



Government  
Property  
Agency

# Biodiversity and Nature Recovery Annex

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## Overview

### Executive Summary



At first glance, the urban environment may appear limited in opportunities to sustain biodiversity. However, as more of the countryside comes under pressures, for example, from intensive farming and development, urban areas are becoming progressively valuable as havens for wildlife.

The Government Property Agency (GPA) has an important leadership role in creating sustainable and resilient working spaces. As a major property owner across the UK we are in a fortunate position to enable positive changes for our clients and nature.

We recognise there are many benefits of a wildlife-friendly environment to society. And acknowledge the growing evidence that a connection with nature is good for both our physical and mental wellbeing. Those of us who live and work in urban environments often find it soothing to spend time in nature because it gives us a break from the stimulation we experience as part of a sometimes hectic city lifestyle.

This guidance will reflect upon the broad variety of roles that our organisation undertakes and how these can be adapted to ensure we maintain and improve biodiversity outcomes across the estate we manage. For example the actions of our partners, contractors and clients. The importance of partnership working, particularly during difficult economic times, means we need to work more efficiently than ever before to achieve our aspirational sustainability objectives.

We recognise that we must play our part in reversing the loss of biodiversity. We do not exist in isolation, humanity is connected to nature and we are all part of the bigger ecological picture, not separate from it. As the strategic leaders of sustainability across the government office portfolio we want to promote biodiversity across our estate in all its forms. By acting together, we can have a huge impact but we will need to work within both financial and physical constraints.

Biodiversity is deteriorating worldwide and this decline is projected to worsen with business-as-usual scenarios. The UN biodiversity conference, known as Cop15, has convened governments from around the world to agree to a new set of goals for nature over the next decade.

Hopefully, these ambitious plans to implement broad-based actions to bring about a transformation in society's relationship with biodiversity will ensure that, by 2050, the shared vision of living in harmony with nature is fulfilled.

The targets agreed here will hopefully point humanity away from our ongoing destructive practices and halt the damage being inflicted on the natural world.

*Clive Anderson*

**Clive Anderson**  
**Director of Capital Projects, the Government Property Agency**

## Introduction: the Government Property Agency

The Government Property Agency (GPA) is at the forefront of the government's transformation agenda. Working with all government departments to help them deliver their business needs and across the nations and regions of the UK. We are rationalising and improving the estate, creating shared, sustainable spaces with transformed digital tools and modern workplace services.

We have a real opportunity to make a huge difference to places, and to change perceptions about the way we work. The GPA is driving sustainability to achieve the Government's carbon net zero ambition, adopting modern technology, and reshaping our services to deliver a revised workplace strategy that is genuinely people-focused.

### Our Mission and Vision

Our's vision is to create a transformed, shared, sustainable and value for money government estate that supports civil servants to work productively in every nation and region of the UK. This is achieved by supporting growth across the UK; transforming the Civil Service; contributing to net zero and delivering better taxpayer value across our assets.

We provide great places to work for civil servants, using our scale and commercial expertise to do this effectively and sustainably, helping to support growth in all parts of the UK.

We recognise and want to embrace the opportunities that arise from our operations whether it be making a real social and economic difference in supporting the government's levelling up agenda or promoting sustainability, improving environmental performance in maximising our contribution to the UK's net zero carbon ambition.

## Context

### UK Biodiversity

The UK is seeing significant declines in wildlife. Out of 24 biodiversity indicators, 14 show long-term decline, including continued deterioration of UK habitats as well as a decline in priority species, according to the 2021 [Joint Nature Conservation Committee \(JNCC\) UK biodiversity indicators report](#). (The UK biodiversity indicators report gives the most comprehensive overview of the action the government is taking on the most pressing wildlife issues).

The data shows that populations of the UK's most important wildlife have fallen by 60% in 50 years. The Department for Environment, Food and Rural Affairs (DEFRA) highlights that there remains huge ongoing pressures on the country's biodiversity, and recognises that many of our native species are in decline. The UK's new Environment Act outlines further details on how the government plans to tackle both the climate and biodiversity emergencies.

Despite this alarming reduction in biodiversity, it is felt by many scientists not to be too late to take urgent action to bring back biodiversity loss from the brink of irreversible damage.

#### **What can the GPA do?**

As the strategic leaders of sustainability across the government office portfolio the GPA will aim to promote biodiversity across its estate in all its forms. The GPA will ensure that its business needs continue to support biodiversity enhancement in all operations to allow nature to thrive.

## What is biodiversity and why is it important?

**Biodiversity** is the shortened form of "biological" "diversity". It refers to all the variety of life that can be found on Earth (plants, animals, fungi and microorganisms) including humans as well as to the communities in which we live. We cannot survive without a healthy ecosystem, our future depends on it - for our health, the food we eat, the water we drink and the air we breathe.

### Global Biodiversity.

The [Joint Nature Conservation Committee \(JNCC\) Nature Positive 2030 report](#) says that "At global level, over 1 million species are threatened with extinction and the populations of many vertebrate animals have declined by two-thirds since 1970. In the UK over 40% of species are in decline, more than 40 million birds have been lost from our skies over the past 50 years, and a quarter of UK mammals are threatened with extinction. Nature is declining around the world because of the demands we are placing on our natural systems".

"The scale of biodiversity loss has profound consequences for people. Globally, and in the UK, many of the essential services for human life provided by nature have declined, including water and air quality, regulation of our climate, soil formation and benefits to people's physical and mental health. Ecosystems with their full complement of biodiversity are more productive and resilient, providing greater benefits to more people and underpinning sustainable economic prosperity".

The JNCC and the GPA believe that there is no time to waste to rebalance our activities to enable better outcomes for nature. In the past, recovery from a crisis such as Covid-19 has been at nature's expense. As we recover from the Covid-19 pandemic we need to plan to allow nature to recover.

### Why is it happening?

The resources we consume and the way we live has consequences that can be far reaching. Regretfully many of the current systems prioritise short-term financial returns over long-term public good, such as soil health or supporting global biodiversity. This short-term approach often encourages poor land/sea management. Correcting these financial incentives will rehabilitate the ecosystems which are being threatened.

## **What can the GPA do?**

As the strategic leaders of sustainability across the government office portfolio we will promote biodiversity across its estate in all its forms. The GPA will continue to ensure high standards of procurement are followed to minimise adverse environmental impacts. Such standards include using only Forest Stewardship Council (FSC) timber in its capital projects to minimise unsustainable wood consumption or only sourcing fabrics from UK supply chains in office refurbishments, where higher manufacturing standards can be evidenced.



## Legal requirement

As a large government landowner, the GPA is obligated to and expects all operations to be compliant with all environmental legislation applicable across the UK.

It is expected that standard government policy and/or controls are implemented (such as Government Buying Standards) and that appropriate steps are taken to acknowledge failures and embed improvements.

In such a large organisation, this work always requires ongoing review as knowledge develops and lessons are learned. Policy and legislative change in recent years has been extensive. As such, the GPA are currently and continually working to embed:

- ISO4001 GPA Environmental Management System
- 25 Year Environment Plan
- Environment Act 2021 & biodiversity net gain in new development
- Environment (Wales) Act 2016
- Applying the biodiversity duty (S102) to conserve and enhance;
- Becoming accountable to the Office of Environmental Protection.
- Supporting LNRs where relevant

Then, working at pace, the GPA will look to raise awareness and plan delivery of:

- Required elements of [Greening Government Commitments 2021-2025](#);
- HM Treasury Green Book and the ENCA (Enabling a Natural Capital Approach)
- Guidance within financial spending reviews, appraisal of policies, programmes and major projects and ensuring long-term guardianship;
- The support of innovation, research and lessons from industry and academia.

### What can the GPA do?

This Biodiversity and Nature Recovery Annex outlines the key actions that will be taken to maintain compliance and embed recent legislation and policy. However, nature recovery needs more than legal minimums. We want to adopt best practice and innovative approaches to become a flagship agency in greening government.

## Summary of the GPA estate

The GPA is a public sector property holding company creating great places to work for civil servants. The GPA defines the strategy, and delivers outcomes, for the Government's office and warehouse portfolios. The GPA acts as the single landlord for government department clients, providing workplace services where required.

Using Civil Service know-how and commercial expertise, the GPA is transforming the estate to be flexibly shared, sustainable and represent value for money. The GPA has substantially increased the space it owns and manages for departments from just over 300,000 sq m in 2020 to over 900,000 sq m at the end of 2022-23.

### The GPA is delivering several programmes:

#### **Government Hubs Programme**

Delivering the largest commercial office programme in the UK, including modern, low carbon, digitally-connected offices shared by multiple departments. This includes over 20 projects.

#### **Whitehall Campus Programme**

This is a sister to the Government Hubs Programme. Creating a smaller, greener, shared, and digitally-enabled campus at the centre of government.

#### **Lifecycle Replacement Programme**

Investing in the estate to keep it safe and secure, to support productivity and to reduce maintenance costs.

#### **Net Zero Programme**

Making additional interventions to reduce carbon emissions and bring down utility costs, which will help us deliver ahead of government carbon targets. The GPA will also dispose of poorly performing properties, build new schemes to high standards, and connect to district heat schemes when possible.

#### **Workplace Service Transformation Programme**

The GPA is driving UK-wide economic growth through engagement with local economies; Civil Service modernisation through improved productivity and engagement with civil servants; net zero through improved building conditions; and better value through improved service quality.

**What can the GPA do?**

By making changes to working practices the GPA aims to minimise the environmental impact of its service offer whilst also maximising the opportunity for reversing biodiversity loss. The GPA is committed to making changes to its working practices to reduce the impact on the loss of biodiversity and support measures which benefit the UK's response to the climate crisis.

The GPA has already embedded net zero and sustainability into its capital programmes. The GPA's new Environmental Management System will enable further progress in evidencing its environmental journey. This Biodiversity and Nature Recovery Annex will be another tool to help clients and partners understand the corporate objectives and aspirational goals of the GPA. It will also aid other government departments in understanding the nature recovery actions within the spaces they occupy, with each department able to capture information that may inform their Greening Government Commitment returns.

## Strategic approach to biodiversity and nature enhancement

In the planning, development and maintenance of this Biodiversity and Nature Recovery Annex, the GPA aims to:

- develop policies and strategies as necessary to deliver the and meet new statutory requirements (such as realising 10% biodiversity net gain in new developments);
- reduce negative impacts on biodiversity through measures relating to the design and operation of its buildings and other assets;
- reduce negative impacts on biodiversity through measures relating to how it procures goods and services;
- reduce heat, drought and flood risk and improve air and water quality, through biodiversity improvement schemes and nature-based solutions;
- improve wellbeing through improved access to nature;
- act as a leader to co-create opportunity and coordinate action and external funding and investment, by proactively and collaboratively engaging with partners and interested parties;
- manage financial decisions associated with the plan in line with its corporate priorities and internal planning processes;
- continually improve via the ongoing implementation of an accredited environmental management system; and
- minimise climate change by reducing carbon emissions by 78% by 2035. net zero by 2050.

## Biodiversity Net Gain in new development

Biodiversity Net Gain (BNG) is a development that leaves biodiversity in a better state than before. It is also an approach where developers work with local governments, wildlife groups, land owners and other stakeholders in order to support their priorities for nature conservation. By ensuring good design and assurance of long-term management via development planning requirements, the biodiversity value of the development site should increase and be maintained over the long-term.

A 10% uplift in value has recently become mandated in the Environment Act 2021 and achievement is guided by the [Chartered Institute of Ecology and Environmental Management \(CIEEM\) Biodiversity Net Gain good practice principles](#) and a DEFRA/Natural England metric, credit scheme and site register. These ten principles set out good practice for achieving Biodiversity Net Gain and must be applied all together, as one approach. The principles are supported by the Institute for Environmental Management and Assessment (IEMA).

Best practice requires avoiding losing biodiversity or any impacts in the first place, as well as requiring the new designs to be locally valuable, landscape appropriate, and maintained long-term. Therefore, achievement of biodiversity gain should be a product of considered and iterative design, rather than an end-of-design tick box solution. Achieving BNG will be most successful, cost effective (and can give multiple benefits through nature-based solutions) when incorporated early in the development process/site selection, with ecologists involved throughout.

The [GPA has several core requirements and technical standards for all new construction](#). The GPA will apply the Building Research Establishment Environmental Assessment Method (BREEAM) to new construction and refurbishment projects to support the delivery of a fit-for purpose, energy efficient and sustainable estate. This spans the entire project lifecycle and it challenges to deliver buildings that enhance benefits for the local wildlife and create outdoor spaces that provide positive experience for the civil servants based there and their visitors.

The GPA recognises the [Natural England Green Infrastructure \(GI\) Design Guide](#) as a source of best practice. It provides advice on how to design, deliver and manage GI to best benefit multiple outcomes. The GPA will use this best practice to plan, design, engineer, and landscape future capital projects as well as retrofitting and enhancing existing assets where practical.

This guide aims to provide practical, evidence-based advice on how to design good quality GI in ways that help to create beautiful nature-rich accessible places, contributing to local character and distinctiveness. It is designed to work alongside and complement the [National Model Design Code](#) and [National Design Guide](#).

**The GPA aim to achieve biodiversity gain in all development by:**

- supporting an estate-wide approach to planning and land use – ensuring BNG proposals are coordinated, resourced, appropriate and able to mature successfully alongside operations;
- new development from 2023/24 should achieve >10% BNG;
- early project engagement when designing Green Infrastructure (GI); and
- mandate BREEAM ecology credits in development.

## Best practice in operations

The GPA predominantly manages offices and warehouses. Building archetypes include new with modern methods of construction, historic listed premises, temporary buildings, and shared/multipurpose leasehold spaces.

Within every one of these functions, the GPA has a role in planning, appraising, designing, specifying, procuring, maintaining, delivering, evaluating and reforming all aspects of operational tasks to deliver its wider priority of creating great places to work for civil servants.

The GPA has a range of strategic partners who advise and deliver on its programmes. The GPA will work closely with other government departments, who are often its clients, to maintain a dialog on best practice and continual improvement.

The GPA frequently works with consultants, contractors, cross-government interests, private industries and academic/voluntary partners, in a variety of ways which can influence design interpretation and language.

Avoidance of impact should always be the first default solution – although financial and resource restrictions often result otherwise. Nevertheless, there are immediate and unique opportunities to directly avoid and reduce impact within the GPA's operations, and it is an exciting time to be promoting sustainability and trialling solutions. This wide-ranging principle will address immediate and pragmatic actions to directly help nature recovery through being sympathetic and proactive in operations.

## Supporting key species and pollinators

Natural capital has emerged as the framework of choice for gaining a better appreciation of the interlinkages between the economy and the environment. Natural capital has been promoted by the Government in the form of its flagship 25 Year Environment Plan. The natural capital approach is particularly relevant in the context of the current climate and biodiversity emergency.

The Environment Act (2021) operates as the UK's new framework of environmental protection. Given that the UK has left the EU, new laws that relate to nature protection, water quality, clean air, as well as additional environmental protections that originally came from Brussels, now need to be established. The Environment Act allows the UK to enshrine some environmental protection into law. It offers new powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction.

The Environment Act 2021 legislation requires a focus on halting the decline of species by 2030. The Environment Act puts a key focus on driving forward nature's recovery. In addition to this the [Nature Recovery Green Paper](#) will support the ambitions to restore nature and halt the decline in species abundance by 2030.

Best practice requires avoiding losing biodiversity or any impacts in the first place, as well as requiring the new designs to be locally valuable, landscape appropriate, and maintained long-term. Therefore, achievement of biodiversity improvements either for pollinators or other key species should be a product of considered and iterative design and partnership working.

The GPA recognises that pollinators are particularly important for maintaining long-term healthy, diverse environments. The GPA will undertake special measures across its portfolio to help slow their significant decline which has been attributed to habitat loss, climate change and pesticide use. Where appropriate the GPA will make changes to land management to provide food, shelter and nest sites.

The [National Pollinator Strategy](#) highlights actions required on farmland, within towns and cities, addressing pest and disease risks, raising awareness and improving evidence; and the [Greening Government Commitments 2021-2025](#) asks departments to specifically support recovery in this area.



## **What can the GPA do?**

By making changes to its working practices the GPA can minimise the environmental impact of its service offer whilst also maximising the opportunity for key species and pollinators. The GPA is committed to making changes to its working practices so they can reduce their impact on the loss of biodiversity and help other government departments, their clients, to report against the GGCs via activities such as beekeeping on the Government office estate.

## Enhancing connection to nature and wellbeing

[The mental health foundations "Nature" report](#) shows that people who are more connected with nature are usually happier in life and more likely to report feeling their lives are worthwhile. Nature can generate a multitude of positive emotions, such as calmness, joy, creativity and can facilitate concentration.

Nature connectedness is also associated with lower levels of poor mental health; in particular lower depression and anxiety levels. Perhaps not surprisingly, people with strong nature connectedness are also more likely to have pro-environmental behaviours such as recycling or supporting net zero.

By 2050, 68% of the world's population will live in urban areas. That's according to a [United Nations report released in 2018](#). Conversations about livable cities often revolve around issues like optimising buildings for energy efficiency, enhancing public transit, creating walkable neighbourhoods and a shift to zero emissions transport. However, the prospect of further urbanisation means now more than ever any further advances must rethink our relationship between the built environment and the natural one.

### **What can the GPA do?**

By developing this Biodiversity and Nature guidance the GPA's working practices will continue to minimise the environmental impact of its service offer whilst also maximising the opportunity for biodiversity enhancement.

The GPA's working spaces both internal and external will foster improved mental health outcomes for civil servants and visitors via the provision of spaces which feel connected to the natural world around them.

## Design approach

### Ensuring success

The GPA is supporting the application of the principles developed collaboratively by CIEEM, IEMA and CIRIA. [These principles set out good practice for achieving Biodiversity Net Gain](#) and must be applied all together, as one approach.

#### What can the GPA do?

The GPA's approach to natural capital enhancements and GI in capital projects:

#### **Principle 1 - Apply the mitigation hierarchy.**

Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.

#### **Principle 2 - Avoid losing biodiversity**

Avoid impacts on irreplaceable biodiversity - these impacts cannot be offset to achieve No Net Loss or Net Gain.

#### **Principle 3. Be inclusive and equitable.**

Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Net Gain. Achieve Net Gain in partnership with stakeholders where possible, and share the benefits fairly among stakeholders.

#### **Principle 4. Address risks, mitigate difficulty, uncertainty and other risks to achieving Net Gain.**

Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.

#### **Principle 5. Make a measurable Net Gain**

Achieve a measurable gain for biodiversity and the services ecosystems provide. Net Gain has been described as a measurable target for development projects where impacts on biodiversity are outweighed by a clear mitigation hierarchy approach to first avoid and then minimise impacts, including through restoration and/or compensation. Adhering to these Net Gain principles (i.e. pursuing all principles together) will help in under-pinning good practice for achieving and sustaining Net Gain.

**Principle 6. Achieve the best outcomes for biodiversity.**

Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly-justified choices. Compensate for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation. Achieve Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels. Enhance existing or creating new habitats. Enhance ecological connectivity by creating more, bigger, better and joined areas for biodiversity.

**Principle 7. Be additional.**

Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).

**Principle 8. Create a Net Gain legacy.**

Ensure Net Gain generates long-term benefits. Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity. Planning for adaptive management and securing dedicated funding for long-term management activities.

**Principle 9. Optimise sustainability.**

Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.

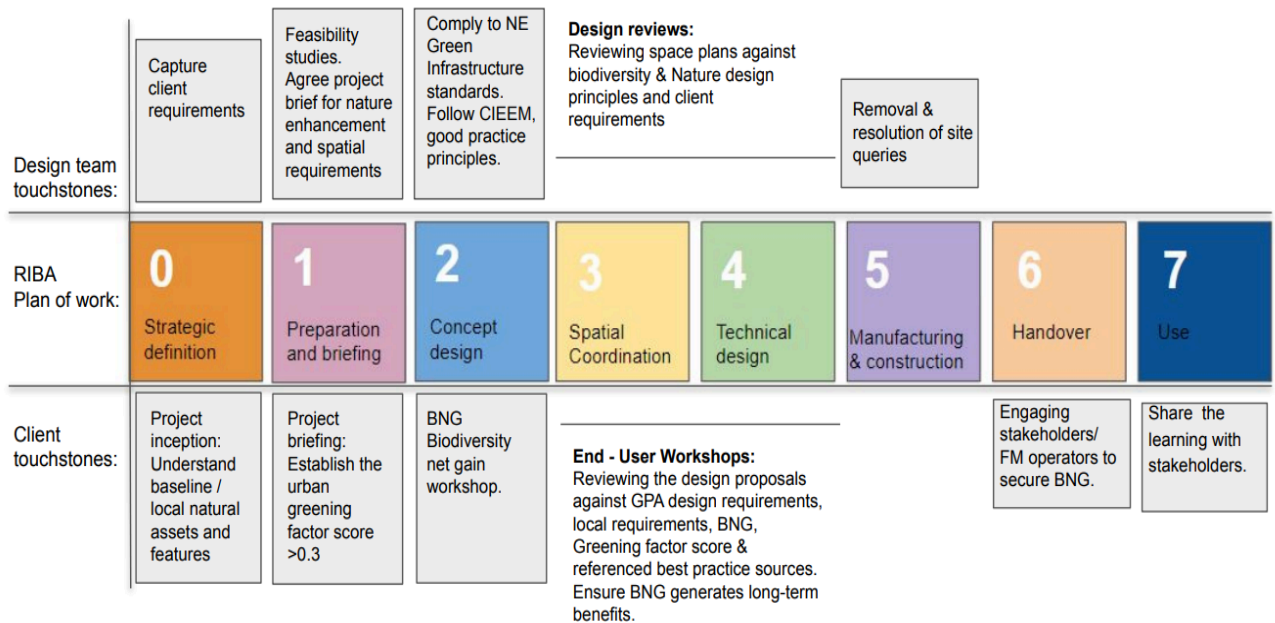
**Principle 10. Be transparent.**

Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.

## Ensuring success diagram

### When to use guidance

The biodiversity and nature guidance should be referred to at all stages of the RIBA plan of work to provide assurance the design process will deliver better outcomes for nature and biodiversity. Early engagement drives better performance outcomes.



The principles of the Annex should also be applied when considering operational or commercial decisions which would have an impact on the natural environment. For example:

- The use of pesticides in maintenance contracts
- Using materials which can evidence minimum sustainability standards
- Choosing supply partners who can evidence high environmental compliance

## Approved design measures to be explored with capital projects

The Greening Government Commitments 2021-2025 ask each department to protect and enhance their land as a contribution to its government commitment. The GPA, on behalf of its clients, will explore various design features for their further rollout across its diverse office and warehouse portfolios. These features will include design incorporated as part of its capital projects Biodiversity Net Gain commitments as well as new features for nature enhancement within existing assets.

The GPA strongly endorses the outcomes specified within the Natural England GI Design Guide 2022

Features for design consideration in new buildings include:

### **Sustainable Drainage Systems (SUDs)**

Sustainable drainage systems (SuDS) can vary in design. (Green roofs, blue roofs, rainwater harvesting, rain gardens, tree pits, swales, wetlands, ponds and other features which have been designed to store water and flow the flow). The use of SuDS are a better alternative to conventional drainage systems into drains and watercourses as they can provide opportunities for biodiversity enhancement and resilience to the effects of climatic change.

### **Green roofs**

A green roof (also known as a living roof) is a roof, deck, or terrace where vegetation or habitat is deliberately established. A green roof can be intensive (commonly known as roof gardens) or extensive (Extensive green roofs are usually vegetated with low-growing, drought-tolerant vegetation such as stonecrops, sedum species, and dry meadow vegetation).

Depending on the approach a variety of growing media known as substrates will be used with different depth requirements depending on the species being accommodated within the scheme. However, regardless of green roof type, early consideration of the proposed measures within the design process is likely to create better outcomes for nature.

Biodiverse green roof systems should be considered early within the design process and be designed to provide more native vegetation or habitat value for wildlife. A well designed green roof should also include habitat features, for example sand piles, stacks of dead wood or stones.

## **Green walls**

Green walls can be divided into green facades (climbing plants) and living walls (intensive green wall systems that are composed of textiles, modules, pockets, or troughs). This is a fast-developing area, and new techniques and products are constantly under development.

Green façades are the traditional green walls where climbing plants are rooted into the ground or into planter boxes. Climbing plants may be grown directly onto the building façade or be trained against wires or trellises. Green façades may take some time to establish; however, maintenance requirements are low, and irrigation may not be necessary where plants are rooted into the ground. It is important to take account of aspect, shade, and the availability of water for locating suitable locations for this design feature.

Living walls are proprietary systems, often installed and maintained as a package. Textiles, plastics, and metal (boxes and cages) are used to provide pockets or troughs that support plants.

Any design features would require early consideration within the design process to develop the optimal outcomes for biodiversity enhancement and ongoing maintenance requirements.

## **Rain gardens**

Rain gardens tend to be relatively small, planted areas designed to receive rainwater flowing from paved surfaces or from drainpipes. In its simplest form it is a shallow depression, partially filled with absorbent yet free draining soil (usually a mixture of coarse sand and organic matter) and planted with vegetation that can withstand temporary inundation. Rain gardens are designed to intercept and slow the flow of water that might otherwise directly enter conventional drains.

When designing rain gardens, it is important to consider how water will drain away once storage capacity is exceeded. Planting a rain garden presents an opportunity to increase biodiversity by using native plants or plants that attract pollinators.

## Swales

A swale is a shallow channel designed to store and convey surface water runoff. If the gradient is suitable, swales may include stop logs or boulders designed to slow the flow. Inlets, outlets and other places that are subjected to high flow rates, that could cause erosion, may need to be armoured. On permeable ground, water may also infiltrate. A swale can also remove pollutants and may be used to direct water for site drainage management.

Plants should be selected that can withstand periods of drought. With most swales it is advisable to establish vegetation by seeding with a variety of native species, including wetland, wet grassland and dry grassland mixtures, chosen according to the local setting.

### Features for species

The selection of features will depend on the location and setting, species that occur in the area and species to be targeted. This will range from common and widespread species like blue tit and soprano pipistrelle bat to declining species and groups like house sparrow and mining bees.

The **Natural England Green Infrastructure Design Guide** has various examples of the features that can be incorporated into the design to provide better outcomes for nature. These can include features like swift bricks or invertebrate refugium.

### Trees in hard landscapes

Street trees and trees planted into other paved areas are a mainstay and a key component of urban greening. The conventional approach has been to plant trees for aesthetic reasons, and while that will continue to be an important consideration, it is now widely accepted that trees are important for a wide range of functions including summer shade and cooling, improving air quality, providing habitat for wildlife, and helping to reduce flood risk.

The size, configuration and make-up of tree pits is an important factor in helping trees to thrive, as well increasing their ability, to absorb and store surface water and therefore improve resilience to drought. The **Natural England Green Infrastructure Design Guide** has various examples of the features that can be incorporated into the design to provide better outcomes for nature.



## **Street furniture and utility structures**

The urban environment includes utilitarian structures associated with provision of services or storage. Examples include bollards, railings or security barriers protecting pedestrians or buildings from vehicles, cycle and bin stores, bins, kiosks and cabinets and poles for power and communications.

It is possible to vegetate many of these features – examples include planted security barriers against hostile vehicles or sub-stations, bin stores and cycle stores with green roofs.

As with green roofs on buildings, biodiversity should be a consideration, with diverse planting of drought-tolerant native species and other suitable species with a documented value for wildlife. When vegetating street furniture and utility structures, it is important that adequate growing medium, light, water and suitable planting is provided and that the provision of benefits and biodiversity is considered as well as aesthetics and maintenance.

## Measuring progress - the GPA's action plan

The GPA will develop tools to monitor compliance with the Biodiversity and Nature Recovery Annex. Performance measures would include the following:

- 10% Biodiversity Net Gain on capital programme projects
- 90% Native species in landscaping
- 10% Non-native for extending pollination season
- Mandate BREEAM ecology credits in development
- Urban Greening Factor of 0.3> in new capital projects

Corporate measurement of actions that enhance nature recovery or biodiversity via the Environmental Management System (EMS) or other measurement functions such as social value delivery. These include but are not limited to:

- Collect more biodiversity data
- Work with stakeholders on localised projects
- Increased conservation cutting
- Reduced light pollution
- Creation of wild areas
- Minimise the use of Glyphosate/ Encourage chemical free maintenance
- Removal of water intensive planting
- Use of window film to reduce bird strikes
- Bat Boxes, Swift Boxes and other wildlife features
- Using materials which can evidence minimum sustainability standards
- Choosing supply partners who can evidence high environmental compliance

Progress will be reported biannually to the GPA's Sustainability Committee (SusCo) via inclusion within EMS reporting regime or as a stand alone committee report.

## References and links

[Nature Positive 2030 Evidence Report Investing for healthy nature, people and economy](#)

[Environment Act 2021](#)

[Natural England Green Infrastructure Design Guide](#)

[Biodiversity Net Gain: Good practice Principles for Development CIEEM](#)

[A guide to Natural Capital terminology from the Natural Capital Committee](#)

[A Natural Capital glossary of terms](#)

[Defra's \(2020\) Enabling a Natural Capital Approach \(ENCA\) guidance](#)

[UK Biodiversity Indicators 2021](#)

[Nature Recovery Plans/ Nature Recovery Networks](#)

[UK Climate Change Risk Assessment 2022](#)

### **Atkins approach**

[Valuing Our Natural Capital: The Atkins Approach \(snclavalin.com\),](#)

[Environmental Net Gain \(snclavalin.com\),](#)

[Biodiversity Net Gain: the Atkins approach](#)