

City of London
Draft Biodiversity Action Plan
2016-2020

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1.0 Introduction

1.1 The City: A unique urban environment

The City of London is both a unique and intense urban environment. A little over one square mile in size, this densely developed area is one of the world's leading financial, business and maritime centres. Offices make up over 70% of all buildings in the City and on weekdays 415,000 workers, of whom the majority commute from across the South East, join the 7,800 or so residents of the Square Mile. Visitors experience the City's rich history through key attractions such as St Paul's Cathedral with an estimated 10.46 million visitors to the City of London in 2014.

1.2 What is Biodiversity?

Biodiversity is the term used to describe the variety of life on Earth. This includes animals, plants and fungi as well as recognisable wildlife such as birds, mammals and insects. The habitats are the places they live and how they interact with their surroundings as part of the ecosystem. Conserving biodiversity involves restoring and enhancing species populations and habitats as well as implementing measures to promote them in the future. The value of biodiversity extends beyond habitat and species with the benefits extending to a range of economic, social and intrinsic values.

1.3 Biodiversity in the City

The City of London has approximately 376 open spaces totalling 32 hectares of both private and City of London Corporation managed open spaces including parks, gardens, churchyards and plazas. Approximately 80% of the sites are less than 0.2ha in size. A full list of types of open spaces in the City of London is listed in [Appendix 3: Open space typology and categorisation](#)

There is also an increasingly important resource for biodiversity at roof top level with the addition of green roofs and roof terraces.

Ground level open spaces are mostly the result of two significant events in the City of London: the Great Fire of London in 1666 and bomb damage caused during World War II. Together these small, high quality and intensively used open spaces are highly valued by all and offer an important resource for biodiversity in the Square Mile.

Historically the City's open spaces have been managed primarily for amenity value and public enjoyment. However, recent changes in management practices have proved more sympathetic to the importance of conserving and promoting biodiversity. Raised awareness of the natural environment has the added benefit of increasing the ways City workers, resident and visitors enjoy, value and engage with open space in the Square Mile through interpretation, activities and events.

1.4 Why does the City need a Biodiversity Action Plan?

The Biodiversity Action Plan (BAP) provides a strategic focus for decision makers. Furthermore, the BAP ensures that a key theme of The City Together Strategy - to achieve a world class City which protects, promotes and enhances our environment - is realised. This theme also supports the City of London Local Plan's vision and strategic objectives. The BAP provides a framework to ensure all legislative requirements relating to the management of green spaces are taken into consideration at all times and both identifies and prioritises actions for biodiversity at a local level.

Outside of the Square Mile the City Corporation owns and manages almost 4,500 hectares of historic and natural open spaces including Hampstead Heath and Epping Forest. These sites are of significant importance for habitats and species and include Sites of Special Scientific Interest, National Nature Reserves and Special Areas of Conservation.

The City of London Biodiversity Action Plan 2016-2020 covers the open spaces, habitats and species in City of London only, regardless of ownership. Open spaces outside of the City of London are covered by the relevant local authorities' Biodiversity Action Plan. Bunhill Fields Burial Ground, located in the London Borough of Islington, is the exception to this and is referred to in the BAP. Within the Square Mile the City Gardens Team are responsible for the maintainance of the parks, gardens and churchyards and other open spaces including Bunhill Fields Burial Ground. Due to its proximity to the City the site is regularly used to support events and activities and as a site in its own right of both historic and biodiversity value.

1.5 Structure of the Biodiversity Action Plan

The aim of the BAP is to produce a set of objectives and actions to assist members of the City of London Biodiversity Action Plan (BAP) Partnership Group and the wider City community in delivering strategically planned biodiversity networks for both the City and Greater London, taking into consideration both local and national priorities.

The BAP will be delivered under the following themes:

- **Open space and habitat management**

Aim: to protect and enhance habitats and species in the City of London

Enable both the City Corporation and privately owned and managed land in the Square Mile to be maintained and enhanced for biodiversity.

- **The built environment**

Aim: to improve green infrastructure in the built environment

Enable biodiversity to be incorporated into the built environment to enhance and connect green spaces.

- **Education and community engagement**

Aim: to promote a greater understanding of the City's biodiversity

Identify and encourage best practice amongst private landowners and managers as well as develop the skills of residents, City workers, school children and students through events, activities and volunteering opportunities.

- **Data collection, surveys and monitoring**

Aim: to improve monitoring and data on biodiversity in the City of London

Establish a structured approach to surveying and monitoring of sites to inform ongoing management decisions and identify future areas of priority. This includes professional ecology surveys, citizen science opportunities and records collected by individuals.

2.0 National, regional and local policy context

2.1 National policy

In 2012 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' replaced the UK Biodiversity Action Plan. The priority habitats and species agreed as part of the UK BAP remain important to focus biodiversity work at regional and local level.

Under the Natural Environment & Rural Communities (NERC) Act 2006, as a public authority in England, the City of London Corporation has a duty 'in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'. This may include promoting biodiversity in planning and development, recognising the importance of conserving and enhancing biodiversity in public authority managed land and buildings and managing green infrastructure to support biodiversity.

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.

The Biodiversity Action Plan should also take into account national strategies such as The National Pollinator Strategy, which seeks to protect pollinating insects that support food production and the diversity of our environment.

2.2 Regional policy

The London Plan is an overall strategy document and policy framework for London, which includes green infrastructure, urban greening and biodiversity. Many of the objectives of the London Plan are incorporated and delivered as part of the City of London Corporation's Local Plan.

The Mayor of London's Biodiversity Strategy 2002 states that the Mayor will work with all relevant partners to ensure a proactive approach to the protection, enhancement, creation, promotion and management of biodiversity. The strategy also details how London's natural open spaces will be protected and conserved. The All London Green Grid (ALGG) is a policy framework that promotes the design and delivery of green infrastructure projects across London with the importance of integrated green infrastructure in the capital identified by the Green Infrastructure Task Force.

2.3 Local policy

The City of London Local Plan sets out the City Corporation's vision, strategy, objectives and policies for planning in the City of London. It sets out the vision for shaping the Square Mile and contains the policies which guide planning decisions.

Policy DM 19.2 addresses biodiversity and urban greening and states that developments should promote biodiversity and contribute to urban greening by incorporating:

- green roofs and walls, soft landscaping and trees;
- features for wildlife, such as nesting boxes and beehives;
- a planting mix which encourages biodiversity;
- planting which will be resilient to a range of climate conditions;
- maintenance of habitats within Sites of Importance for Nature Conservation.

The City Corporation has developed 16 area enhancement strategies which incorporate important elements such as tree planting and urban greening. These are integral to supporting biodiversity in the planning process.

The Biodiversity Action Plan supports one of the key themes of the City Together Strategy: achieving a World Class City which protects, promotes and enhances our environment.

The City of London Open Space Strategy, which was adopted as a Supplementary Planning Document in January 2015, sets out the principles to help improve the quality, management and accessibility of the open spaces of the Square Mile. The strategy comprises of ten strategic objectives which includes ensuring that existing and new spaces make a positive contribution to the biodiversity value of the City through appropriate plant choice and habitat creation. A full list of the policies that support biodiversity in the City is set out in [38](#).

3.0 Biodiversity in the City of London

The City of London Biodiversity Partnership Group was established as a key part of the development of the City of London Biodiversity Action Plan 2016-2020; this group met on 18 March 2015 and consists of; representatives from the relevant departments of the City of London Corporation, biodiversity or open space representatives of neighbouring boroughs, business, community and resident representatives and ecology and biodiversity professionals. A full list of organisations represented is set out in [39 2](#). The aim of the meeting was to evaluate the City of London Biodiversity Action Plan 2010-2015 and review current and proposed Sites of Local Importance for Nature Conservation (SLINCs) to take forward to a full City-wide SINC review.

The objectives set out in the previous Biodiversity Action Plan 2010-2015 focused on three different types of habitats:

- urban greenspaces, churchyards and cemeteries;
- built structures;
- the Tidal Thames.

As the City is unique in terms of its size, structure, opportunities and challenges for biodiversity a more landscape-scale approach will be adopted in the BAP 2016-2020. This means all the elements that influence habitats and species will be taken into account. Specific action plans will be developed for some species such as the black redstart. This will maximise the benefits across all open and green spaces with specific objectives developed to prioritise actions for specific sites, species or areas of opportunity. Priority habitats and species have been identified at both a UK and London level by the London Biodiversity Partnership.

3.1 Habitats

The 'priority habitats' identified by the London Biodiversity Partnership that are most relevant to the Square Mile are 'parks and urban green spaces' with an 'important habitat' identified as 'built structures'. The action plans have been developed to take into consideration these priority habitats. A further habitat recognised as a London biodiversity target within the City of London is the Tidal Thames, which is also the City's only Site of Metropolitan Importance for Nature Conservation (SMINC), and standing water which includes ponds. Whilst there are some sites with standing water that are dealt with in this BAP, the Tidal Thames is the prime responsibility of the Port of London Authority, with the City's responsibilities for the riverside and foreshore detailed in the City of London Local Plan Policy CS9 and the Thames Strategy Supplementary Planning Document (2015). Encouraging biodiversity is also a key objective of the Riverside Walk Enhancement Strategy (2015).

3.2 Target species

Following consultation with the City of London BAP Partnership Group and taking into consideration local, regional and national priorities the following species have been selected as target species:

- House sparrow - *Passer domesticus*
- Black redstart - *Phoenicurus ochruros*
- Swift - *Apus apus*
- Peregrine falcon - *Falco peregrinus*
- Bats - *Chiroptera spp.*
- Bumblebees - *Bombus spp.*
- Stag beetle - *Lucanus cervus*

These species are exemplars of their ecological niches, the interaction the species has with the surrounding environment, and also are in many cases highly adapted to the urban environment. They have been selected to highlight their importance within the City of London and to focus conservation management and monitoring.

3.3 Sites of Importance for Nature Conservation

The London Plan identifies the need to protect biodiversity and to provide opportunities for people to access nature through local green spaces. The best examples of key habitats and green spaces are identified as Sites of Importance for Nature Conservation (SINCs). SINCs are non-statutory designated sites identified by local authorities. In London, sites are categorised of importance at a Metropolitan, Borough and Local level.

The following sites have been identified in the City of London:

Table 1 - Sites of Importance for Nature Conservation in the City of London

Site Ref	Sites
	Sites of Metropolitan Importance for Nature Conservation (SMINC)
M031	The River Thames and its Tidal Tributaries
	Sites of Borough Importance for Nature Conservation (SBINC) Grade 2
CiBII01	The Temple Gardens
CiBII02	The Barbican and St Alphage's Garden
ISBII09	Bunhill Fields Burial Ground*
	Sites of Local Importance for Nature Conservation (SLINC)
CiL01	Pepys Garden and St Olave's Churchyard, Seething Lane
CiL02	St Paul's Cathedral Garden
CiL03	Cleary Gardens
CiL04	St Botolph without Bishopsgate Churchyard
CiL05	Aldermanbury Gardens
CiL06	The Roman Wall, Noble Street
CiL07	Finsbury Circus

*Bunhill Fields Burial Ground is managed by the City of London Corporation but located in the London Borough of Islington.

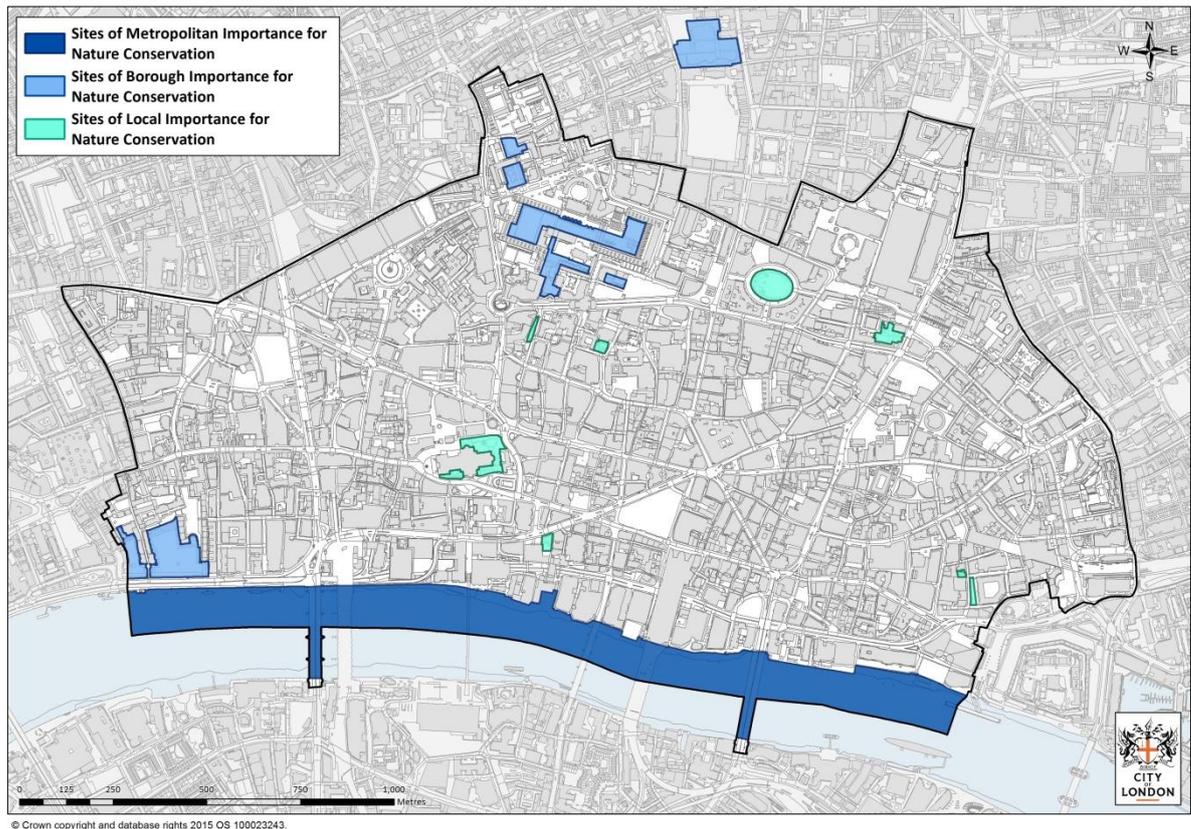


Figure 1: Map of Sites of Importance for Nature Conservation (SINCs) in the City of London.

These sites, designations and boundaries were identified in 2002 as part of borough-wide surveys of habitats by the London Ecology Unit and the Greater London Authority. These sites will therefore be reviewed as part of the City of London Biodiversity Action Plan 2016-2020.

In addition to these sites, the City proposes to designate three further SLINCs in 2016. These are:

- Postman's Park
- Portsoken Street Garden
- St Dunstan in the East

3.4 Open Spaces Audit

A comprehensive audit of all open spaces owned and managed by the City Corporation and private landowners is carried out by the Department of the Built Environment every five years. The audit report provides details of the distribution and characteristics of the open spaces defined in the City of London Local Plan's Key City Places. These are:

- The North of the City
- Cheapside and St Paul's
- Eastern Cluster
- Aldgate
- Thames and the Riverside

The Open Spaces Audit will be used to support the City of London Biodiversity Action Plan by identifying and prioritising biodiversity enhancements and providing access to nature and green space in the Square Mile.

3.5 Access to nature and green space in the City

Areas of deficiency in access to nature are those areas in London where people have to walk more than 1km to reach a SINC of at least borough importance. Both the Sites of Borough Importance for Nature Conservation (SBINC) Grade 2 located in the City of London have reduced or limited public access because they are privately owned or designated for residents use. The nearest publicly accessible SBINC to the City of London that is managed by the City Corporation is Bunhill Fields Burial Ground. This site is located just outside the City's boundary in the London Borough of Islington.

The opportunity to identify or upgrade sites to SBINC status may be identified as part of a SINC review. However, due to the dense urban nature of the City and the limited size of current local sites, opportunities may be limited. There is a clear deficiency in access to nature in the east of the City and particularly the Eastern Cluster and Aldgate.

The London Plan defines deficiency in access to open space in relation to both the maximum distance residents should have to travel to access a public open space and the size and quality of that open space. The London Plan categorises public open spaces based on their structure and size. The majority of open spaces in the City are identified as 'Pocket Parks' with a minority of 'Small Open Spaces'. As identified in the London Plan, individuals should have access to these types of spaces within 400 metres of their homes with residential areas outside of this distance potentially defined as deficient in access to open space. Open space provision and types across London are detailed in [Appendix 4: Public Open Space Categorisations](#)

Identifying and maximising both the biodiversity potential and access for public enjoyment of these small sites in the City is of key importance. Management plans will be developed to focus both on enhancing the quality and accessibility of SINCS.

3.6 Achievements and recommendations

The work of the previous City of London Biodiversity Action Plan 2010-2015 there were some significant achievements:

- The establishment of the City-based friends group, 'Friends of City Gardens' that focus on encouraging more biodiversity-friendly planting, such as native bulbs and hedges. Their work also includes surveying wildlife across the Square Mile and supporting the monitoring and recording of target species.
- The City of London Tree Strategy SPD, adopted in May 2012, identifies the value of maintaining and planting native trees for supporting biodiversity. The main aim of The Tree Strategy is to increase City Corporation owned trees by 5% by 2019.
- The 'Beyond the Hive' architectural competition took place in 2010. This was a collaboration between City businesses and City Gardens that saw the creation and installation of a series of insect hotels in five green spaces and raised awareness of the importance of biodiversity.
- Annual participation in the RSPB Big Garden Birdwatch by volunteers at targeted SLINC sites including the production of a report and the provision of data to Greenspace Information for Greater London (GiGL) for inclusion in the regional wildlife records dataset.
- Working with corporate volunteers to improve habitats within the parks, gardens, and churchyards of the Square Mile such as increasing shrub cover or installing log piles.
- The introduction of over 50 bird nesting boxes across the City including their annual monitoring and cleaning by volunteers with the City Gardens Team.
- The production of a series of 'Wildlife Walk' leaflets designed to guide visitors to the SINCs.
- Increased access to nature for City residents and visitors such as the opening of Fann Street Wildlife Garden for Open Garden Squares Weekend.
- Rooftop Bird Survey 2014 and Summer Breeding Bird Survey 2015 organised by the Friends of City Gardens in collaboration with ecology experts including published reports and providing species data to GiGL.
- City in Bloom organised and judged by the Friends of City Gardens with entrants encouraged to increase the biodiversity value of their entries.
- Green Roof Enhancement Workshop in 2015 for City building managers to promote the value and opportunities for improving the sustainability and biodiversity value of green roofs. A green roof 'insight lunch' was also held in April 2015 to promote the value of green roofs to City of London Corporation employees.

While the biodiversity enhancements achieved under the previous BAP should be celebrated, there were also several aspects that could be improved on in the Biodiversity Action Plan 2016-2020:

- Although SINC status does not provide statutory protection, it was agreed that there should be a mechanism to ensure regular communication between the land owner and/or manager and those within the City of London Corporation responsible for protecting, delivering and monitoring biodiversity. This would include an agreement on key management objectives for the site and the introduction of annual meetings to ensure that any proposed changes to the management or environment of these sites which may affect the habitat are properly evaluated and the impact on biodiversity mitigated as much as possible.
- The survey and monitoring of SINC's also needs to be improved so that the outcomes of nature conservation work can be properly evaluated. The digitising of data and sharing with the Local Environmental Records Centre (LERC), GiGL, to contextualise and further share this information with other decision-makers and organisations, is essential for understanding biodiversity not just in the City but across London as a whole.

3.7 Health and wellbeing benefits of biodiversity

As well as the importance of conserving habitats and species, biodiversity and activities that enhance the environment are beneficial to people. The opportunities that exist for individuals to engage and promote biodiversity in the City of London contribute to an active and healthy lifestyle. Examples include taking part in planting activities in a green space, working to create new habitats, community food growing or using walks and trails to explore nature in the City. Biodiversity is also an important contributing factor in mitigating air pollution with specific planting used to improve local air quality and raise awareness within the community. The City Corporation is also working with external organisations based in the Square Mile, such as Bart's Health NHS Trust to increase green infrastructure across their sites. Both participating in biodiversity related activities earning Spice Time Credits and spending on physical activities such as gyms and swimming pools have a positive impact on health and wellbeing. Access to green space and nature is also linked to improving the mental health and wellbeing of individuals as well as creating quiet and tranquil areas for workers, residents and visitors.

3.8 Education and community engagement

The work of promoting and enhancing SINC's provides a valuable opportunity for individuals to share and learn new skills, knowledge and experience as well as bringing together residents, workers and visitors with a shared passion for biodiversity. This form of engagement can be vital in encouraging local residents to become champions in promoting the quality and understanding of biodiversity in the City. For this reason biodiversity enhancement is used as a platform for many events and activities in the City's green spaces.

3.9 Sustainability in the built environment

The built environment represents an important habitat in the City. It includes historic structures and monuments as well as new developments. Historic walls, churchyards and monuments may support specialised plants and provide unique nesting sites for birds. The sustainability of new structures in the built environment is now a crucial element of building design, with opportunities to support and enhance biodiversity. Developers can include green roofs and walls to contribute towards Building Research Establishment Environmental Assessment Methodology (BREEAM) certification through the creation of new habitats to support local biodiversity. At rooftop level there is increasing space for biodiversity delivered through green roofs which increased from 15,000m² in 2005/06 to 50,000m² in 2014/15. This includes two types of green roof:

- Intensive, which requires a programme of management
- Extensive, which requires low levels of management and equate to a natural environment which aids biodiversity

As set out in the City of London Local Plan proposals for major developments should aim to achieve a BREEAM rating of 'excellent' or 'outstanding'. It is important that both existing structures and new developments include features that enhance and compliment the network of green infrastructure across the City and take habitats and species into consideration. Planners and developers have the opportunity to incorporate biodiversity using simple features such as nest boxes, biodiverse green roofs and SuDS (sustainable drainage systems).

New developments or refurbishments must not negatively impact existing habitats without including adequate mitigation. For example, the black redstart population in the City is estimated to be at least 10 % of the UK breeding population. This is regarded as 'significant' and any changes to the rooftop habitat should be carefully considered. Similarly, the peregrine falcon is also an urban success story with a pair nesting in the City. These unique habitats need to be preserved without disturbance to ensure these rare species are protected.

4.0 Target species

The following target species have been selected as flagship species for their wider conservation value and importance. They therefore act as a focus for raising awareness and targeting biodiversity conservation actions. Many of the actions to promote these species will have wider positive benefits to biodiversity in the Square Mile.

4.1 House sparrow – *Passer domesticus*

Once a common sight in parks and gardens across the UK, it is now widely acknowledged that there has been a severe decline in the UK house sparrow population. It is estimated that Greater London lost 70% of its house sparrow population between 1994 and 2001. Due to this rapid population decline the species has received the highest level of conservation importance, red status, with the species needing urgent action. The decline is linked to availability of food, air pollution and loss of habitat and nesting sites. The decline in house sparrows has also been observed in the City with a few isolated pockets of individuals on the City fringes.

The actions targeted at house sparrows may also have a positive impact on all bird species present in the City, with interventions based in specific sites. Guidance will be developed and included in an ecology toolkit and SINC management plans to ensure habitat interventions are tailored to the needs of the house sparrow. These recommendations will include provision of nest boxes, planting seed rich species, trialling supplementary feeding of protein-rich food during the nesting season and establishing more areas of dense shrub cover. It is also vital to engage with partner organisations and residents through citizen science initiatives to gain a greater understanding of the house sparrows remaining presence in the City.

4.2 Black redstart – *Phoenicurus ochruros*

The black redstart is a small robin-sized bird that has adapted to live in the urban environment. There are fewer than 100 breeding pairs in the UK and the black redstart features on the amber list of birds of conservation concern. The black redstart was first reported in London in the 1920s and the species has adapted to living in industrial and urban areas. The population increased significantly following the Blitz when bombsites provided the ideal habitat. The rubble between the bombed-out shells of buildings replicated the bare and stony cliffs of the black redstarts' natural habitat.

Central London and specifically the City of London are an extremely important location for this species, with a significant percentage of the national breeding population located in the Square Mile. The population is probably made up of resident pairs and breeding birds that travel from western to southern England between March and May and returning to wintering sites from September. The black redstart's population has seen a drop in numbers over the decades which have mainly been linked to loss of breeding sites as buildings have been redeveloped. The increase in the number of green roofs in the City is likely to be the key to continued success of this species in the Square Mile. A species action plan will be developed to provide developers and building managers with advice on enhancing their roofs for the black redstart.

4.3 Swift – *Apus apus*

Swifts are summer visitors to London that arrive in April and leave in August to wintering areas in Africa. They feed on insects and other invertebrates. Swifts nest in the crevices of cliff faces and have adapted to make the urban landscape their home by taking advantage of features that replicate this environment, favouring the eaves and roof space of buildings. Methods of modern building design and the redevelopment of buildings has meant swifts have been excluded from suitable breeding sites which have led to their significant decline in the UK. It is recommended that building management guidelines include retrofitting of swift nesting boxes in refurbished buildings as well as new developments along the Thames riverside. Once there's a greater understanding off the Thames Riverside environment opportunities for other species such as the house martin may be identified.

4.4 Peregrine falcon – *Falco peregrinus*

Peregrine falcons have been present in the City for a number of years. They are given the highest degree of legal protection under Schedule 1 of the Wildlife and Countryside Act 1981. Peregrines saw a dramatic fall in numbers in the 1960s due to the use of organochlorine insecticides and persecution. Numbers have since recovered and the species is present in many urban areas with the nesting sites closely monitored. Around 20% of the European peregrine population breeds in the UK and therefore it is important to protect this species.

The peregrine falcon's natural habitat is cliff ledges. These birds are attracted to the City as tall buildings mimic this habitat. The species also act as a natural predator of pigeons. One pair regularly nests in the City and has successfully raised young for several years. It is important that the nesting sites of these birds are protected, that artificial nests are installed at appropriate locations and building managers and occupiers are made aware of their significance and protected status.

4.5 Bats – *Chiroptera spp.*

There are 17 species of bats in the UK with the common pipistrelle, *Pipistrellus pipistrellus*, being the most common species in the inner London boroughs. Bats forage on insects such as moths and beetles and have specific roosting and hibernating preferences. They forage over water and use tree lines to aid navigation. Bats are regularly seen over the Barbican lakes and gardens but they are likely to be present elsewhere in the City. Further surveying and monitoring are required to establish their distribution in the Square Mile. A group of volunteers has now been trained to undertake bat walks which will take place during the summer months.

There continues to be a significant threat to bats in the UK in terms of loss of roosting, maternity and hibernating sites in both natural and artificial structures. Loss of suitable feeding sites and disruption of flight paths due to artificial lighting also have an impact on bat populations.

It is vital to raise awareness on the law protecting bats and their roosts from disturbance and the opportunities to increase individuals' knowledge and understanding of the potential for bats in the Square Mile.

Interventions to protect habitats for bats in the City must include considering the impact of surrounding development. Habitat enhancements can include night-scented planting and appropriately-positioned artificial roosting sites such as bat boxes or bat bricks incorporated into buildings.

4.6 Bumblebees – *Bombus* spp.

Bumblebees, along with other pollinators which include species of bee, moth, hoverfly, butterfly and beetle, provide a vital service for parks, gardens, street trees and food-growing sites. There are 24 species of bumblebee in the UK but only eight of these are common. They nest either at ground level or underground at the base of hedges or grassed areas. The queen bumblebees overwinter in nests which are constructed in abandoned burrows of mice and other small rodents as well as holes in walls. The retention of overwintering sites is a very important part of supporting the species. The queens emerge early in the spring. Thus, the provision of nectar and pollen from early spring-flowering species, such as goat willow, is also important.

Urban areas can provide a diverse range of flowering plants which extend the season and availability of pollen and nectar. The decline of bumblebees is linked to the decline of wildflower-rich meadows and the intensification of landscape management practices. The bumblebee can be used as a flagship species to promote the wider importance of pollinators. Identification and monitoring of pollinator species will provide an important evaluation of the success of these interventions.

4.7 Stag beetles – *Lucanus cervus*

The stag beetle is the UK's largest ground living beetle with concentration in population in south-west London. Stag beetles have a lengthy life cycle lasting up to seven years from egg to adult. The larvae rely on dead or decaying wood such as fallen trees, branches and stumps. The stag beetle is a nationally threatened species. The population decline is related to habitat loss due to development and the sanitisation of parks and gardens with the removal of dead and rotting material. Predators such as foxes can also disrupt the stag beetles from completing their life cycle.

Raising public awareness of the stag beetle, its life cycle and the benefits of dead and decaying wood, leaf litter and not 'tidying up' green spaces will help create suitable habitats for the wider invertebrate population. Leaf composting areas will be introduced in all SINC sites as an outcome of site-specific SINC management plans. Log piles have been installed in most of the existing SINC sites and will be built in newly designated sites. Stag beetles act as an excellent flagship species to both engage with the public and promote positive habitat management for all invertebrates.

5.0 Action plans

To deliver the objectives of the Biodiversity Action Plan 2016-2020 four action plans have been developed. These deliver the key themes that support both the priority species and wider biodiversity priorities in the Square Mile.

Action Plan 1: Open space and habitat management

Aim: to protect and enhance habitats and species in the Square Mile

Action Plan 2: The Built environment

Aim: to improve green infrastructure in the built environment

Action Plan 3: Education and community engagement

Aim: to promote a greater understanding of the City's Biodiversity

Action Plan 4: Data collection, survey and monitoring

Aim: to improve monitoring and data on biodiversity in the City

5.1 Action Plan 1: Open space and habitat management

Existing and potential new SINC's of both borough and local importance will be reviewed during the life of the new BAP. The BAP also requires the City Corporation to develop SINC management plans for sites managed both by the City Corporation and by private landowners. The management plans for each site will identify and develop agreed biodiversity enhancements and provide individuals managing those sites with a clear framework for delivery with progress reviewed annually. The management plans will identify the specific actions for these spaces enabling the City to engage in a dialogue with interested parties and identify funding opportunities. The objectives identified as a priority for inclusion in SINC management plans can also be promoted and delivered through the ecology toolkit and City in Bloom judging criteria.

The SINC management plans will help promote good management of open spaces for biodiversity and include a range of enhancements such as:

- Increasing shrub cover and berry-bearing plants.
- Providing continuous vertical habitats from ground level to the tree canopy to create dense cover for roosting and nesting.
- Planting a range of nectar and pollen-rich species, including night-scented varieties that will provide forage for pollinators throughout the year.
- Amending management practices that may harm biodiversity, such as leaf blowing or introducing practices that will enhance habitats, such as leaf composting.
- Considering the biodiversity value of planting when redesigning, refurbishing or enhancing current open spaces.
- Consider the impact of climate change on biodiversity choosing plants that are resilient to a range of climate impacts.
- Retaining and increasing dead wood for invertebrates in open space sites either as log piles or as a support for ivy.

The Biodiversity Action Plan objectives are targeted at protecting and enhancing habitats in the Square Mile. Species action plans will be developed for the target species to raise awareness and engage others in addressing the priorities.

Many of the City's open spaces such as the churchyards have a strongly historic character that underscores their biodiversity to strong effect. A number include historic structures such as parts of the Roman and medieval City wall, exposed Victorian building basements, elements of former churches damaged or altered after the Second World War, gravestones destroyed in the Blitz and memorial structures. Their structures provide an excellent host for mosses, lichens and ferns and other wall-dwelling species. Many of these sites are unique habitats that will be surveyed and monitored. The SINC management plans for those sites will require all interested parties, including departments within the City Corporation, Historic England and Natural England, to be made aware of any proposed developments. The sites will be managed taking into consideration the habitat features identified and the desirability of maintaining their unique historic character. Many of these sites and structures are designated assets such as scheduled ancient monuments, listed buildings, or within conservation areas and Historic Parks and Gardens; all of which have statutory protection.

The Biodiversity Action Plan will identify opportunities to understand and contribute towards the River Thames as a Site of Metropolitan Importance for Nature Conservation. The City's artificial structures and river walls and foreshore provide an important habitat for wildlife with the river itself proving an important ecological corridor through the heart of London. Developments guided by the Thames Strategy and Riverside Walk Enhancement Strategy must protect biodiversity and encourage enhancements to this wildlife corridor as well as improve water quality with the use of sustainable drainage systems (SuDS). The City Corporation works with both the Environment Agency and Port of London Authority to enhance biodiversity along the River Thames. The Thames Tideway Tunnel which is due to be completed in 2023 will improve water quality and associated biodiversity in the Thames by reducing sewer discharges into the river.

5.2 Action Plan 2: The built environment

The built environment includes all new and existing buildings, structures and public realm developments. This action plan focuses on the important contributions the built environment can make to supporting biodiversity. These include:

- Green roofs and walls
- Tree planting
- Environmental enhancement schemes
- Biodiversity-rich planting schemes
- Sustainable drainage systems
- Installation of artificial nest boxes for targeted species

The City of London Local Plan supports and promotes the installation of green roofs, both intensive and extensive, and green walls on all appropriate developments. This has the potential to contribute significantly to the biodiversity of the City of London, complementing the network of green spaces at ground level. Well-designed green roofs provide the ideal opportunity to create the open mosaic habitat typical of brownfield sites, replicating the habitat favoured by species such as the black redstart. Although green roofs may have constraints depending on their location, they can provide favourable growing conditions such as a sunny aspect, which may be limited at ground level. This can increase the planting palette available to designers, including the possibility of growing vegetables, and increase the opportunities to increase biodiversity value. Roof gardens and terraces also play an important role in allowing access to amenity space for building occupiers and the wider community with the added value of providing connected aerial habitats.

The City has an established network of ground level open spaces. Both street trees and environmental enhancement projects have the potential to improve the connectivity of green spaces and associated habitats. The Local Plan acknowledges the importance of enhancement schemes which include trees and soft landscaping that promote biodiversity and link existing green spaces and routes in green corridors. The City of London Tree Strategy Part 2 also promotes the aim to increase existing stock and encourage green corridors that contribute to the biodiversity of the City.

Significant opportunities exist to improve the connectivity of green spaces and their biodiversity value. Development of the built environment has the potential to enhance the habitats of priority species that have adapted to and made the Square Mile their home. All buildings and infrastructure must therefore positively contribute to a range of sustainability issues and opportunities with biodiversity a key component. Planners and developers must consider both the impact of new developments and opportunities for temporary biodiversity enhancements that can be included in a project, such as:

- Ensuring lighting associated with construction sites does not unnecessarily illuminate nearby open spaces and disrupt bat foraging routes.
- Ensure new lighting in public realm enhancement schemes does not have an adverse impact on biodiversity.
- Introducing temporary green walls or other pollen and nectar-rich features on construction sites and on hoardings which in some circumstances may be in place for many years.
- Take advantage of vacant sites such as planters, beds or borders or areas undergoing redevelopment by sowing wildflower species to provide pollen and nectar as well as a temporary visual amenity.
- Installing well positioned and specified artificial nesting boxes to support a range of nesting birds can be an excellent addition to a tree, open space or building.
- Retrofitting artificial structures to improve habitats for species such as bats and pollinators.
- Providing interpretation on the background and history of a site as well as importance of features such as street trees and green roofs.

Such suggestions will be developed as part of an ecology toolkit.

5.3 Action Plan 3: Education and community engagement

The action plan for education and community engagement covers a wide remit, including:

- Promoting a greater understanding of the City's biodiversity and informing stakeholders how their work or leisure might impact on the natural environment.
- Providing opportunities for stakeholders to contribute towards initiatives designed to enhance biodiversity in open spaces and to learn new skills.
- Training City Gardeners with the skills to help them maintain and enhance biodiversity as a key aspect of their day-to-day work.
- Encouraging volunteers and City Gardeners to work together on biodiversity projects.

The City of London has a number of established community and resident groups that engage in activities which promote and enhance the value of biodiversity in the community. These activities include:

- Residents' bulb planting days.
- Initiatives such as City in Bloom that bring together City businesses, residents and community groups to have a positive impact on biodiversity in the Square Mile.
- School gardening clubs and outdoor learning sessions run by volunteers.
- Surveys of plants and animals organised by individuals.

These groups will help deliver the BAP objectives and the City Corporation will provide support and identify funding streams to support their work.

National award schemes such as Royal Horticultural Society (RHS) Britain in Bloom and the Green Flag Awards and Green Heritage Site Accreditation managed by Keep Britain Tidy recognise the importance of considering biodiversity in all aspects of parks and open spaces management. The schemes also provide a stimulus for managers to strive for excellence and promote their achievements to a wider audience.

The City Gardens Team will encourage City businesses to undertake corporate social responsibility (CSR) commitments in the City's green spaces. This will provide the ideal opportunity for City businesses and their employees to gain a greater understanding of the network of open spaces available in the City and make a positive contribution to biodiversity. Schemes such as Spice Time Credits, where individuals give an hour of their time and receive a Time Credit to spend on an activity or event of their choice, can be used as an incentive to encourage individuals who have not previously volunteered to participate in biodiversity projects. This has a positive impact on building a stronger and engaged community in the City as well as developing the skills of individuals.

The City Gardens Team will put in place a series of talks, seminars and presentations which will demonstrate to residents, businesses and visitors the value of biodiversity in the urban landscape and how they can help to protect and enhance it. The City Corporation supports the London-wide campaign to raise awareness of what SINCs are and their importance in the context of the City and London.

Biodiversity is an excellent platform to engage with children and to increase their understanding of the natural world. There are two state primary schools that take the majority of the City's resident children - Sir John Cass Primary School in the east of the City and Prior Weston, a London Borough of Islington primary school on the north-west edge of the City as well as another primary school, City of London Academy Islington, which is due to open on the edge of the City in September 2017. In addition to these state schools there are a number of private schools and nurseries in or on the fringes of the Square Mile. Volunteer groups already work with both state schools and other nurseries to provide learning opportunities and support gardening activities. Both the City Corporation and volunteer and community groups can be of key importance in working with schools to support curriculum-based biodiversity activities.

The City Gardens Team will also identify and support opportunities for adult learning, both for individual personal development and to support biodiversity.

The City Corporation website will be developed to include information on biodiversity of the City, raise awareness of SINCs and explain what individuals and businesses can do to support biodiversity in the Square Mile. The website will also be used as a platform to provide detailed biodiversity project case studies to inspire others and disseminate good practice guidance. The City Gardens Team will actively expand its mailing list and send quarterly e-newsletters that will be used to flag new initiatives. They will also be used to signpost respondents to other more detailed sources of information and how they can engage with delivery of the Biodiversity Action Plan.

5.4 Action Plan 4: Data collection, surveys and monitoring

It is essential that data on species and habitats is systematically collected and digitally recorded. This information can be used to inform planners and developers, help shape management plans and demonstrate the importance of green spaces and associated green infrastructure features. The data collected is a vital element for developing an evidence base for evaluating the success of interventions, and guiding future work. It is important that the data is publically accessible and that the City contributes to the regional and national agenda to understand and protect biodiversity.

GiGL is London's environmental record centre. It receives, collates and manages detailed information on aspects of open spaces, including habitat and species information. This data can then be supplied to any interested parties, such as planners and developers, to enable them to make informed decisions to protect and enhance biodiversity. GiGL's habitat and species datasets can provide important information to make informed decisions but the City Corporation currently has limited access to interpret this data.

More can be done to encourage the monitoring of successful habitats, provide information to make enhancements and inform future projects. The City Gardens Team, planners and volunteers will actively engage with developers and building managers to encourage more ecological surveys of these habitats and the sharing of information. Data is invaluable to support funding bids and further ensures that projects and developments take into consideration the specific conditions that influence biodiversity in the City. The City Corporation aims to enter into a Service Level Agreement with GiGL. This will enable the City to access site specific data that has been collected from multiple sources to commission City-wide biodiversity reviews. The objectives in the action plan will focus on ensuring the information held by GiGL is accurate and up to date and that data is collected in an appropriate way for submission to GiGL. The actions of the BAP aim to make the data more accessible and allow individuals to contribute. The Open Spaces Department will work in conjunction with the Department of the Built Environment when commissioning, collating and monitoring data.

The Biodiversity Action Plan identifies the need to monitor target species. This will also include other species such as moths, butterflies, bees and spiders that provide an engaging way for both adults and children to better understand the City's open spaces and biodiversity. There is also a need to gain a greater understanding of the more unusual species present in the Square Mile with surveys of mosses, lichens and ferns. To achieve this objective the City Gardens Team will provide training for volunteers and staff to encourage the collection of data specific species as part of national surveys, such as Moth Night, the London Natural History Society's (LNHS) study of butterflies and the annual RSPB Big Garden Birdwatch.

Recording data on counts and surveys provides an accessible, achievable and measureable outcome for investment in biodiversity identification and survey training.

6.0 Funding opportunities

The City Gardens Team will work with volunteers to access funding and sponsorship opportunities as they arise. These may be national schemes run by corporates, Heritage Lottery funding, Community Infrastructure Levy (CIL) funds, planning obligations commonly referred to as section 106 agreements or other City funds such as the City Bridge Trust.

To support funding bids the City Gardens Team will facilitate the writing, editing and production of accessible reports that can be published on the City of London website. The Biodiversity Action Plan will help to raise awareness of the value of biodiversity interventions that may benefit from additional funding, including the installation of bird and bat boxes, bird baths and feeding stations.

7.0 How the Biodiversity Action Plan will be monitored and delivered

As progress towards achieving the actions of the BAP is made, it is important to record and communicate this to members of the City of London BAP Partnership Group as well as the wider public. Biodiversity information will be updated on the City of London website and City of London Biodiversity Action Plan Partnership Group members will be updated regularly and invited to an annual general meeting.

All progress relating to the BAP action plans will also be reported on the Biodiversity Action Reporting System (BARS).

Table 2 - Action Plan 1: Open space and habitat management

Action No	Action	Lead Partner	Contributing partner	Start/end Date
OSHM1.1	Review of Sites of Importance of Nature Conservation (SINCs) in the City of London. Maintain, upgrade or increase number of SINC sites.	CoL OSD	LWT GiGL	April 2016 – October 2016
OSHM1.2	Produce management plans for all SINC sites with land owners and managers following SINC review. Two management plans to be developed per year with management agreements adopted. Subject to co-operation of private landowners and managers and access to GiGL open space, habitat and species data.	COL OSD	Landowners and managers	April 2016 – April 2020
OSHM1.3	Produce a black redstart species action plan. Funding and access to GiGL habitat and species data dependent.	CoL OSD	FoCG	April 2016 – April 2017
OSHM1.4	Maintain or increase the number of local sites in positive conservation management reported annually for the single data list 160-00. Statistics compiled annually.	CoL OSD		April 2016 – April 2020
OSHM1.5	Investigate the setting up of a multi-departmental working group to develop guidance on managing historic walls, memorials and structures to include in SINC management plans.	CoL DBE CoL OSD CoL CS		April 2016 – April 2017

Action No	Action	Lead Partner	Contributing partner	Start/end Date
OSHM1.6	Promote planting of pollen and nectar-rich flowering shrubs, annuals and perennials to residents, businesses and City Corporation colleagues. Compile plant lists compiled or update and promote existing literature e.g. RHS Perfect for Pollinators downloadable plant lists.	CoL OSD	FoCG	April 2016 - April 2020
OSHM1.7	Programme of bulb planting in residential areas, open spaces and churchyards to increase the availability of nectar-rich planting available to early emerging pollinators. Bulb planting at two sites annually.	CoL OSD	FoCG BEO	April 2016 - April 2020
OSHM1.8	Achieve and maintain 30% shrub cover at all SINC sites. Feasibility to be identified in SINC management plans and improvements to 2 sites per year where possible, funding dependent.	CoL OSD	FOCG BWG	April 2016 - April 2020
OSHM1.9	Identify and install additional nest boxes for targeted species in all SINC sites and other suitable open spaces, funding dependent.	CoL OSD	FoCG	April 2016 - April 2020
OSHM1.10	Review and install bird feeding stations in all SINC sites and other suitable open spaces.	CoL OSD	FoCG	April 2016 - April 2020
OSHM1.11	Identify or design a bird bath that can be easily cleaned and installed in all SINC sites. Replenishing water and cleaning regime to be included.	CoL OSD		April 2017 - April 2018

Action No	Action	Lead Partner	Contributing partner	Start/end Date
OSHM1.12	Install additional loggeries in all suitable SINC sites and other open spaces to support stag beetles and other invertebrates. 2 sites to be reviewed and completed per year.	CoL OSD	FoCG	April 2016 - April 2020
OSHM1.13	Install leaf composting bins in all SINC sites to support sustainable practices and encourage invertebrates.	CoL OSD	FoCG	April 2016 - April 2020
OSHM1.14	Following a baseline survey of bats in the City of London identify opportunities to include night-scented species in planting schemes. Include in SINC management plans, ecology toolkit and City in Bloom judging criteria.	CoL OSD	FoCG	April 2016 - April 2020
OSHM1.15	Identify opportunities to provide water for biodiversity including wildlife ponds and enhance existing ponds and lakes for biodiversity.	CoL OSD	FoCG BWG	April 2016 - April 2020
OSHM1.16	Review and monitor grass cutting regimes in all suitable SINC sites. Findings and management changes to be incorporated into SINC management plans.	CoL OSD		April 2016 - April 2017
OSHM1.17	Identify areas within SINC and any other suitable open spaces establish wildflower meadows and install where possible.	CoL OSD	FoCG	April 2016 - April 2020

Table 3 - Action Plan 2: The built environment

Action No	Action	Lead Partner	Contributing partner	Start/end Date
BE1.1	Produce an audit of which biodiversity is a key component for new and retro-fitted green roofs.	CoL DBE	CoL OSD	April 2017 – April 2020
BE2.2	Produce green infrastructure audits to support the City of London's environmental enhancement strategies to identify opportunities for urban greening, biodiversity enhancements and improving habitat connectivity.	CoL DBE	CoL OSD	April 2017 – April 2020
BE2.3	Develop an ecology toolkit and biodiversity checklist for the City of London as a tool to support new developments and environmental enhancement schemes. Funding dependent.	CoL OSD	CoL DBE	April 2017 – April 2020
BE2.4	Promote case studies and industry guidance to support the development and enhancement of green roofs and living walls for biodiversity.	CoL OSD	CoL DBE	April 2016 – April 2020
BE2.5	Ensure the review of the City of London Local Plan supports the Biodiversity Action Plan and considers areas of deficiency in access to public open space and nature.	CoL DBE	CoL OSD	April 2017 – April 2020
BE2.6	Promote the use of temporary green infrastructure of biodiversity value such as green hoardings and annual wildflower seed mixes to mitigate any temporary loss of open space.	CoL DBE	CoL OSD	April 2017 – April 2020
BE2.7	Promote the availability of nest sites for swifts on existing buildings and as part of new developments specifically targeting the Riverside Walk area. Opportunities to identify as part of SINC review and SINC management plans.	CoL DBE	CoL OSD	April 2017 – April 2020

Action No	Action	Lead Partner	Contributing partner	Start/end Date
BE2.8	Identify opportunities to include artificial roosting sites for bats in new and existing developments based on bat survey findings, funding and target area dependent.	CoL OSD	CoL DBE	April 2016 – April 2020
BE2.9	Identify any potential sites on both existing buildings and new developments to install artificial nest boxes of an appropriate construction and undisturbed location. 1 area/site to be identified per year.	CoL OSD	FoCG	April 2016 – April 2020
BE2.10	Activity explore the possibility of creating a SINC at rooftop level at as part of the review of SINC in the City of London	CoL OSD	CoL DBE FoCG LWT	April 2016 – April 2020

Table 4 - Action Plan 3: Education and community engagement

Action No	Action	Lead Partner	Contributing partner	Start/end Date
ECE1.1	Hold a biodiversity event to launch the Biodiversity Action Plan in 2016.	CoL OSD	FoCG BWG	July 2016
ECE1.2	Deliver a programme of volunteer and staff biodiversity training to cover species identification, surveying and recording. Further training needs to be identified, funding dependent.	CoL OSD	FoCG	April 2016 – April 2020
ECE1.3	Engage with current and new residents, businesses and communities groups to support and engage individuals and organisations to deliver the Biodiversity Action Plan. Annual meeting with City of London BAP Partnership Group members.	CoL OSD	FoCG BWG	April 2016 – April 2020
ECE1.4	Support the Friends of City Gardens in delivering the annual City of London's local In Bloom campaign, City in Bloom. Maintain existing number of entrants per year.	FoCG	CoL OSD	April 2016 – April 2020
ECE1.5	Use the annual City in Bloom campaign to promote biodiversity in private window boxes, balconies and gardens in the City of London.	FoCG	CoL OSD	April 2016 – April 2020
ECE1.6	Deliver a green roof and wall workshop, walk or tour in partnership with City businesses and City Corporation departments to demonstrate good examples and best practice to planners, developers and industry professionals. 1 per year.	FoCG	CoL DBE CoL OSD	April 2016 – April 2020

Action No	Action	Lead Partner	Contributing partner	Start/end Date
ECE1.7	Engage with schools in the City of London and City fringes to promote the understanding of biodiversity and to encourage food growing and healthy eating. Provide fundraising advice and support for accessing teaching resources. Establish ongoing relationships with all City-based schools. Funding and officer and volunteer time dependent.	FoCG	CoL OSD	April 2016 – April 2020
ECE1.8	Identify and promote local and national biodiversity campaigns that the City Corporation, residents and businesses can support such as Moth Night, LHNS butterfly survey, National Tree Week etc.	CoL OSD	FoCG BWG	April 2016 – April 2020
ECE1.9	Ensure that any new signage and interpretation in City Gardens managed open spaces includes local and relevant biodiversity information. Two SINC sites to be reviewed and updated per year. Funding dependent.	CoL OSD		April 2016 - April 2020
ECE1.10	Review and update the 'wildlife and nature' content of the City Gardens, City of London website to reflect the Biodiversity Action Plan 2016-2020. Include links to signpost individuals to further information. Content to be updated as required and included as part of annual website review.	CoL OSD	FoCG	April 2016 - April 2020
ECE1.11	Make planting lists and plans available on the City of London website to allow individuals to both interpret and be inspired by planting design for biodiversity value. One site reviewed and updated per year.	CoL OSD	City Guides FoCG	April 2016 - April 2020
ECE1.12	Review City Gardens Wildlife Walks leaflets; update or develop into different form of interpretation. Funding dependent.	CoL CG		April 2017 – April 2018

Action No	Action	Lead Partner	Contributing partner	Start/end Date
ECE1.13	Develop leaflet, visitor interpretation or webpage to explain what bird species are present in the City. Funding dependent.	CoL OSD	FoCG	April 2018 – April 2020
ECE1.14	Work with Thames 21 and other stakeholders to promote the River Thames as a SMINC to schools, businesses and local groups.	CoL OSD	Thames 21 FoCG CoL DBE	April 2017 – April 2020
ECE1.15	Promote river clean up dates and water quality testing opportunities to City Gardens volunteer network.	COL OSD	Thames 21 FoCG	April 2016 – April 2020
ECE1.16	Support residents and communities in improving their local areas for biodiversity. Promote and support community days. Hold one biodiversity based event per year.	CoL OSD	FoCG BWG	April 2016 – April 2020
ECE1.17	Develop a training session for City Gardens staff and other City Corporation colleagues and deliver annually to develop new skills in managing biodiversity in the urban parks environment. Funding dependent.	CoL OSD	FoCG	April 2016 – April 2020
ECE1.18	Seek volunteer support in the regular replenishing, cleaning and monitoring of bird feeding stations.	CoL OSD	FoCG	April 2016 – April 2020
ECE1.19	Introduce, promote and publicise bat walks in the City of London in partnership with the Friends of City Gardens.	FoCG	CoL OSD	April 2016 - April 2020
ECE1.20	Prepare guidance notes on the key tree species of value to biodiversity and the urban landscape specific to the City.	CoL OSD	FoCG	April 2017 – April 2018

Action No	Action	Lead Partner	Contributing partner	Start/end Date
ECE1.21	Introduce a tree walk and promote the City of London tree leaflet. Tree walk to be held annually as part of regional/national awareness weeks. E.g. London Tree Week. Funding and volunteer and CoL officer input dependent.	CoL OSD	FoCG	April 2018 – April 2020
ECE1.22	Increase the number of volunteers enrolled as Spice Time Credit members.	CoL OSD	CoL CCS FoCG BWG	April 2016 - April 2020
ECE1.23	Identify new Spice Time Credits earn and spend opportunities with the Open Spaces Department to encourage new volunteers to get involved in biodiversity events and activities.	CoL OSD	CoL CCS FoCG BWG	April 2016 - April 2020
ECE1.24	Develop a package of corporate volunteer day opportunities for the City of London website. All corporate volunteer days to support biodiversity projects and raise awareness of nature in City. Hold sessions for two corporate volunteer groups per year.	CoL OSD	FoCG	April 2016 - April 2020
ECE1.25	Develop a seed mix or planting palette to encourage residents to include biodiversity planting in window boxes on the Barbican Estate. Expand scheme to other City residential estates.	GAG BEO	CoL OSD FoCG BWG	April 2017 – April 2018
ECE1.26	Incorporate biodiversity enhancements into community food growing schemes. Promote good practice guidance to food growing groups and include in City in Bloom judging criteria.	FoCG	CoL OSD	April 2016 - April 2020
ECE1.27	Provide advice to residents and businesses that wish to feed the birds adjacent to open spaces.	FoCG	CoL CG	April 2016 – April 2020

Table 5 - Action Plan 4: Data collection, surveys and monitoring

Action No	Action	Lead Partner	Contributing partner	Start/end Date
DCSM1.1	Agree way forward and identify funding for a service level agreement with GiGL.	CoL OSD	CoL DBE	April 2016 – April 2017
DCSM1.2	Enter and provide updates on progress of the Biodiversity Action Plan on the Biodiversity Action Reporting System (BARS).	CoL OSD		April 2016 – April 2020
DCSM1.3	Carry out a full biodiversity audit with GiGL to gain an understanding of habitat type, size, quality, accessibility, areas of deficiency in access to nature and recorded species distribution in the Square Mile to inform a strategy for biodiversity conservation, enhancement and future opportunities. SLA agreement and funding dependent.	CoL OSD	CoL DBE GiGL	April 2016 – April 2020
DCSM1.4	Identify funding to carry out a black redstart and bat baseline survey to guide future management interventions and enhancements.	CoL OSD	FoCG	April 2017 – April 2020
DCSM1.5	Identify funding to commission a spider and invertebrate survey.	CoL OSD	FoCG	April 2016 – April 2020
DCSM1.6	Identify funding for a moss, lichen and fern survey in targeted SINC sites. Produce specification of target sites.	CoL OSD	FoCG	April 2016 – April 2020
DCSM1.7	Promote and distribute GiGL monitoring forms to City Gardens staff, City Corporation colleagues and volunteer groups. Achieve a 10% increase per annum in wildlife records submitted to GiGL for the City of London.	CoL OSD	FoCG	April 2016 – April 2020

Action No	Action	Lead Partner	Contributing partner	Start/end Date
DCSM1.8	Develop a partner citizen science form to allow individuals to submit wildlife and green space information in the City of London. GiGL SLA agreement dependent.	CoL OSD	FoCG GiGL	April 2017 – April 2020
DCSM1.9	Participate in the annual RSPB Big Garden Birdwatch. Collect data, engage with City residents and raise awareness of the City bird population. Report to be produced and circulated and data submitted to GiGL.	FoCG	CoL OSD	April 2016 – April 2020
DCSM1.10	Use ArcGIS, the geographic information system (GIS) application used by the City of London and the Corporate Internet GIS tool to integrate mapping relating to biodiversity including factors that contribute to biodiversity including open spaces, green roofs, SINC, tree cover, urban greening and biodiversity features such as bird boxes and bee hives and areas of opportunity.	CoL OSD	CoL DBE	April 2016 – April 2020
DCSM1.11	Conduct an annual summer roof top/breeding bird survey. One survey per year. Identify funding to support survey, report production and volunteer expenses.	FoCG	CoL OSD	April 2016 – April 2020
DCSM1.12	Annual monitoring and clearing of bird boxes located in City of London open spaces. Annual report to be produced with feedback and recommendations.	FoCG	CoL OSD	April 2016 – April 2020
DCSM1.13	Promote annual nest box cleaning of boxes on private land, buildings and structures to private landowners and managers providing training and volunteers to assist contractors.	FoCG	CoL OSD	April 2016 – April 2020

Action No	Action	Lead Partner	Contributing partner	Start/end Date
DCSM1.14	Investigate opportunities for planning applicants or consultants to pass on their results of ecological surveys or BREEAM biodiversity assessments to GiGL as part of the planning process.	CoL DBE	CoL OSD	April 2017 – April 2020
DCSM1.15	Carry out a moth survey at SINC sites. Surveys to include both ecologist and volunteer surveys. 1 site per year.	CoL OSD	FoCG	April 2016 – April 2020
DCSM1.16	Investigate opportunities for encouraging building managers, owners and occupiers to commission an audit and survey of their green roofs or other green infrastructure. Aim to gather habitat and species data to inform current management and future enhancements and to make this data available to GiGL.	CoL DBE	CoL CG FoCG	April 2017 – April 2020

Table 6 - Key for action plan tables

Abbreviation	Organisation
CoL OSD	City of London Corporation, Open Spaces Department
CoL DBE	City of London Corporation, Department of the Built Environment
CoL CS	City of London Corporation, City Surveyor's Department
CoL CCS	City of London Corporation, Community and Children's Services
BEO	Barbican Estate Office
GAG	Gardens Advisory Group (Barbican Residents Consultation Committee Working Party)
BWG	Barbican Wildlife Group
FoCG	Friends of City Gardens
GiGL	Greenspace Information for Greater London
LWT	London Wildlife Trust

8.0 Appendices

8.1 Appendix 1: National, regional and local policy

The list below outlines the key policy and legislation at a local, regional and national level to which the Biodiversity Action Plan contributes towards their delivery and support:

National policy

Biodiversity 2020: a strategy for England's Wildlife and Ecosystem Services Habitats and Species of Principal Importance in England

Natural Environment and Rural Communities Act 2006

Regional policy

The London Plan – The Spatial Development Strategy for London Consolidated with Alterations Since 2011 (March 2015)

Connecting with London's Nature – The Mayor's Biodiversity Strategy (July 2002)

Local policy

City of London Local Plan 2015

Core Strategic Policy CS9: Thames and the Riverside

Core Strategic Policy CS10: Design

Policy DM 10.1: New development

Policy DM 10.2: Design of green roofs and walls

Policy DM 10.3: Roof gardens and terraces

Policy DM 10.4: Environmental enhancement

Core Strategic Policy CS12: Historic Environment

Policy DM 12.1: Managing change affecting all heritage assets and spaces

Policy DM 12.2: Development in conservation areas

Policy DM 12.5: Historic parks and gardens

Core Strategic Policy CS15: Sustainable development and climate change

Policy DM 15.5: Climate change resilience and adaptation

Core Strategic Policy CS18: Flood risk

Policy DM 18.2: Sustainable drainage systems (SuDS)

Core Strategic Policy CS19: Open Spaces and Recreation

Policy DM19.1: Additional open space

Policy DM19.2: Biodiversity and urban greening

The City of London Open Spaces Strategy – Supplementary Planning Document 2015

City Gardens Management Plan 2011 – 2016

City of London Tree Strategy Part1 – Supplementary Planning Document 2012

City of London Tree Strategy Part 2 – 2012

Objective 7: (increase stock of tree)

Objective 8: (increase amenity and green corridors)

Objective 9: (bio-diversity, air quality and climate change)

8.2 Appendix 2: City of London Biodiversity Action Plan Partnership Group

The following organisations and individuals are represented in the Partnership Group as having an influence and interest in delivering the objectives of the Biodiversity Action Plan:

- Barbican Allotment Group
- Barbican Wildlife Group
- British Land
- Broadgate Estates, City of London
- BTO (British Trust for Ornithology)
- Bumblebee Conservation Trust
- Butterfly Conservation
- Camden Council
- City of London Corporation
- City Residents
- Diocese of London
- Friends of City Gardens
- GiGL (Greenspace Information for Greater London)
- Golden Lane Allotment Group
- Greater London Authority
- Historic England
- Inner Temple
- London Beekeepers Association
- London Borough of Hackney
- London Borough of Islington
- London Borough of Tower Hamlets
- London Wildlife Trust
- Middle Temple
- Natural England
- Nomura International plc.
- Petticoat Square Gardening Club
- Port of London Authority
- RSPB (Royal Society for the Protection of Birds)
- Schroders plc.
- Sir John Cass Primary School
- Southwark Council
- TCV (Trust for Conservation Volunteers)
- Thames 21
- The Green Roof Consultancy
- Westminster City Council

8.3 Appendix 3: Open space typology and categorisation

The open space typologies used for the City of London Open Spaces Audit are identified in the table below:

Typology	Primary Purpose
Parks and Gardens	Accessible, high quality opportunities for informal recreation and community events.
Natural and semi-natural greenspaces	Wildlife conservation, biodiversity and environmental education and activities.
Local Green Corridors	Walking, cycling or horse riding, whether for leisure purposes or travel and opportunities for wildlife migration.
Outdoor Sports Facilities	Participation in outdoor sports, such as pitch sports, tennis, bowls, athletics or countryside or water sports.
Amenity Greenspace	Opportunities for informal activities close to home or work or enhancement of the appearance of residential or other areas.
Provision for children and young people	Areas designated primarily for play and social interaction involving children and young people, such as equipped play areas, ball courts, skateboard areas and teenage shelters.
Cemeteries and churchyards	Quiet contemplation and burial of the dead, often linked to the promotion of wildlife conservation and biodiversity.
Primary civic spaces	Provides open space amenity. Includes civic and market squares and other hard surfaces designed for pedestrians.
Secondary civic spaces	Provides both open space amenity and facilitates pedestrian movement.
Sites awaiting development	Awaiting development.

8.4 Appendix 4: Public Open Space Categorisations

The table below provides an overview of the Public Open Space categories as defined in The London Plan. Spaces are categorised according to their size, facilities and local importance and provide a clear method to evaluate open space provision and type across Greater London.

Open Space Categorisation	Size Guidelines	Distances from homes
Regional Parks	400 hectares	3.2 to 8 kilometres
Metropolitan Parks	60 hectares	3.2 kilometres
District Parks	20 hectares	1.2 kilometres
Local Parks and Open Spaces	2 hectares	400 metres
Small Open Spaces	Under 2 hectares	Less than 400 metres
Pocket Parks	Under 0.4 hectares	Less than 400 metres
Linear Open Spaces	Variable	Wherever feasible

8.5 Appendix 5: Registered Parks & Gardens

The following sites in the City of London feature on the Historic England 'Register of Historic Park and Gardens of special historic interest in England' which identifies sites of particular historic significance:

Site	Grade
Inner Temple	II
Finsbury Circus	II
Middle Temple	II
The Barbican	II*

8.6 Appendix 5: Glossary

Explanation of terms used in the City of London Biodiversity Action Plan 2016-2020:

All London Green Grid

The All London Green Grid (ALGG) is a Greater London Authority (GLA) framework to promote the design and delivery of 'green infrastructure' across London.

Biodiversity

Biodiversity is the term used to describe the variety of life on Earth. This includes wildlife such as animals, birds and plants, the habitats which are the places they live and how they all interact with their surroundings as part of the ecosystem.

Building Research Establishment Environmental Assessment Methodology (BREEAM)

BREEAM is the world's leading sustainability assessment method for master planning projects, infrastructure and buildings. It addresses a number of lifecycle stages such as new construction, refurbishment and in-use.

Citizen Science

Citizen science is scientific research conducted by amateur or non-professional enthusiasts. Citizen science may be performed by individuals or groups of volunteers and interested parties.

City of London Corporation

The City of London Corporation provides local government and policing services for the financial and commercial heart of Britain, the 'Square Mile'.

City Gardens, Open Spaces Department

The City Gardens Team are responsible for tree and green space management for around 200 open spaces in the Square Mile including parks, gardens, churchyards, plazas and highway planting. The City Gardens Team is also responsible for Bunhill Fields Burial Ground just outside the City boundary in the London Borough of Islington.

City in Bloom

City in Bloom is an annual campaign organised and judged by the volunteers of Friends of City Gardens. The competition recognises the work of communities, businesses and residents in making the places we live, work and visit a greener place. Entries can include all aspects of greening interventions including green roofs, courtyard gardens and window boxes.

Corporate Social Responsibility (CSR)

CSR is a process which companies choose to follow to take responsibility for their actions and encourage positive impacts through their activities on the environment, consumers, employees, shareholders, communities and all other members of the public who may also be considered as stakeholders.

Department for Environment Food & Rural Affairs (Defra)

Defra is a UK government department responsible for safeguarding our natural environment, supporting our world-leading food and farming industry, and sustaining a thriving rural economy. Our broad remit means we play a major role in people's day-to-day life, from the food we eat, and the air we breathe, to the water we drink.

Friends of City Gardens (FoCG)

A community group of volunteers comprising City residents, City of London Guides, City workers and other interested parties. They support the City Gardens Team and have a special interest in promoting and enhancing biodiversity.

Greenspace Information for Greater London (GiGL)

GiGL is the capital's environmental records centre that collates, manages and makes available detailed information on London's wildlife, parks, nature reserves, gardens and other open spaces.

Green Corridors

Almost continuous areas of open space which are linked. They can act as wildlife corridors and serve amenity, landscape and access roles.

Green Infrastructure

A strategically planned and managed network of green spaces and other environmental features vital to the sustainability of any urban area. This includes although not exclusively trees, green roofs and walls and green corridors.

Local Plan

The document setting out the strategy, vision and policies and proposals for planning the City. It was prepared in consultation with the public and was adopted in 2015.

London Biodiversity Partnership

The London Biodiversity Partnership was formed in 1997 to bring together organisations to benefit wildlife and boost the capital's green space.

National Planning Policy Framework

The Government's statement of planning guidance to local planning authorities, issued by the Department of Communities and Local Government in March 2012. The City Corporation must take account of it in preparing and implementing its planning policies.

Open Mosaic Habitat

Open Mosaic Habitats on Previously Developed Land (OMH) is defined by the Defra. They are found mainly in urban and formerly industrial areas and have high biodiversity value. This value includes rare plants, mosses, lichens and a large number of rare invertebrates, especially bees, wasps and beetles.

Open Space

Open space is land which is not built on and which has some amenity value or potential for amenity value. Amenity value is derived from the visual, recreational or other enjoyment which the open space can provide, such as historic and cultural interest and value. This includes open spaces in public or private ownership.

Single Data List 160-00

An annual publication on local sites across England in positive conservation published by Defra. This publication contains information on local sites which are being managed to preserve their nature conservation interest and referred to as sites in 'positive conservation management'.

Sites of Importance for Nature Conservation (SINCs)

Sites are designated as SINCs to highlight areas of ecological value in the City. The sites are graded as being of Metropolitan (SMINCs), Borough (SBINCs), or Local (SLINCs) importance.

Sustainable Drainage System (SuDS)

A range of sustainable measures for surface water management which reduce the amount, flow or rate of surface water discharge into sewers.

Spice Time Credits

Spice Time Credits are supported by the City of London Corporation. Individuals can earn Time Credits by giving their time to support a community activity or group. For every hour a volunteer gives to their community they earn one Time Credit which can be 'spent' to access services and activities with other groups or organisations signed up to the Spice Time Credits Network.

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Open Spaces Department

The City of London Corporation owns and manages a number of Open Spaces, Parks and Gardens in and around London as part of its commitment to sustaining a world class city. Each open space is a unique resource managed for the use and enjoyment of the public and for the conservation of wildlife and historic landscape.

In addition to the Biodiversity Action Plan, a number of other publications are available, including many free leaflets. A full list of sites and visitor information can be found on our website, detailed below.

If you would like to receive this publication in your language, or in an alternative format such as large print, Braille or audio tape, please contact:

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