Appendix B – Phase 1 Habitat Plan and Photos

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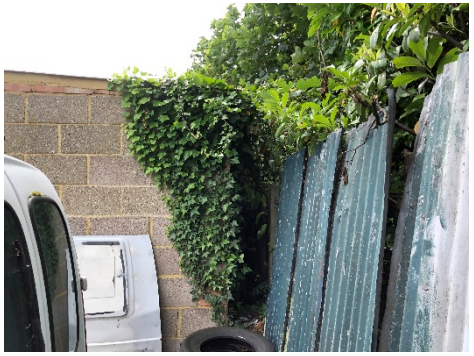
P9: Tree line immediately adjacent to the west boundary of the site

P10: View of southern section of tree line with cherry laurel present north of BN2

P11: Reptile refugia (damaged section of west boundary corrugated metal fencing)

P12: Reptile refugia (pile of tyres can be seen in background)



P13: Ivy growth on north- and west-facing walls of BN2

P14: Bare ground with self-seeding ephemeral vegetation

P15: Extensive green roof on building adjacent to south boundary of site

P16: Gap in the building eaves of BN5 and habitats of entrance driveway

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P17: Zoomed-in view of the gap in the building eaves of BN5

P18: View of south-facing wall of BN1

P19: East-facing wall of BN2

P20: BN3

P21: BN4 and BN5 and tall ruderal and ephemeral/short perennial vegetation

P22: Interior of BN4

P23: Front of BN5

P24: Tall ruderal vegetation running between BN4 and BN5

Appendix C – Relevant Legislation

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Bats

All species of bat are fully protected under the Conservation of Habitats and Species Regulations 2017. It is illegal to injure, kill, capture or disturb a bat. It is also illegal to damage, destroy or obstruct trees, buildings or other places used for roosting, even if bats are not present.

Most development and maintenance work affecting bats and / or roosts e.g. bridge / tree maintenance works, demolition, barn conversions etc., therefore require a Habitats Regulations License for work to take place legally.

All bat species are also protected under the Wildlife and Countryside Act 1981 (as amended). This means they are additionally protected from intentional or reckless disturbance, intentional or reckless obstruction of access to any place of shelter or protection; and/or, selling, offering or exposing for sale, possession or transporting for purpose of sale.

Wild Birds

The Wildlife & Countryside Act 1981 (as amended) is domestic legislation for Great Britain. The Act includes the UK's domestic implementation of the species protection of the European Directive on the Conservation of Wild Birds (79/409).

Under the Wildlife and Countryside Act 1981 all birds, their nests and eggs are protected by law and it is thus an offence, with certain exceptions to intentionally:

- Kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird while it is in use or being built.
- Take or destroy the egg of any wild bird.
- Have in one's possession or control any wild bird (dead or alive) or any part of a wild bird that has been taken in contravention of the Act or the Protection of Birds Act 1954.
- Have in one's possession or control any egg or part of an egg that has been taken in contravention to the Act. This includes items taken or killed before the passing of the Act.
- Have in one's possession or control any live bird of prey of any species in the world (with the exception of vultures and condors) unless it is registered and ringed in accordance with the Secretary of State's regulations.
- Have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered (and in some cases ringed) in accordance with the Secretary of State's regulations.
- Disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Barn Owls

Barn Owls are included in Schedule 1 of the Wildlife & Countryside Act 1981 which affords them protection against disturbance whilst nesting in addition to the basic level of protection of Barn Owls afforded to most wild birds. Under Part 1, Section 1 (5) it is an offence punishable with imprisonment for a period of up to 6 months to intentionally or recklessly:

- Disturb a Barn Owl while it is building a nest or is in, on or near a nest containing eggs or young.
- Disturb a Barn Owl's dependent young.

Reptiles

Slow worms *Anguis fragilis*, common lizard *Zootoca vivipara*, adder *Vipera berus* and grass snake *Natrix natrix* are protected under the Wildlife and Countryside Act 1981). It is an offence to:

- Intentionally kill or injure a reptile (Section 9(1));
- Intentionally trade or transport reptiles for sale (Section 9(5)).

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Although the habitats of reptile species are not protected, disturbing or destroying reptile habitat during the course of development activities while reptiles are present is likely to lead to an offence.

Sand lizards *Lacerta agilis* and smooth snakes *Coronella austriaca* are European protected species and are afforded full protection under Section 9 of the Wildlife and Countryside Act 1981 and Regulation 39 of the Habitats Regulations 1994. However, these species are rare and highly localised, and will not occur at this site.

All reptiles are additionally are classed as Species of Principal Importance for under S41 of the Natural Environment and Rural Communities (NERC) Act 2006.

Great Crested Newts

Great crested newts *Triturus cristatus* are listed on Appendix II of the Bern Convention and on Annexes II and IV of the EU Natural Habitats Directive. In England and Wales the great crested newt is protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2010 and under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). In Scotland, great crested newts are protected under Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). It is an offence, with certain exceptions, to:

- Intentionally or deliberately capture, kill, or injure GCN;
- Intentionally or recklessly damage, destroy, and disturb GCN in a place used for shelter or protection, or obstruct access to such areas;
- Damage or destroy a GCN breeding site or resting place;

The legislation covers all newt life stages such that eggs, tadpoles and adult newts are all equally protected. Actions that are prohibited can be made lawful by a licence issued by the appropriate Statutory Nature Conservation Organisation. The GCN is a Priority Species under the UK Biodiversity Action Plan and has been adopted as a Species of Principal Importance in England under section 41 of the NERC Act 2006 (section 42 in Wales).

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Badgers

Badger receive legislative protection under the Protection of Badgers Act 1992. Under this Act, it is an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or attempt to do so. The intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence.
- To intentionally or recklessly interfere with a sett. (this includes disturbing Badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it). A sett is defined as "any structure or place which displays signs indicating current use by a Badger". Natural England advice (June 2009) is that a sett is protected so long as such signs remain present, which in practice could potentially be for some time after the last actual occupation by Badger. Interference with a sett includes blocking tunnels or damaging the sett in any way.

West European Hedgehogs

The West European Hedgehog is listed on schedule 6 of the Wildlife and Countryside Act (1981) which makes it illegal to kill or capture wild hedgehogs, with certain methods listed. They are also listed under the Wild Mammals Protection Act (1996), prohibiting cruel treatment of hedgehogs

Invertebrates

A number of invertebrate species are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under Section 9(1) of this act, it is an offence to intentionally kill, injure or take any wild animal included in Schedule 5.

Some are also protected under the Conservation of Habitats and Species Regulations 2010 (as amended).

The Regulations enact the European Union's Habitats Directive (92/43/EEC) in the UK. The Habitats Directive was designed to contribute to the maintenance of biodiversity within member states through the conservation of sites, known in the UK as Special Areas of Conservation (SACs), containing habitats and species selected as being of EC importance (as listed in Annexes I and II of the Habitats Directive respectively). Member states are required to take measures to maintain or restore these natural and semi-natural habitats and wild species at a favourable conservation status.

The Regulations also require the compilation and maintenance of a register of European sites, to include SACs and Special Protection Areas (SPAs) classified under Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). These sites constitute the Natura 2000 network. The Regulations impose restrictions on planning decisions likely to significantly affect SPAs or SACs.

The Regulations also provide protection to European Protected Species that largely overlaps with the WCA 1981, albeit the provisions are generally stricter. Under Regulation 41 it is an offence, inter alia, to:

- Deliberately capture, injure or kill any wild animal of a European Protected Species;
- Deliberately disturb any wild animals of any such species, including in particular any disturbance likely to impair their ability to survive, to reproduce or to hibernate, or migrate, or which is likely to affect significantly their local distribution or abundance;
- Deliberately take or destroy the eggs of such an animal;
- Damage or destroy a breeding site or resting place of such an animal

The Regulations do provide a licensing system that permit otherwise illegal activities in relation to European Protected Species, subject to certain tests being fulfilled.

Appendix D – Biodiversity Policy

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Richmond upon Thames Biodiversity Action Plan

Relevant policies are included below.

Bats

Aims:

- To reverse the current population declines of bats in London Borough of Richmond upon Thames (LBRuT)
- To address public misconceptions about bats and secure their status as culturally valued species.

All of LBRuT's bat species are dealt with collectively in this plan because:

- Those currently concerned with the conservation of bats deal with all species;
- All bat species and their roosts are equally protected by law;
- The conservation problems faced by all bats are believed to be generally similar, so measures proposed here are likely to be of benefit to a number of species.

Current status

Eleven bat species are known to occur in LBRuT and at least six are thought to breed. Common and soprano pipistrelle are by far the most widespread, while the noctule, brown long-eared bat and Daubenton's bat are more localised but regularly recorded. Two nationally rare species, Nathusius' pipistrelle and Leisler's bat, are regularly recorded in the borough. Serotine and Natterer's bat are occasionally recorded, the latter confirmed as a breeding species in 2009. Whiskered/Brandt's bat is also strongly suspected to occur in the borough. Important sites in LBRuT for bats include the London Wetland Centre in Barnes, the River Crane valley, Richmond and Bushy Parks, Stain Hill reservoirs, as well as various sites within the River Thames corridor, such as Petersham Lodge Woods and Lonsdale Road reservoir.

Current bat species listed as priority species under the UK Post-2010 Biodiversity Framework are:

- Greater Horseshoe – Last recorded in Greater London in 1953, historic status in LBRuT unknown
- Lesser horseshoe – Last recorded in Greater London in 1953, historic status in LBRuT unknown
- Barbastelle – Recorded in Greater London in 2017, the first record since 1968; last recorded in LBRuT in 1946
- Bechstein's bat – Not recorded in Greater London, historic status in the region unknown
- Noctule – Regularly recorded in LBRuT, though evidence of a decline in Greater London
- Soprano pipistrelle – Regularly recorded in LBRuT, including known breeding roosts
- Brown long-eared bat – In LBRuT mainly recorded in Royal Parks, including known breeding roosts

Specific Factors Affecting the Species

- Loss of maternity roost sites in buildings or trees – destruction of, disturbance or damage to vulnerable maternity roosts can result from entrenched attitudes towards maintenance and management, a lack of public awareness and understanding of bats, as well as continued ignorance of the legislation protecting them.
- Loss of and disturbance to other roost site – hibernation and other seasonal roost sites can be disturbed or damaged for the same reasons as above. These sites include buildings (mainly their roof spaces), trees, bridges and various underground structures, such as cellars, and disused tunnels.
- Loss of feeding habitats – changes in land use (including development) can result in the loss of insect-rich feeding habitats such as wetlands, woodlands and grasslands.

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- Disturbance to commuting routes – flight paths to and from feeding areas and roosts may be disturbed through the loss of flight line features such as green corridors, or through introduction of new features such as artificial lighting. Bats require an urban gradient of less than 60% of built or lit surfaces in order to move freely. Vegetation removal must be mitigated by green infrastructure on new buildings including green roofs.

Actions
Specific actions targeting bats:

Action RB03 – Maximise the roosting opportunities for prospecting bats by encouraging land managers and property owners to follow good practice guidelines.

Action RB13 – Modern roofing membranes that are the cause of bat-entanglement should not be used in buildings that have had known bat presence or high potential. This includes buildings that are near woodland, water or of a certain age or historic in nature. See http://www.batsandbrms.co.uk/ for latest info on research and best practice.

Action RB14 – Request the reduction in night-time lighting through the following measures:

1. Give support to any measure which seeks to limit night-time lighting by the imposition of curfews after 1am.
2. There should be no NEW lighting near ecologically sensitive areas, ponds, lakes, rivers, and areas of high conservation value. New schemes elsewhere should provide refuges/dark corridors that animals can use.

General recommendation to:

- Limit the duration of light
- Reduce 'light trespass' into areas not intended to be lit (including the sky)
- Change the intensity of lighting
- Change the spectral composition of the lighting.

3. Floodlighting schemes should be encouraged to:
    - Reduce the height of lighting columns
    - Not to use reflective surfaces under lights
    - Use narrow spectrum, avoid white and don't use UV light to minimise the range of species affected by light
    - Lights should not be on automated switching but should be extinguished after the last user.
4. Car park lights should be switched off as early as possible.
5. Trees and vegetation should be retained as they act as light shields.
6. Historic buildings should not be lit: this includes uplighters on churches and chapels as well as heritage structures.
7. Events with lighting or fireworks should not be held near water or during the period May to August

Hedgehogs

Aims:

- To prevent population decline of hedgehogs in the London Borough of Richmond upon Thames (LBRuT).
- To raise public and organisational awareness and concern about this culturally valued species.

Current status

Hedgehogs rely on inter-connected green spaces with a sufficient range of habitats for nesting and foraging, with a minimum of 90 hectares of land. The total area of LBRuT is 22.6 square miles, 51% of this being occupied by parks, golf courses and other open green land. Domestic gardens dominate the remainder, taking up another 19% in 2005 (Private Gardens Habitat Action Plan, 2019). Richmond is a relatively green borough. However, the pressures on hedgehog habitats are similar to towns and suburbs everywhere. In London between 1998-9 and 2006-8 vegetated land in private gardens declined by the equivalent of two and a half Hyde Parks each year (LWT, London Garden City, 2010). Estimating the population of hedgehogs is very difficult, as it is for many wildlife species. Central London has almost no hedgehogs, but some suburban neighbourhoods have more animals per hectare than anywhere else. It seems likely that LBRuT's hedgehog population is greater than in many

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other boroughs. This plan includes action to improve estimates of the distribution and if possible the size of local hedgehog populations.

Specific factors affecting the species

Many hazards can be controlled by simple responses and these are summarised in the Appendix below. For example, garden fences that have no gaps at ground level restrict the movement of hedgehogs. Hedgehogs are completely reliant on access to inter-connected patches of habitat where they can forage and find refuge (State of Nature, 2016). Loss of habitat to building development is a threat that requires a broader policy response. Paving front gardens for parking reduces green space for all wildlife. Manicured gardens do not favour hedgehogs: they prefer long grass, compost heaps and wood piles for nesting and foraging. Busy roads that separate green spaces are a threat to life. Open ponds and swimming pools can be a hazard. Whilst hedgehogs are good swimmers, they can drown if there is nowhere for them to climb out. Slug pellets and pesticides can harm hedgehogs by entering the food chain and by reducing the number of invertebrates available as prey. Rodenticides can cause harm if a hedgehog feeds on an animal that has died from this cause.

Actions

Specific actions targeting hedgehogs

Action RBPH07 – Promote best practice in fencing design and installation with private sector

Action RBPH12 – Encourage planning applications to enhance green connectivity and prevent or mitigate deterioration of habitat, e.g. links between gardens.

House Sparrow

Aims:

- To reverse the current population decline of house sparrows in London Borough of Richmond upon Thames (LBRuT).
- To address public misconceptions about house sparrows and secure their status as valued species.

Specific factors affecting the species

- Changes in roof design – this may be an issue in some areas of older housing stock which are undergoing renovation, as modern roof repairs may prevent access to the roof space for birds. However a decline has also been noted in areas where roof replacement is less widespread.
- Pesticides used in roof treatment – in addition to re-structuring, roofs are often subject to pesticide treatment. Whilst it is recognised that certain pesticides are harmful to bats, no such issue has been recognised for birds.

Actions

Specific action for house sparrow

Action STR07 – Distribute sparrow nesting boxes in areas identified as having potential for new house sparrow habitat.

Action STR09 – Work to include safeguards within the planning framework to ensure that survey and mitigation are included whenever sparrow populations might be affected.

Song Thrush

Aims:

- To prevent further decline of the song thrush in the London Borough of Richmond upon Thames (LBRuT).
- To contribute to an overall strengthening of the population of song thrush throughout London

Specific factors affecting the species

Habitat loss

During the breeding season song thrushes need nest sites low in dense vegetation. Overmanagement of suitable habitat, including reductions in shrub cover or removal of hedgerows, are likely to be detrimental to song thrush numbers by reducing the supply of suitable nest sites and exposing nests to

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predators. While habitat loss has been most significant in agricultural areas (note that there is a significant amount of farmland within West London, to the west of LBRuT) there is anecdotal evidence that a reduction in urban shrub cover may well be affecting song thrush populations throughout the London region. As our opening quote from D.H. Hudson in 1928 suggests, this issue is not a new one.

Actions
Specific actions for Song Thrush:

Action STR05 – Liaise with relevant land managers and provide information on habitat management techniques sympathetic to song thrush. Encourage land owners to set aside an area under minimal maintenance as song thrush habitat.

Action STR05 – Liaise with relevant land managers and provide information on habitat management techniques sympathetic to song thrush. Encourage land owners to set aside an area under minimal maintenance as song thrush habitat.

Stag Beetle

Aims:

- To protect, conserve and enhance nationally significant populations of stag beetle in London Borough of Richmond upon Thames (LBRuT).
- To ascertain the reasons for uneven distribution of stag beetle populations across LBRuT.
- To increase public awareness of the importance of stag beetle and that of the dead wood habitat.

Current Status
The stag beetle has been recorded across most of London but the key boroughs are all south of the Thames, except for Hounslow and parts of LBRuT, although there are clusters of records in places such as Winchmore Hill and Hornchurch. Gardens appear to be the most important habitat for the beetle in London, perhaps because most people are likely to be in their gardens when beetles are likely to be active. The significance of parklands in areas such as LBRuT is unclear as until recently there have been no systematic surveys in parks. Domestic gardens may be crucial to the conservation of the stag beetle in the capital given that many experts believe they do not fly far to find a mate. However, the increasing density of urban housing may militate against future domestic gardeners' contributions.

Specific factors affecting the species

Reduction of dead wood
In earlier centuries dead wood would have been reduced through the intensive management and loss of woodlands. Although some 'tidying up' still continues in woodlands and parks, managers are now much more aware of the need to retain dead wood as part of the woodland ecosystem and this will have benefited stag beetle at a local level. Similarly, changes in the management of parks have led to the retention of dead wood, although this policy was always maintained in Richmond Park. It is surprising how quickly a fallen tree, even a hardwood such as oak, rots away completely.

Loss of habitat to urban development
Habitat has been lost in London through suburban expansion in the inter–war years. Although the introduction of the Green Belt led to the restriction of suburban expansion, many of London's open spaces including woodland have been developed. Development will continue to result in the loss of stag beetle habitat, especially as there is a lack of awareness of the beetle's presence on sites as the adults are only visible for a few weeks a year.

Actions
Specific actions for stag beetles:

Action SBR02 – Promote the retention and/or use of natural and artificial stag beetle habitats by landowners and the public.

Swift

Aims:

- To encourage and ensure the maintenance of habitable conditions for swifts in the London Borough of Richmond upon Thames (LBRuT).
- To contribute to the prevention of a further decline of the swift in the UK.
- To increase awareness of ways to accommodate swifts, e.g. through nestboxes.
- To encourage the reporting of swift sightings.

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Specific Factors Affecting the Species

Habitat loss – Nest Sites
Swifts originally nested in caves, tree-holes and cliffs, but adapted to the urban environment and now nest in high man-made structures, under tiles, in the eaves, in lofts, spires and towers. Old buildings (pre-1944) are more conducive to swift nesting, while modern or re-roofed buildings tend to be impossible for swifts to nest in. Some buildings include anti-swift mechanisms such as swiftproof eaves or netted eaves to deny access. Renovation of old buildings should generally not be carried out during breeding season, due to the swift's nest-site fidelity—a swift will keep returning to the same nest. If it is not accessible one year, the swift might never return.

Loss of nesting sites through renovation can be mitigated through the inclusion of nest-boxes or "swift bricks". Swifts need an unobstructed flight path in front of their nest, which needs to be situated at a minimum height above ground level of 4-7 meters, with little exposure to direct sunlight. A method to attract swifts is to play swift calls near potential nests.

Actions
Specific actions targeting swifts

Action RS01 – Create advisory note for LA planning officers with advice on when to consider swifts in a development and how to mitigate loss.

Action RS02 – Compile and provide an advisory note for LA /landowners on the identification/ maintenance/ creation and enhancement of swift nests on buildings and disseminate.

Water Vole

Aims:

- To conserve water vole population in London Borough of Richmond upon Thames (LBRuT) and to increase their range and numbers for the benefit of current and future generations.

Specific Factors Affecting the Species

Fragmentation and isolation of habitats and populations
This is viewed as being a major factor of concern. Loss of wetland habitats has reduced populations and left them more vulnerable to other threats such as predation. Development, land drainage, low water levels, river engineering and changes in waterside management have all destroyed habitat. Intensive grazing and trampling by livestock along watercourses also contributes greatly to habitat loss in some of the more rural boroughs, but equally might apply to LBRuT where the impact of both livestock and deer herds should be considered.

Actions
Specific actions for water voles:

Action VW06 – Ensure sympathetic water vole friendly land management is in practice on suitable sites, which includes an appropriate level of safeguarding control of mink

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Pollinators

Aims:

- Ensure the needs of pollinators are represented in local plans, policy and guidance.
- Understand current pollinator habitat within the London Borough of Richmond upon Thames (LBRuT).
- Protect, increase and enhance the amount of pollinator habitat in LBRuT. • Encourage appropriate management of pollinator habitat.
- Increase awareness of pollinators and their habitat needs with local residents, businesses and other landowners.

Specific factors affecting pollinator populations

Habitat loss
The most significant cause of decline is the loss and degradation of habitats which provide food, shelter and nesting sites for pollinators. The loss of wildflower–rich grasslands is one of the most important issues. Over 3 million hectares of these habitats have been lost in England alone since the 1930s, the loss being attributed to more intensive farming and urban/industrial development.

Fragmentation of habitat
Remaining habitat is being lost due to development of brownfield sites and demand for housing.

Action
Specific actions targeting pollinators

Action PS03 – Within the planning process ensure greenspaces in new developments are made pollinator friendly

Action PS06 – Recognise and capitalise on opportunities to create pollinator friendly habitats as part of all appropriate new development.

Action PS12 – Work with local landowners to develop a balanced approach to landscape management to benefit pollinators

Action PS17 – Advise landowners of appropriate management for their existing and new meadows.

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The New London Plan, 2021

Relevant policies from The New London Plan are included below.

Policy G1 – Green Infrastructure

A. London's network of green and open spaces, and green features in the built environment should be protected and enhanced. Green infrastructure should be planned, designed and managed in an integrated way to achieve multiple benefits.

B. Boroughs should prepare green infrastructure strategies that identify opportunities for cross-borough collaboration, ensure green infrastructure is optimised and consider green infrastructure in an integrated way as part of a network consistent with Part A.

C. Development Plans and area-based strategies should use evidence, including green infrastructure strategies, to:

1. identify key green infrastructure assets, their function and their potential function
2. identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.

D. Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network.

Policy G2 – London's Green Belt

A. The Green Belt should be protected from inappropriate development:

1. development proposals that would harm the Green Belt should be refused
2. the enhancement of the Green Belt to provide appropriate multi-functional uses for Londoners should be supported.

B. The extension of the Green Belt will be supported, where appropriate. Its de-designation will not be supported.

Policy G3 Metropolitan Open Land

A. Metropolitan Open Land (MOL) is afforded the same status and level of protection as Green Belt:

1. Development proposals that would harm MOL should be refused. MOL should be protected from inappropriate development in accordance with national planning policy tests that apply to the Green Belt.
2. boroughs should work with partners to enhance the quality and range of uses of MOL.

B. The extension of MOL designations should be supported where appropriate. Boroughs should designate MOL by establishing that the land meets at least one of the following criteria:

1. it contributes to the physical structure of London by being clearly distinguishable from the built-up area
2. it includes open air facilities, especially for leisure, recreation, sport, the arts and cultural activities, which serve either the whole or significant parts of London
3. it contains features or landscapes (historic, recreational, biodiverse) of either national or metropolitan value
4. it forms part of a strategic corridor, node or a link in the network of green infrastructure and meets one of the above criteria.

C. Any alterations to the boundary of MOL should be undertaken through the Local Plan process, in consultation with the mayor and adjoining boroughs. MOL boundaries should only be changed in exceptional circumstances when this is fully evidenced and justified, ensuring that the quantum of MOL is not reduced, and that the overall value of the land designated as MOL is improved by reference to each of the criteria in Part B.

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A. Development Plans should:

1. undertake a needs assessment of all open space to inform policy. Assessments should identify areas of public open space deficiency, using the categorisation set out in Table 8.1 of The Intend to Publish London Plan as a benchmark for the different types required.140 Assessments should take into account the quality, quantity and accessibility of open space
2. include appropriate designations and policies for the protection of open space to meet needs and address deficiencies
3. promote the creation of new areas of publicly-accessible open space particularly green space, ensuring that future open space needs are planned for, especially in areas with the potential for substantial change
4. ensure that open space, particularly green space, included as part of development remains publicly accessible.

B. Development proposals should:

1. not result in the loss of protected open space 2 where possible create areas of publicly accessible open space, particularly in areas of deficiency

Policy G5 Urban greening

A. Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage

B. Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in Table 8.2 of the Intend to Publish London Plan, but tailored to local circumstances. In the interim, the mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development (excluding B2 and B8 uses).

C. Existing green cover retained on site should count towards developments meeting the interim target scores set out in (B) based on the factors set out in Table 8.2.

Policy G6 Biodiversity and access to nature

A. Sites of Importance for Nature Conservation (SINCs) should be protected.

B. Boroughs, in developing Development Plans, should:

1. use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks
2. identify areas of deficiency in access to nature (i.e., areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them
3. support the protection and conservation of priority species and habitats that sit outside the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans
4. seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context
5. ensure designated sites of European or national nature conservation importance are clearly identified and impacts assessed in accordance with legislative requirements.

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National Planning Policy Framework, 2021

Section 15 – Conserving and enhancing the natural environment

174. Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

175. Plans should: distinguish between the hierarchy of international, national, and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

176. Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited. while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.

177. When considering applications for development within National Parks, the Broads and Areas of Outstanding Natural Beauty, permission should be refused for major development60 other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy.
b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and
c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.

178. Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 172), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate unless it is compatible with its special character.

Appendix D – Biodiversity Policy

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Habitats and Biodiversity

179. To protect and enhance biodiversity and geodiversity, plans should:
   a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
   b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

180. When determining planning applications, local planning authorities should apply the following principles:
   a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
   b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
   c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
   d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

181. The following should be given the same protection as habitats sites:
a) potential Special Protection Areas and possible Special Areas of Conservation;
b) listed or proposed Ramsar sites; and
c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

182. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects) unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Appendix E – Artificial Lighting for Bats

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Illuminating a bat roost can cause disturbance[5] and this may result in the bats deserting the roost or even becoming entombed within it[6]. Light falling on a roost access point will at least delay bats from emerging and this shortens the amount of time available to them for foraging[7]. In addition, the associated flightpath to and from the access point is just as valuable and vulnerable as the roost itself. Severing a key flightpath some distance from the roost could cause desertion in its own right. In addition to causing disturbance to bats at the roost, artificial lighting can also affect the feeding behaviour of bats. There are two aspects to this. One is the attraction that light from certain types of light sources has to a range of insects; the other is the presence of lit conditions posing a barrier to movement.

Sources of lighting which can disturb bats are not limited to roadside or external security lighting, but can also include light spill via windows, permanent but sporadically operated lighting such as sports floodlighting, and in some cases car headlights. Additionally, glare (extremely high contrast between a source of light and the surrounding darkness – linked to the intensity of a luminaire) may affect bats over a greater distance than the target area directly illuminated by a luminaire and must also be considered on your site.

Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires.

All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used:

- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats[8].
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
- The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered. However, this often comes at a cost of unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition, and their use should only be as directed by the lighting professional.
- Column heights should be carefully considered to minimise light spill.
- Only luminaires with an upward light ratio of 0% and with good optical control should be used – See ILP Guidance for the Reduction of Obtrusive Light.
- Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
- Any external security lighting should be set on motion-sensors and short (1min) timers.

[5] Downs, N. C. et al (2003) 'The effects of illuminating the roost entrance on the emergence behaviour of *Pipistrellus pygmaeus*', *Biological Conservation*, 111, 247–252.

[6] Packman, C., Zeale, M., Harris, S. & Jones, G. (2015) *Management of bats in churches – a pilot*, English Heritage Research Project: 6199.

[7] Boldogh, S., Dobrosi D. & Samu P. (2007) 'The effects of the illumination of buildings on house-dwelling bats and its conservation consequences', *Acta Chiropterologica*, 9, 527–534.

[8] Stone, E.L., Jones, G. & Harris, S. (2012) 'Conserving energy at a cost to biodiversity? Impacts of LED lighting on bats', *Glob. Change Biol.*, 18, 2458–2465.

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- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

For further information on designing artificial lighting for bats, please see the Institution of Lighting Professionals' and Bat Conservation Trust's Guidance Note 08/18.[9]

[9] ILP and Bat Conservation Trust (2018) *Bats and artificial lighting in the UK: Bats and the Built Environment series*, Guidance Note 08/18, Warwickshire: Institution of Lighting Professionals.