopting the Westminster Open Spaces and Biodiversity Strategy(3).

2.2.10.6 **Draft City of London Local Plan 2036**

The Draft City of London Local Plan, which provides a model for other local authorities, adopted an UGF scheme in 2018 (for implementation in 2020), as a way of promoting green infrastructure and increasing the quantity and quality of green infrastructure. Although opportunities to add more vegetation to certain buildings (e.g. Listed Buildings with pitched roofs), may be limited, the City of London Draft City Plan 2036 demonstrates that there are many opportunities to add greenery to new buildings and refurbished buildings in Conservation Areas, as well as zones which are not specially designated. As a result, there are plans to apply a UGF across the City (3), with the understanding that some historic buildings may be exempt.

It is suggested that minimum target scores of 0.3/0.4 are adopted as schemes commence, although planning officers have noted that other cities are more ambitious and that higher target scores should be achievable.

2.2.10.7 **North West Regional Spatial Strategy 2008**

Green Infrastructure Toolkit – adapting the Green Space Factor and the Green Points System for use in the North West of England

The Green Infrastructure toolkit adapts the the Green Space Factor and the Green Points System for use in the North West of England. This was developed from Malmö's Green Space Factor and Green Points System to support the green infrastructure objective of the Northwest Regional Development Agency's Sustainability Policy for the Built Environment (32). The toolkit is designed to help determine which interventions will maximise the 11 economic benefits identified by the Natural Economy Northwest England project (32), as detailed in section 2.1.3.1.

It has been adapted to apply to the whole of development sites, with varying requirements depending on whether or not the site already has built structures. If the site already has built structures then the UGI Score has to be determined for the site as it exists predevelopment as well as for the planned development. To reach a score of 'Very Good' the planned development score needs to be at least 0.2 higher than the pre-development (32). If the site does not currently have built structures on it then the score for the planned development must reach at least 0.6 to be classed as 'Very Good' (32).

2.1.5 EXISTING LOCAL GREENING STRATEGIES

The Government Estate Strategy is working to improve the setting, security and accessibility of 'Constitutional London' – the iconic parts of Westminster (33). One of the priorities is to make the estate greener under the Greening Government Commitments, through work with stakeholders to create improved connections to the river, parks, and blend nature with the urban environment (33).

A working group, led by the Mayor's office, Westminster City Council and Parliament created in 2017 is investigating permanent measures around Parliament Square, to improve public safety and security and to deliver healthier streets by improving air quality and pedestrian comfort levels(34).

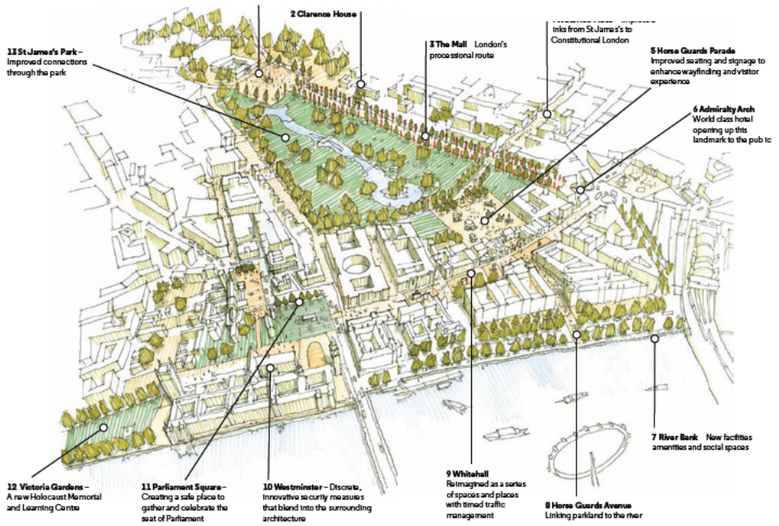


Figure 3 - Government Estate Strategy Proposed public realm improvements

Through the Parliament Square Streetscape Project, a study due to be published by autumn 2019 is underway (34), which will assess the possibility of partially closing the square to general traffic.

Figure 4 - Parliament Square Pedestrian Improvements (Hawkins Brown)

Both the pedestrianisation of Parliament Square project and Government Estate Strategy, in addition to the Restoration and Renewal Programme, provide opportunities to create and connect the pockets of local green space around Westminster, to enhance biodiversity, ecological connectivity, air quality and the wellbeing of residents, workers and visitors.

2.1.6 PRECEDENTS

An increase in green space via stepping stone habitats and the creation of green infrastructure will have a positive impact on air quality and wellbeing in Westminster, and ensure a positive contribution to the local environment and climate. Section 2.1.6 presents a number of precedent projects that are exemplary in their provision of green space, as detailed in the Sustainability Strategy: Precedent Analysis Report (00POW-4107-BDP-XX-XX-Y-XX-RG-00003) (35).

2.1.6.1 Wild West End

In Chicago, introducing green roofs across 10% of buildings in the city removed 17,400mg of nitrogen dioxide each year(36). Following a similar model, Wild West End is made up of a collaboration between London property owners supported by the Mayor of London, and the London Wildlife Trust(36). It aims to create an extensive network of green infrastructure that forms connections between the large areas of parkland in the West End.

The Wild West End initiative will transform a part of the city for thousands of residents, workers and tourists, as well as providing the ecosystem services associated with green infrastructure such as cooling, air purification, sound and heat insulation, flood risk reduction and SUDS, stress relief and provision of habitat for the city's biodiversity (36).

The Crown Estate's green corridor will integrate gardens at street level and on rooftops, as well as the installation of bird and bat boxes, beehives and green walls, providing habitats for birds and pollinators that form a crucial part of the ecosystem in London(33). This collaborative and connective approach is also in line with London's designation as the world's first National Park City, aiming to create a city that is rich in wildlife, with high-quality green spaces and clean air, where people and nature are better connected.

Wild West End has outlined a framework defining valuable green space by function, outlining ten features:

- Garden square
- Allotment / growing garden
- Biodiverse roof
- Extensive or semi-intensive green roof
- Intensive green roof / roof garden
- Vertical greening
- Trees
- Sustainable Drainage
- Green Streets (provision of window boxes, hanging baskets and planters along the length of the street)
- Parklet / pocket park

And 6 intended functions:

- Biodiversity
- Air quality
- Air cooling and thermal benefits
- Water retention
- Mental and physical health
- Noise and smell

2.1.6.2 Brown Hart Gardens

Brown Hart Gardens is a raised terraced garden in Mayfair. An elevated public square has been created over the Grade II listed substation. Complex historical and structural constraints were overcome to create a green space in a dense urban environment(37).

The drainage system was redesigned to drain water to a new perimeter channel offering greater protection for the substation below. The planters and seats in the middle of the deck can be moved around into a variety of configurations allowing flexible planting schemes to add interest to the gardens through the seasons(37).

The flexible planting and seating arrangement and the pavilion cafe provide facilities for relaxation, recreation and community events, as well as enhancing the biodiversity of the area, providing a simple green space in the heart of a very dense urban environment.

2.1.6.3 The Center for Sustainable Landscapes, Pittsburgh

The Center for Sustainable Landscapes (CSL) at the Phipps Conservatory and Botanical Gardens, Pittsburgh, USA is a new building and the First WELL Building Platinum project (pilot) in the world(38). The work at the CSL is based on recognising vital and positive connections between people, plants, beauty and health. As Phipps' education, research and administration facility, the CSL building aims to function as a "living museum"(38), focusing attention on the important intersection between the built and natural environments, and demonstrating that human and environmental health are inextricably connected.

2.1.6.4 **Maggie's Centre, Oxford**

Maggie's Centre, Oxford, has been designed as a tree house raised on stilts above the landscape to provide a stimulating and uplifting environment, with close proximity to nature and views out to the surrounding trees.

2.1.6.5 **50 Victoria Embankment**

2011 refurbishment of a listed building in a Conservation Area achieved an UGF Score 0.27 with the installation of 3 extensive green roofs (3).

2.1.6.6 **St Dunstan's Court**

2012 refurbishment of residential building in a Conservation Area achieved an UGF 0.31 through retained and enhanced dense gardens (3).

2.1.8 MASTERPLAN STRATEGY FOR GREENING

Following work to establish the existing baseline green space in section 2.1.3, future plans for local greening by external stakeholders (section 2.1.5) and current proposals by the Restoration and Renewal Programme Masterplan design team were reviewed. Following a similar concept to that of Wild West End – connecting pockets of green space, as illustrated in Figure 6, the current Masterplan vision seeks to develop a holistic and inclusive design that will complement emerging initiatives for the regeneration of the Parliamentary Estate. These initiatives include the Government Estates Strategy, section 2.1.5, Figure 3, and upcoming and speculative projects such as the proposed improvements to Parliament Square by Hawkins Brown, as detailed in Figure 4.

In line with the Masterplan vision, the Palace of Westminster Security Strategy looks to incorporate permeable security measures that do not present visual barriers within the landscape – comparable to those at the US embassy, London, which have at the same time created new natural habitat.

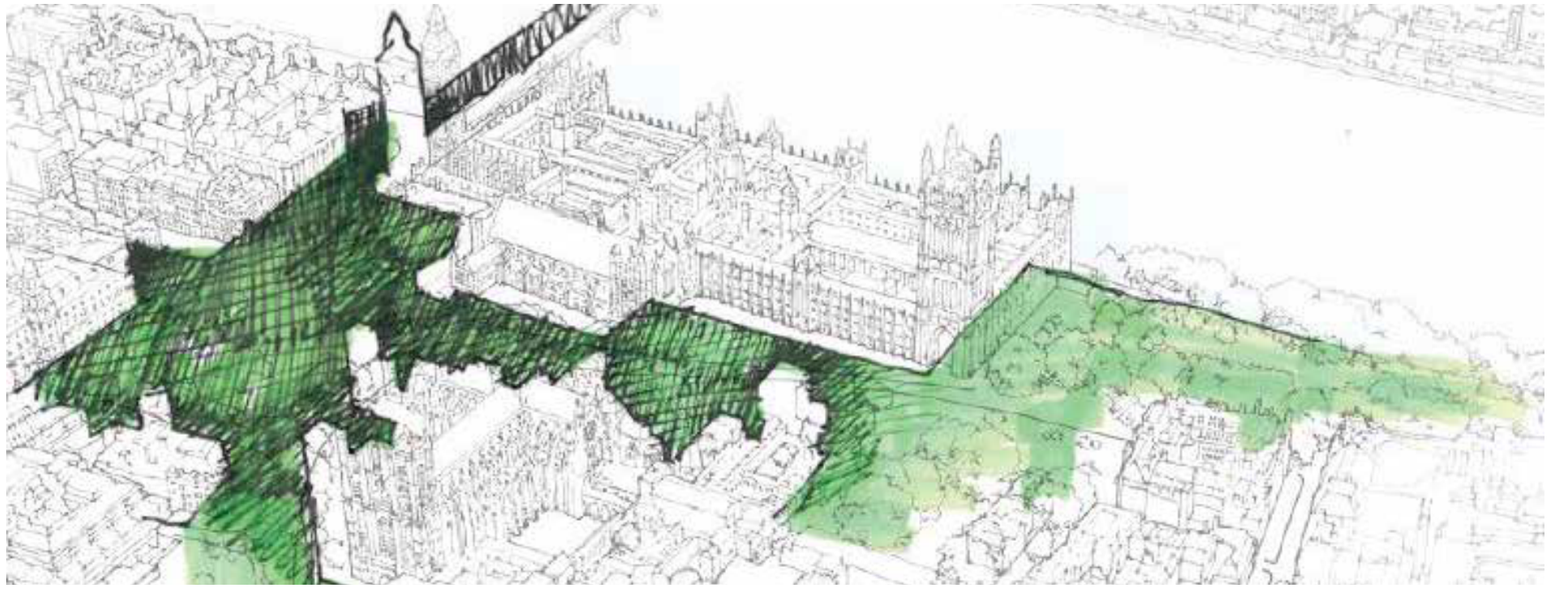


Figure 5 - Masterplan and Landscape Urban Design Sketch

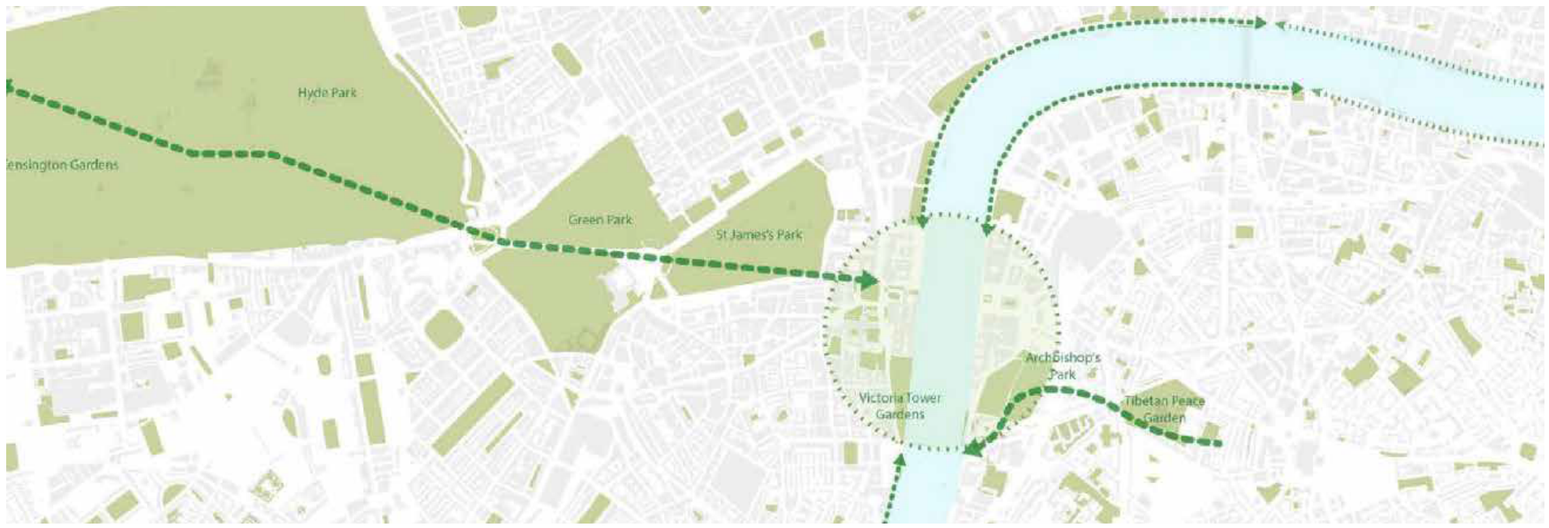


Figure 6 - London's Green Fabric, potential to join the dots

2.1.9 **OPPORTUNITIES**

Areas of the Parliamentary Estate that can be feasibly greened and areas of maximum opportunity are beginning to be identified with the Masterplan team and outlined in the Masterplan Summary RIBA Stage 1C Report (00POW-4107-BDP-XX-XX-Z-XX-DO-00012) (39). Figure 7 shows initial sketches of areas including roofs and courtyards that have been identified as having the potential for greening. Their selection will need to be coordinated with the other stakeholders, paying consideration to any conflicts and constraints.

These potential new green spaces are indicated to raise the UGF to 0.253 at Outcome Level 1. While this doesn't meet the UGF of 0.3 recommended by the Draft New London Plan, it is in alignment with the Northwest Regional Development Agency's recommended increase in UGF of 0.2 for sites that already have built structures(32). This is an area the London Plan does not provide specific guidance on. It is anticipated that at Outcome Level 3, an UGF of 0.3 would be achieved. Figure 7 illustrates the maximum potential for greening roofs, however there may still be further potential for greening external areas and courtyards, as is being explored. Currently Figure 7 demonstrates an UGF of 0.299. This does not yet take into consideration additional vertical greening that could be incorporated, nor proposed green space that may be discounted due to heritage constraints or other proposed design uses.

As highlighted in section 2.1.3.1, while the UGF does not fully encompass the quality of the green cover, the Green Points System outlines features designed to improve the quality of landscape design and encourages the inclusion of features that increase biodiversity and reduce rainwater run-off. Some of these aspects for consideration include:

- Working gardens
- Recreational green space
- Living walls
- Vertical planting
- Small allotments
- Rain gardens
- Native tree planting
- Artificial nesting sites
- Working with existing spaces including roofs, courtyards and walls

Figure 7 - Potential greening opportunities for Central Courtyards, terrace and green roof (BDP Masterplan Summary Report)

Of particular note are climbers, trailing plants and green installations that can be incorporated into existing spaces and easily removed if necessary, without impacting on the heritage building fabric. In line with the Westminster Biodiversity Action Plan, identifying habitats and species of local conservation priority, the RIBA Stage 2 biodiversity/habitat assessment will help to further identify locally appropriate native species or non-native species with known benefit to local wildlife for incorporation into the planting strategy.

Figure 8 - Opportunities for vertical greening (climbers and trailing plants)

2.1.10 MEASURING PERFORMANCE

As discussed in section 2.1.3.1, the most widely accepted metrics for measuring the quantity and quality of green space are based around Green Space Factor schemes. The Mayor of London has developed a generic UGF model to assist in determining the appropriate provision of urban greening in developments, based on a review of UGFs applied in other cities.

The UGF model also incorporates elements of the Green Points System, as adopted in Malmö, Sweden, designed to improve the quality of landscape design, consider biodiversity and other factors including wellbeing and stormwater management (32).

Table 3 outlines the UGF Key Performance Indicator and other relevant monitoring indicators currently being developed under the sustainability objective to enhance ecological value across the Parliamentary Estate.

Table 3 - Indicators and targets for Enhancing Ecological Value across the Parliamentary Estate

Indicator	Baseline	OL1	OL 2	OL 3	Units
Urban greening factor	0.04	0.25			n/a
Increase in outdoor amenity area					% No.
Change in biodiversity units					%
'Biodiversity Legacy Level' achieved by the project					n/a
Urban agriculture space	0				m2

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2.10

MULTI-STRATEGY EVALUATION

Eighteen Business Areas identify the range of operations within the Palace of Westminster encompassing both Houses. Some describe business activities that are provided separately by the House of Lords or the House of Commons administrations, a number are provided jointly for both Houses, and occasionally activities are carried out autonomously by Members or third party organisations.

In setting the brief, the business activities have set a number of functional requirements that need to be provided – either through space or facilities, or both. The Sustainability Design Strategy will influence how these spaces or facilities will be provided and how they will operate. Beyond these business functions, there are 12 design strategies under development in RIBA Stage 1 that will define an approach to delivering the project. The Sustainability Strategy is one of these 12. The business functions and strategy areas are shown in the figure below.

A series of workshops have been held to identify where the Sustainability Strategy will influence, or be influenced by, the approach taken across these other critical functions/areas. These workshops have identified the key interdependencies that need to be considered as the brief is finalised, through the design stages into construction and beyond, as the building is reoccupied. Each business area or strategy has been mapped against the 15 objectives of the Sustainability Strategy to identify cross-over.

The key interdependencies are identified in the figure (right), with key linkages highlighted to describe the critical areas of engagement.

Further alignment workshops with the design strategies and other design groups took place during RIBA Stage 1C, to evaluate the Sustainability Objectives against the aspirations of each. The areas of alignment and challenges identified for consideration are summarised across the following pages. Work to align the Sustainability Strategy with the Masterplan and Civil and Structural Engineering work (which are not individual design strategies) has also been carried out and represented here. Workshops will continue with the business areas and strategy leads during the next stages to ensure the objectives of the Sustainability Strategy are realised.

Figure 1: Sustainability interdependencies with design strategies and Parliamentary Business Areas

2.10.1 MASTERPLAN

The Masterplan influences a large number of elements related to the delivery of the Sustainability Strategy Objectives. These include green space and amenity areas that improve occupant wellbeing, SuDS, efficient logistics, future sustainable transport options, their infrastructure, parking requirements for various levels of mobility and provision of car parking.

2.10.1.1 Courtyards

The two largest courtyards provide the greatest opportunity for gardens, Speakers Green could also provide breathing space and gardens

2.10.1.2 Gardens and Terraces

Linking Black Rod's Garden, the river front terraces and Speaker's Green, provides an opportunity to create a green corridor and improve biodiversity, outdoor amenity and occupant wellbeing.

Risks

- Outcome Level 1 limits the land available for integrating SuDS solutions.
- There is some conflict between open courtyards for enhancing biodiversity, flood risk and UHI alleviation, and covered courtyards for providing greater flexibility in the use of space that contributes towards the building being more accessible.

2.10.4 **PARTICIPATION**

Both the Participation Strategy and Sustainability Strategy have aspirations for the programme to provide quality public space and increase engagement with Parliament.

2.10.4.1 **Public Realm**

New palace yard could be used more effectively, with potential for greening and providing quality public space.

2.10.4.2 **Visitors Centre**

The introduction of a new visitor centre such as within Cromwell Green provides a prime opportunity for the incorporation of a biodiverse roof. A new visitor centre within the existing building, potentially underground, is likely to have a lower embodied carbon impact.

Risks

- Cromwell Green provides limited space for a visitor centre.
- Abingdon Green as a potential location for a new visitor centre would result in a loss of public green space.

2.10.6 **OCCUPANCY**

The Occupancy Strategy has four aspirations, two of which - to provide high levels of occupant wellbeing and facilitate changes in working practices and flexibility in the medium and long term, are strongly aligned with the objectives of the Sustainability Strategy to optimise the operation of the Parliamentary Estate and promote well-being.

2.10.6.2 **Biophilia**

Various spaces have the capacity to accommodate different levels of biophilia, the touch down area in the catering area could provide improved access to nature. This is an area in which the Sustainability Strategy will continue to provide further guidance.

2.10.9 CONSERVATION AND BUILDING FABRIC

The Conservation and Building Fabric Strategy is developing a series of conservation approaches proportional to significance, number of and suitability of changes to component areas. This will help to deterimine opportunities for future flexibility and resilience, which are a priority for the programme alongside safeguarding the unique heritage of the Palace of Westminster and its functions. Under heritage legislation, what is of most important value is Parliament's function and therefore the building should aid its function.

2.10.9.5 Green Space

There are opportunities to provide localised and reversible greening without conflict with the Conservation and Building Fabric Strategy.

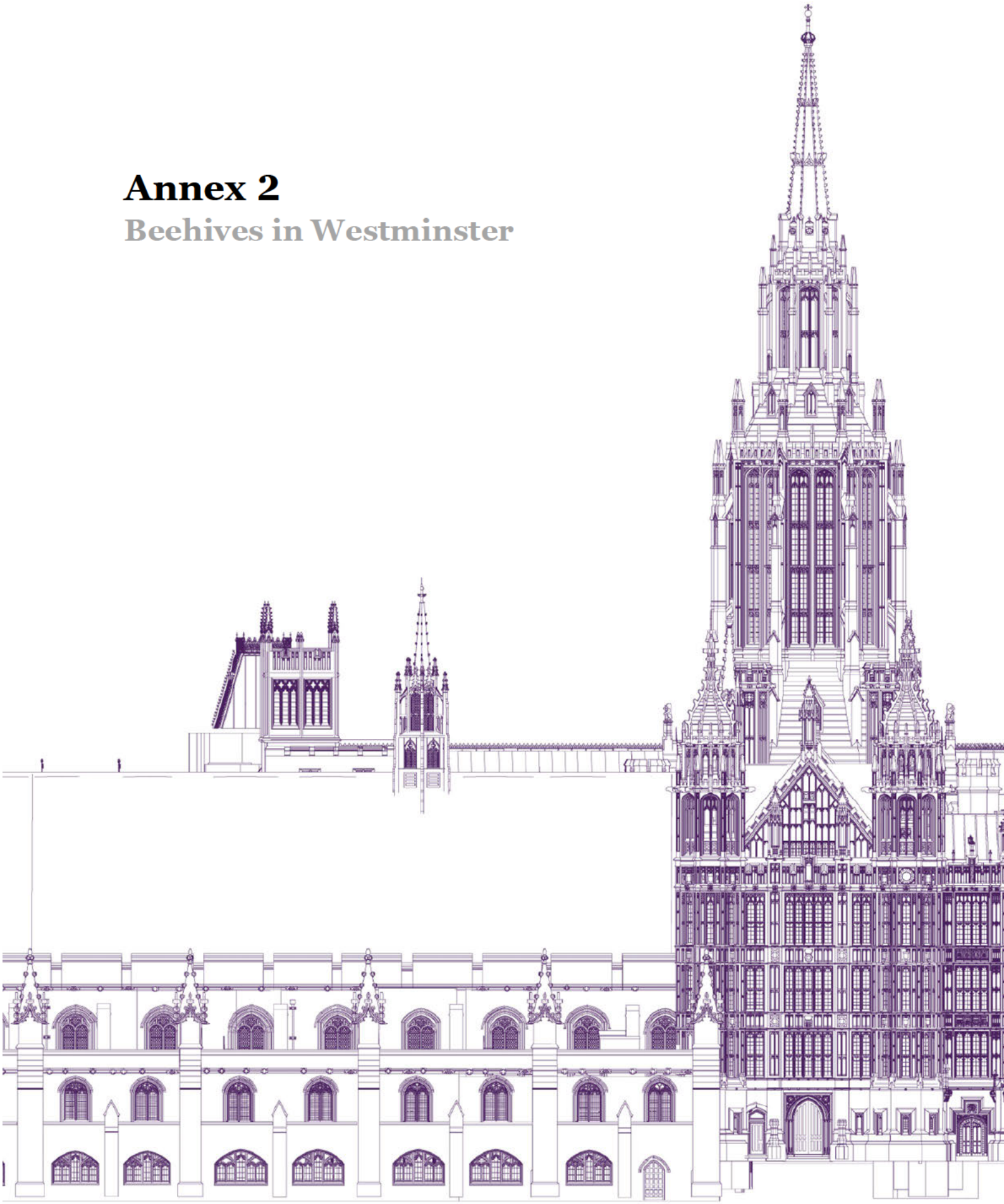
Risks

- There may be some original finishes under hardstanding that there will be aspirations to revive, this conflicts with opportunities to provide soft landscaping to improve flood risk alleviation, biodiversity, air quality and well-being.

HOUSES OF PARLIAMENT
RESTORATION & RENEWAL

Annex 2

Beehives in Westminster



[redacted]
Subject: FW: Bees in Westminster
Date: 11 June 2020 15:27:41
[redacted]

FYI

PPMS CLASSIFICATION: UNRESTRICTED

[redacted]
Sent: 17 January 2020 17 52
[redacted]
Subject: FW Bees in Westminster

[redacted]

Following the RH presentation earlier this week I contacted the LBKA to check their latest advice on bees and pollinators.

As you will see below the comprehensive LBKA advice is even more firmly against installing bees and in favour of planting of pollinators.

Could you pass this on to the Project team please? There is an offer of help within the email that they may wish to take up

I have copied sustainability colleagues in case we have similar bids for bees in future!

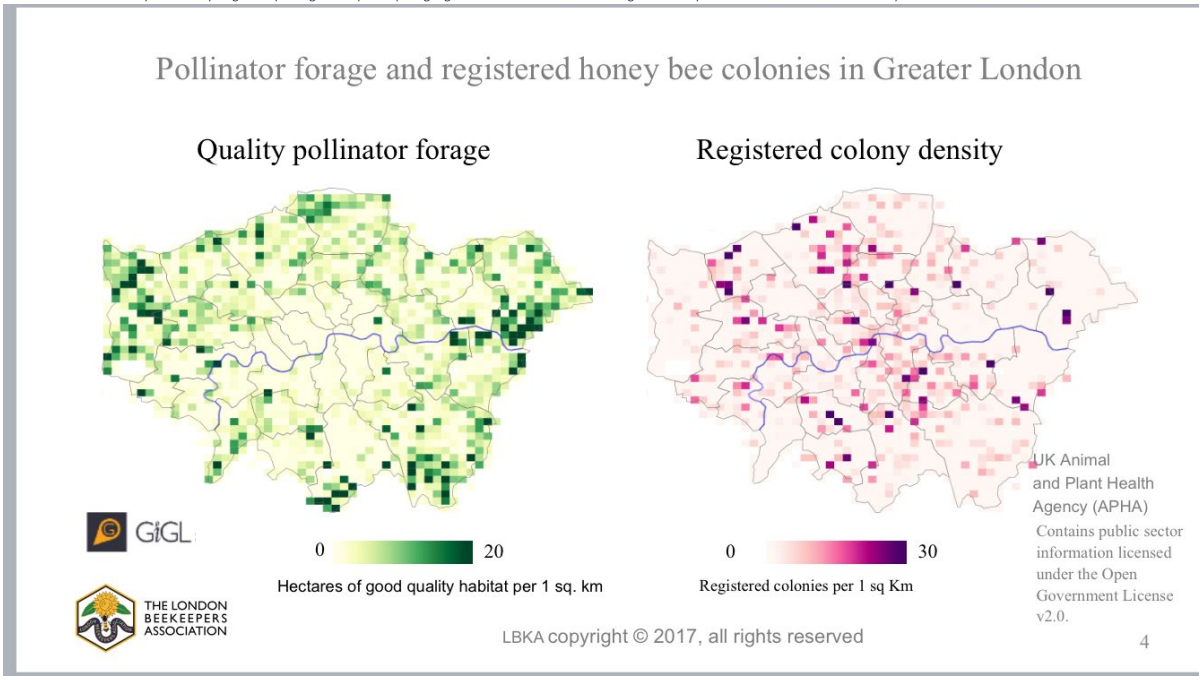
[redacted]

[redacted]
Sent: 16 January 2020 15 58
[redacted]
Subject: Re Bees in Westminster

Hello [redacted]

The situation has not improved since our last communication. Since we last spoke to you there are an additional 2500 hives in London taking the total number of hives registered in Greater London to >7500 and there is an anticipated 30% that do not register so the actual figure may be nearer 10 000 colonies.

The association is currently in the early stages of updating our maps comparing registered hive distribution and forage availability as the data we have is now several years old.



You can see on the green map above that there are no 1km squares within Westminster with significant quality habitat for pollinators. Even the royal parks which are mostly short cut grass and trees barely register on this map as having less than 2% of their land area classed as quality habitat for bees and other pollinators.

The most recent estimate for the required amount of habitat to support a single honey bee hive is 8ha. If you look at the purple map you can see there are some areas of Westminster with over 30 hives per km2 but no squares offering more than 2ha per km2 of quality habitat so introducing more bee hives is not sustainable and they will not be very productive.

I know first hand from managing bees on the roof of the ritz hotel overlooking green park that honey yields in Westminster are pathetic. The hotel is lucky to get 12-15kg of honey per year between its 3 hives. It s a similar situation in Holborn where I ve been assisting the bedford estates team with their bee hives. It s a real struggle keeping city centre bees healthy and well fed.

There is simply no incentive to put more bee hives into zone 1 central London.

There is also increasing evidence that higher densities of managed honey bees in urban centres badly effect wild pollinators both through competition for floral resources and by anthropomorphic spread of honey bee pathogens to other insects.

Last year a study showed that a single honey bee hive collects enough food between May and August to provision 100 000 solitary bee nests such is the level of competition as honey bee hives are a very resource hungry super organism. Each colony annually needs to collect 100lbs of pollen and up to 100gallons of nectar to survive and produce a honey crop. You have to ask where in Westminster a colony will find all of this given most of the parks and green space are sterile London plane trees and short cut grass void of flowers.

The message remains to plant for bees instead. We can advise on this but there may be a charge for this service depending on the level of detail required.

Swarming is also still a problem. In my last email I mentioned that we advised DEFRA against putting bees on Noble house as a vanity project but they went ahead anyway. Well in June 2019 those bees swarmed onto the neighbouring building which was undergoing a refurbishment and covered in scaffolding. The builders were forced to abandon the works for a day when the swarm landed on the scaffolding. See photo attached.

Since the ULEZ came into force we have experienced a shortage of volunteers willing to incur the charge to collect swarms from the city centre. Requests to TFL to waiver the charge to our volunteers carrying out a FREE public service have fallen on deaf ears. Anyone keeping bees inside the congestion and ULEZ zone must ensure they have contingency plans in place to collect swarms if they should emerge from their hives. Many swarms in Westminster went uncollected last year due to this volunteer shortage.

Our chairman recently visited 10 Downing Street which were interested in having hives but have since changed their mind having consulted us.

Creating habitat on rooftops for bees to forage rather than hives does tick many strategy boxes which helps deliver

Westminster Biodiversity action plan
Greater London biodiversity action plan
UK National biodiversity action plan
Environment Agency flood risk mitigation
Greater London authority flood management strategy through rainwater retention and reduced run off
Mayor of London s clean air strategy
Various strategies tackling climate change adaptation
National pollinator strategy
London pollinator action plan

There may be funding to install planting on developments that tie into these initiatives but there is no funding to add bee hives. There are also awards and schemes which give kudos to planting schemes on developments including roof tops BREEAM for example. I ve personally been awarded a bees needs award in 2019 by DEFRA for a green roof conversion I worked on in city of London. It also won a city gardens award and city in bloom. These are other examples of were kudus and prestige can be gained by planting rather than introducing bee hives.

I would try to push the developers in this direction.

If you have people who are determined to acquire honey bee hives despite the plea not to then the association does now have pest practice responsible urban beekeeping documents we would ask them to read and adhere to. If your interested in these documents I can have the chairman Richard Glassborrow cc d in forward these to you.

I hope this is helpful.

[redacted]
Forage Development Officer/Trustee
London Beekeepers Association
https //protect-eu mimecast com/s/gsKYC9105CvGVW8To2VfE?domain lbka org uk
@LondonBeeKeeper
https //protect-eu.mimecast.com/s/eCLBC0YG6tK10XjsDrVtg?domain facebook.com

Registered Charity 1165736

‘Everyone can help Bees you don t need to be a beekeeper

LBKA s mission statement Better beekeeping better public understanding of Bees and a better london environment for pollinators and people.

From: [redacted]
To: R&R External Information Requests
Subject: Re: FOI Request re biodiversity
Date: 30 June 2020 10:37:52

Thank you very much for this, however the PQ answer said that the R&R programme had 'conducted preliminary assessments of the potential benefits of promoting biodiversity as part of the restoration works, including the introduction of swift bricks and bird boxes' yet your response says 'The Programme does not hold any information specifically about swift bricks or birdboxes'.

Also, the emails on beehives show there had been earlier conversations on that topic.

Please can you send me details of the project's original plan regarding beehives?

[redacted]

> On 29 Jun 2020, at 14:28, R&R External Information Requests <externalinformationrequests@r-r.org.uk> wrote:
>
> Dear [redacted],
>
> Please find attached our response to your request for information.
>
> If you have any further questions, please do not hesitate to get in touch citing your reference number F20-003.
>
> Kind Regards,
>
> **Freedom of Information**
> **Restoration and Renewal Programme**
>
> **www.restorationandrenewal.uk**
>
> PPMS CLASSIFICATION: UNRESTRICTED
>
> **From:** [redacted]
> **Sent:** 03 June 2020 16:23
> **To:** R&R External Information Requests <externalinformationrequests@r-r.org.uk>
> **Subject:** FOI Request re biodiversity
>
> To whom it may concern,
>
> Under the terms of the Freedom of Information Act 2000, please provide me with full copies of the assessments of promoting biodiversity in the Parliamentary restoration works, as referred to in the below written question.
> <image004.png>
>
> Please respond within 20 working days.
>
> The House of Commons has already told me it does not hold the information, and requested I contact you instead.
>
> Thank you,
>
> [redacted]
>
> **[ ]**
> **Q**

Asked by **Andrew Percy**
(Brigg and Goole)
Asked on: 07 May 2020

Parliamentary Works Sponsor Body

Palace of Westminster: Repairs and Maintenance

45120

To ask the Right hon. Member for East Hampshire representing the Parliamentary Works Sponsor Body, what assessment he has made of the merits of including (a) swift bricks, (b) bird boxes, (c) beehives, and (d) others in the refurbishment of the Palace of Westminster.

A

Answered by: **Damian Hinds**
Answered on: 19 May 2020

The Restoration and Renewal Programme has conducted preliminary assessments of the potential benefits of promoting biodiversity as part of the restoration works, including the introduction of swift bricks and bird boxes, and the desirability of such measures will be subject to the requirements of both Houses. The potential inclusion of beehives will require more careful consideration, including the health and safety implications, while other measures could include ensuring that all planting is pollinator friendly. The Sponsor Body has also agreed a strategic objective for the Programme to optimise the environmental impacty of the Palace in its construction and operation, which has been endorsed by the Commissions of both Houses and will be kept under review as the Programme progresses.

<F20-003-Response Letter & Annex.pdf>

HOUSES OF PARLIAMENT
RESTORATION & RENEWAL

08 July 2020

[redacted]
By email.

Freedom of Information Act 2000 Follow Up Request Response

Reference: F20-003

Dear [redacted],

Thank you for your email of 30 June 2020 which we received on 30 June 2020.

You requested the following information: *details of the project's original plan regarding beehives.* You also stated that: *the PQ answer said that the R&R programme had 'conducted preliminary assessments of the potential benefits of promoting biodiversity as part of the restoration works, including the introduction of swift bricks and bird boxes' yet your response says 'The Programme does not hold any information specifically about swift bricks or birdboxes.*

Your correspondence is being treated as a request for information under the provisions of both the Freedom of Information Act 2000 (FOI) and, because it contains reference to environmental information, the Environmental Information Regulations 2004 (EIR).

The information provided in response to your initial request regarding bees and beehives is all the information that the R&R Programme currently holds regarding this subject.

The R&R Programme is in an early phase of development which means that detailed biodiversity work has yet to be undertaken for the Palace of Westminster. Related projects on the Parliamentary Estate, such as the Northern Estate Programme (NEP), are at a more advanced stage, and consequentially may hold a greater level of information about assessments concerning bees, beehives, swift bricks and bird boxes.

The R&R Programme became a separate statutory body on 8 April 2020; and consequentially we are unable to provide you with information about NEP which remains under the control of the House of Commons.

The work on NEP remains the essential first step to enable the restoration and renewal of the Palace to take place. Therefore, Mr Hinds response about preliminary assessments of the potential benefits of promoting biodiversity made reference, more generally, to both the R&R and NEP programmes.

The earlier conversations in the email thread about beehives were made in relation to NEP, not the Palace. The information supplied in our initial response to your request referred to bees in Westminster more generally therefore would also be relevant and appropriate to R&R.

HOUSES OF PARLIAMENT
RESTORATION & RENEWAL

I have consulted the R&R Sustainability Team, and I understand that the Environmental Team of In-House Services, Strategic Estates should be able to provide you with further information about bees within the context of NEP and other Parliamentary projects. The Lead Architect and Lead Landscape Masterplanner on NEP would be able to provide more information about bird and bat boxes.

I wish to advise you that details of all non-personal FOI requests, and any associated information or documents released will be recorded on an FOI disclosure log which will be published on the Houses of Parliament Restoration & Renewal website in due course.

If you are unhappy with the response or level of service that you have received in relation to your request please contact us in the first instance and we will seek to reach an informal resolution. If you remain dissatisfied then you may ask for an internal review. If you ask for an internal review of the decision we will acknowledge this request and inform you of the date by which you might expect to be told the outcome. The following outcomes are possible:

- The original decision is upheld; or
- The original decision is reversed or modified.

If you wish to exercise you right to an internal review then you should contact us within two months of the date of this letter, and within 40 working days for information provided under the provisions of the Environmental Information Regulations. There is no statutory deadline for undertaking internal reviews and the timescale will depend upon the complexity of the matter. We would normally endeavour to complete such reviews within 20 working days of acknowledgement; and exceptionally within 40 working days. We will keep you informed of the progress of the review. If you wish to request a review you should contact foi@r-r.org.uk.

If you are not content with the outcome of the internal review then you may apply directly to the Information Commissioner for a decision. The Information Commissioner can be contacted via the 'Making a Complaint' section of their website or by phone on 0303 123 1113.

Please cite your reference number F20-003 in any future correspondence with us.

Yours sincerely,

Freedom of Information
Restoration and Renewal
Houses of Parliament Restoration and Renewal Programme
First Floor, 7 Millbank, London SW1P 3JA