temple

Creating sustainable futures

Sipson Garden Centre, Sipson, London, UB7 0HW

Preliminary Ecological Appraisal

Report for Bidwells

Job Number	T10166			
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Contents

Executive Summary

Temple was commissioned in October 2023 by Bidwells to carry out a Preliminary Ecological Appraisal (PEA), comprising a Phase 1 habitat survey, protected species assessment and ecological evaluation of land at Sipson Garden Centre, Sipson Road, Sipson, West Drayton, London, UB7 0HW (henceforth referred to as 'the Site'). The PEA is required in support of detailed planning application for a 'Centre of Excellence for Airside Support Vehicles'. The main findings are as follows:

- The Site comprised of the grounds of the former Sipson Garden centre, which consisted of mown grassland, tall ruderal habitat, concrete parking hardstanding, lines of trees, dense scrub and greenhouses.
- The Site is not subject to any statutory or non-statutory nature conservation designations.
- The Site is within 4.9km of the South-west London Waterbodies Ramsar and Special Protection Area. A Habitat Regulations Assessment may be required in order to identify if works are likely to impact these internationally designated sites.
- The Site is within the Impact Risk Zone of three Sites of Scientific Interest (SSSI); Stainesmoor SSSI, Wraysbury Reservoir SSSI and Wraysbury and Hythe End Gravel Pits SSSI. Consultation with Natural England may be required to determine if further mitigation is required to prevent works degrading the three SSSI.
- **Roosting Bats –** Building B3 was assessed as having low suitability for roosting bats. A single dusk emergence survey has been recommended to assess if this building is being used by roosting bats.
- **Breeding birds -** The Site contained buildings, trees and dense scrub with high suitability for nesting birds. Works should be carried out outside the nesting bird season; nesting bird season runs March-August inclusive. Any works carried out during this period should be preceded by a nesting bird check, completed by a suitably qualified ecologist. This check is valid for 48 hours and may need to be repeated if works exceed this timescale.

- **Reptiles –** The Site contained a variety of habitats suitable for common reptile species. Reptile surveys have been recommended before work starts.
- **Priority species -** The desk study returned a large number of records for stag beetle and hedgehogs. A precautionary method of works has been recommended when removing vegetation to prevent any accidental harm to hedgehogs. Habitat creation has been recommended to enhance the Sites suitability for stag beetles.
- **Other wild mammal species –** The Site was being used by foxes and rabbits. It is illegal to crush or asphyxiate mammals under the mammal act. If mammal holes are at risk of being collapsed or destroyed an ecologist must be consulted who will confirm appropriate mitigation measures. Excavations should be covered overnight to prevent trapping animals.

Where possible on the basis of information available to date, recommendations to enhance the importance of the Site for biodiversity in accordance with the Environment Act 2021 and national and local planning policies, have been provided. These comprise of the creation of green roofing, green walls, hedgerows, stag beetle habitats, hedgehog friendly fencing, a sustainable urban drainage system, the planting of new trees and the implementation of a low impact lighting strategy.

1 Introduction

BACKGROUND TO COMMISSION

1.1 Temple was commissioned by Bidwells in October 2023 to carry out a Preliminary Ecological Appraisal (PEA) of land at Sipson Garden Centre, Sipson Road, Sipson, West Drayton, London, UB7 0HW. The appraisal was carried out to provide ecological information to inform a detailed planning application for a proposed centre to service airport support vehicles. This appraisal considers land within the planning application site boundary (henceforth referred to as 'the Site') as indicated on the plan provided by the client (Bidwells).

SCOPE OF THE REPORT

1.2 The aim of this appraisal is to provide baseline ecological information about the Site. This will be used to identify any potential ecological constraints associated with the proposed development and/or to identify the need for additional survey work to further evaluate any impact that may risk contravention of legislation or policy relating to protected species and nature conservation. Where possible, this report outlines any avoidance, mitigation, compensation and enhancement measures as may be required to ensure compliance with legislation and policy. Although enhancement measures may be used to achieve a net gain in biodiversity in line with national and local planning policies, this does not comprise a formal Biodiversity Net Gain assessment and no metric calculations have been made.

1.3 This appraisal is based on the following information sources:

- a desk study of the Site and land within a 2km surrounding radius;
- a search for international wildlife sites within a 15km surrounding radius;
- a UKHab survey with a translation to Phase 1 habitat (JNCC, 2010) of the Site to identify and map the habitats present;
- a Species Assessment of the Site to identify features with potential to support legally protected and/or notable species including those defined by Section 41 of the NERC Act 2006 as Species of Principal Importance;

- a Preliminary Roost Assessment (PRA) of all buildings and trees on the Site for roosting bats; and,
- an evaluation of the Site's importance for nature conservation.

1.4 This appraisal has been prepared with reference to best practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2017) and as detailed in British Standard 42020:2013 *Biodiversity - Code of Practice for Biodiversity and Development* (BSI, 2013).

1.5 The survey, assessment and report were conducted and written by Jordan Whitcombe (BSc), an experienced ecologist with three years experience who is trained and competent in carrying out Phase 1 habitat surveys and protected species assessment.

1.6 A habitat map of the Site is presented in Appendix 1 with a botanical species list of plants recorded in Appendix 2. Photographs of the site are presented in Appendix 3 and Habitat Condition Assessment forms (in accordance with Panks *et al.,* 2022) are replicated in Appendix 4.

SITE CONTEXT AND STATUS

1.7 The Site is approximately 7ha in size and is centred on Ordnance Survey National Grid reference TQ 07330 78233. The Site consists of the grounds of the former Sipson Garden Centre, north of the Village of Sipson. It is surrounded by the M4 to the East, an industrial estate to the north, Sipson Road to the west and residential housing to the south. It is approximately 450m south of the town of West Drayton and 1.6km north of Heathrow Airport. The surrounding landscape is a mix of urban and industrial use, with some isolated agricultural fields to the west. There are a number of reservoirs near the Site, including Saxon Lake 1.4km west, Old Slade 3km west and a number of unknown reservoirs 2.3km north-west. Other habitats around the Site include Harmondsworth Moor Park 2.15km west and Cranford Park 2km east.

DEVELOPMENT PROPOSALS

1.8 The development proposals for the Site, based on current plans provided by the client is to redevelop the existing disused Sipson Garden Centre and surrounding land into a new 'Centre of Excellence for Airside Support Vehicles'. This would be a new facility to service a new fleet of electric vehicles used at Heathrow Airport. This would include;

- A service area which includes seven service bays and one racked storage bay (1,003m^2);
- Ancillary office space and other uses of 446.9m^2; and
- Hard standing/parking of approximately 0.57ha.

1.9 Works will involve the demolition of the security hut (Building B1), greenhouse (Building B2) and wooden barn/shed type building (Building B3).

1.10 The proposals also include landscaping that includes the planting of new trees, hedgerows and installation of green roofs.

RELEVANT LEGISLATION AND PLANNING POLICY

1.11 The following key pieces of nature conservation legislation are relevant to this appraisal. A more detailed description of legislation is provided in Appendix 5:

- The Conservation of Habitats and Species Regulations 2017 (as amended) (commonly referred to as the Habitats Regulations);
- Wildlife and Countryside Act 1981 (as amended);
- Natural Environment and Rural Communities Act 2006;
- The Environmental Act 2021;
- Protection of Badgers Act 1992; and
- Wild Mammals (Protection) Act 1996.

1.12 The National Planning Policy Framework (The Department of Levelling Up, Housing and Communities, 2023) and The Environment Act 2021 requires local authorities to

avoid and minimise impacts on biodiversity and to provide net gains in biodiversity when taking planning decisions. In addition, in England, under Section 40 of the Natural Environment and Rural Communities Act 2006, all public bodies are required to have regard to biodiversity conservation when carrying out their functions.

1.13 Other planning policies at the local level of relevance to this development include the Hillingdon Local Plan and the Hillingdon Unitary Development Plan. Further information is provided in Appendix 5.

NOMENCLATURE

1.14 A botanical species list, including scientific names in accordance with Stace (2019), is provided in Appendix 2. Common names of species, in accordance with the Natural History Museum Species Dictionary (Natural History Museum (2022), are used throughout this report with scientific names given at first mention only for fauna.

2 Methodology

DESK STUDY

2.1 The following data sources were reviewed to provide information on the location of statutory designated sites[1], non-statutory designated sites[2], legally protected species[3], Species and Habitats of Principal Importance[4], and other notable species[5] and habitats[6] that have been recorded within a 2km radius of the Site:

- Greenspace Information for Greater London CIC, the local Biological Records Centre, principally for species records and information on non-statutory sites;
- A previous Preliminary Ecological Appraisal Report undertaken in 2018 (John Wenman Ecological Consultancy, 2018).
- MAGIC (http://www.magic.gov.uk/) - the Government's on-line mapping service; and
- Ordnance Survey mapping and publicly available aerial photography.

2.2 A summary of key records provided by the desk study is presented in Section 3 of this report. All records have been used to inform the assessment of the potential for protected or otherwise notable species to be present at the Site to provide a preliminary view of the Site's ecological importance but these are not presented in full in the report.

1 **Statutory designations** include Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites (referred to collectively as National Site Network sites in England), National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR).

2 **Non-statutory sites** are designated by local authorities (e.g. Sites of Importance for Nature Conservation or Local Wildlife Sites).

3 **Legally protected species** include those listed in Schedules 1, 5 or 8 of the Wildlife and Countryside Act 1981; Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended); or in the Protection of Badgers Act 1992.

4 **Species/Habitats of Principal Importance** are those defined by Section 41 of the Natural Environment and Rural Communities Act, 2006.

5 **Notable species** include Species of Principal Importance under the Natural Environment and Rural Communities Act 2006; Local Biodiversity Action Plan (LBAP) species; Birds of Conservation Concern (Stanbury *et al.* 2021); and/or Red Data Book/nationally notable species (JNCC, undated).

6 **Notable habitats** include Habitats of Principal Importance under the Natural Environment and Rural Communities Act, 2006; those included in an LBAP; Ancient Woodland Inventory sites; and Important Hedgerows as defined by the Hedgerow Regulations 1997.

HABITAT SURVEY

2.3 A habitat survey of the Site was carried out on the 13th of November 2023, in weather conditions of 11°C, 8/8 oktas cloud cover, no wind and heavy rain throughout the duration of the survey. It covered the entire Site including boundary features.

2.4 Habitats were described and mapped following the standard UK Habitat Survey methodology (UK Habitat Classification Working Group, 2018) and marked on a paper base map and subsequently digitised using ESRI ArcGIS software. Habitats were also assessed against descriptions of Habitat of Principal Importance as set out by the JNCC (BRIG, 2008)[7] where appropriate. Habitats were also converted into their Phase 1 habitat equivalent (JNCC, 2010).

2.5 The condition of habitats on the Site have been recorded in line with the Biodiversity Net Gain 4.0 Technical Supplement (Panks *et al,*. 2022) with condition assessment forms presented in Appendix 4.

2.6 Records for dominant and notable plants are provided, as are incidental records of birds and other fauna noted during the course of the habitat survey. The latter have been used to justify the potential presence of important ecological features where applicable.

2.7 The Site was also surveyed for the presence of invasive plant species as defined by Schedule 9 of the Wildlife and Countryside Act 1981 (as amended); however, detailed mapping of such species is beyond the scope of this commission and locations on the habitat plan are indicative only.

PROTECTED AND INVASIVE SPECIES ASSESSMENT

2.10 The suitability of the Site for legally protected species was assessed on the basis of relevant desk study records[8] combined with field observations from the habitat

[7] Collection of data required to confirm that certain habitats (including rivers and ponds) meet criteria for HPI is beyond that obtained during a UKHab habitat survey. In these cases, the potential for such habitats to meet relevant criteria is noted but further surveys to confirm this assessment may be recommended.

[8] Primarily dependent on the age of the records, distance from the site and types of habitats at the site.

survey. The likelihood of the habitat(s) supporting protected and/or notable species was ranked on a scale from 'negligible' to 'present' as described in Table 2.2.

2.11 The assessment of habitat suitability for protected or notable species was based on professional judgement drawing on experience of carrying out surveys of a large number of urban and rural sites and best practice survey guidance.

Table 2.2: Protected species assessment

Category	Description
Present	Presence confirmed by the current survey or by recent and/or desk study records.
High	Habitat present provides all of the known key requirements for a given species/species group. Local records are provided by desk study. The Site is within or close to a national or regional stronghold for a particular species. Good quality surrounding habitat and good connectivity.
Moderate	Habitat present provides some of the known key requirements for a given species/species group. Several desk study records and/or the Site are within known national distribution and with suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, barriers to movement and disturbance.
Low	Habitat present is of relatively poor quality for a given species/species group. Few or no desk study records. Presence cannot be discounted on the basis of national distribution, nature of surrounding habitats or habitat fragmentation.
Negligible	Habitat is either absent or of very poor quality for a particular species or species group. No desk study records. Surrounding habitat unlikely to support wider populations of a species/species group. Outside or peripheral to the known range of a species.

2.12 The findings of this assessment help establish the need for protected species surveys. Surveys may be required where a site is judged to be of suitability for a particular species/ species group even if that suitability is deemed to be Low - this is particularly the case where there the risk of contravening the relevant conservation legislation is unknown or cannot be quantified on the basis of the information available. However, in some cases there may be opportunities to ensure compliance with the legislation without further survey through precautionary measures prior to and during construction.

PRELIMINARY ROOST ASSESSMENT – BUILDINGS

2.13 The PRA consisted of an external inspection of all features/surfaces of the buildings/structures and an internal inspection where access allowed. The survey and assessment was undertaken by Jordan Whitcombe, an experienced ecologist with five years' commercial bat survey experience and who possesses a Natural England Level 2 Class Licence for bats (licence number 2023-11117-CL18-BAT).

2.14 The aim of the surveys outlined below is to establish the suitability of the Buildings B1, B2 and B3 within the site to support bat roosts. The suitability of structures to support roosting bats, ranging from negligible to the presence of a confirmed roost, is assessed using the findings of the survey and the desk study. The following criteria were used to determine the suitability of the buildings for roosting bats (taken from Collins, 2023):

- Negligible – While presence cannot be absolutely discounted there were no significant visible features that could be used by bats for roosting.

- Low – A structure with one or more potential roost sites that could be used by individual bats opportunistically; however, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain Potential Roost Features (PRFs) but with none seen from the ground or features seen with only very limited roosting potential.

- Moderate – A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).

- High – A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

- Confirmed roost[9] – Evidence indicates a building or other structure is used by bats, for example:

    - bats seen roosting or observed flying from a roost or freely in the habitat;

    - droppings, carcasses and feeding remains indicative of a roost; and

    - bats heard 'chattering' inside on a warm day or at dusk.

2.15 The gathered information has been used to inform whether further survey is required in the form of dusk emergence and/or dawn re-entry surveys to fully understand how bats are using the site and the potential impacts of the proposals on bats, or whether an assessment can be made on the basis of Buildings B1, B2 and B3 inspection alone.

Internal and External Inspections

2.16 The PRA was carried out on the 13th of November 2023 in weather conditions 11°C, 8/8 oktas cloud cover, no wind and heavy rain throughout the duration of the survey.

2.17 The survey comprised an external inspection of Buildings B1, B2 and B3 within the site, involving a detailed search of all accessible architectural features for bat droppings, urine staining, scratch marks, staining around suitable crevices and feeding remains. Windowpanes and other external surfaces were checked for droppings or other secondary evidence. This included external features, such as

[9] Adapted from Cowan, A. (2006) Trees and Bats. Guidance Notes 1. Arboricultural Association, Cheltenham

soffits and fascias, roof lining, brickwork and window casements. Any features that could potentially provide access into internal areas (such as cavity walls) were noted.

2.18 An internal inspection of Buildings B1, B2 and B3 was completed, whereby the surveyor walked through the interior of the building in logical progression. All surfaces, including floor areas, were checked for discarded feeding remains and bat droppings. A high-powered torch was shone along the interior of the roof, where appropriate, to look for bats, staining and droppings.

2.19 The survey methodology followed best practice guidelines (Reason and Wray, 2023; Collins, 2023). Equipment used during the building inspection included a hand-held LED torch and binoculars.

2.20 Finally, all buildings/structures were inspected for evidence of/potential for breeding and/or roosting birds.

SITE EVALUATION

2.21 Where sufficient baseline data are available, the Site's ecological importance has been evaluated broadly following guidance issued by CIEEM (CIEEM, 2018) which ranks the nature conservation importance of a site according to a geographic scale of reference: international, national, regional (London), metropolitan, county, vice-county or other local authority-wide area (The London Borough of Hillingdon); and of importance at the zone of influence of the Site only. In evaluating the nature conservation importance of the Site, the following factors were considered: nature conservation designations; species/habitat rarity; naturalness; fragility and connectivity to other habitats. Where no importance has been assigned this is due to insufficient information.

2.22 An assessment of likely ecological impacts has been undertaken in accordance with CIEEM guidelines (CIEEM, 2018) only where clear evidence is available to substantiate and justify the findings. In the absence of such evidence, the ecological feature is merely identified as a potential constraint to development. Reference is also made to Section 6 of the Bat Mitigation Guidelines (Reason and Wray, 2023) and

Natural England's standing advice and includes a summary of the scale of impact according to bat roost type and development effect, if known.

2.23 Where ecological constraints to development are identified, further survey requirements and/or mitigation measures that are proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development are described. In addition, in accordance with the Environment Act 2021, National Planning Policy Framework (NPPF) and local/regional planning policies, opportunities to enhance or create benefits for wildlife are provided where this is possible based on the information available to date. These measures may be appropriate for the attainment of net gains in biodiversity, although this assessment does not provide a formal measure of Biodiversity Net Gain.

DATA VALIDITY AND LIMITATIONS

2.24 Every effort has been made to provide a comprehensive description of the Site; however, the following limitations apply to this assessment.

- The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the Site. It should not be taken as providing a full and definitive survey of any protected species group. Additional surveys may be recommended if on the basis of the preliminary assessment or during subsequent surveys it is considered reasonably likely that protected species may be present and potentially affected by the proposed development.
- The ecological evaluation is preliminary and may change subject to the findings of further ecological surveys (should these be required.
- Even where data for a particular species group are provided in the desk study, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest, the area may simply be under-recorded.
- Where only four figure grid references are provided for protected species by third parties, the precise location of species records can be difficult to determine and they could potentially be present anywhere within the given

1km x 1km square. Equally, six figure grid references are accurate to the nearest 100m only.

- The Phase 1 habitat survey does not constitute a full botanical survey or provide accurate mapping of invasive plant species.
- Bats are highly mobile animals and can move roost sites both within and between years. Where surveys are not spread throughout the bat active season is possible that roost sites that are used for a limited time only could be missed, and the detection of small numbers of crevice dwelling species from an inspection alone may remain problematic, particularly where droppings accumulate within an inaccessible void such as a cavity wall or above the roof lining. Where visible and undisturbed, however, evidence of bats inside a building is likely to be detectable throughout the year.
- Ecological survey data are typically valid for 12-18 months unless otherwise specified (CIEEM, 2019). Data used to support a bat mitigation licence application to Natural England must be from the most recent survey season; depending on the timing of the application, this may mean from the same or previous year.
- The heavy rain during the survey made note taking difficult. Where this occurred, pictures of the Site were taken as well as voice notes. No ecological features or constrains were missed due to the weather conditions.
- An internal inspection of building B3 could not be completed. An internal inspection of this building has been recommended to precede the dusk emergence survey being recommended.

2.25 Despite these limitations, it is considered that this report accurately reflects the habitats present, their biodiversity importance and the potential of the Site to support protected and otherwise notable species.

3 Results and Evaluation

DESIGNATED SITES

Statutory designated nature conservation sites

3.1 The Site is not subject to any statutory nature conservation designations.

3.2 The Site is within 15km of five internationally important sites (Table 3.1).

3.3 The Site is within the impact risk zones (IRZ) of three Sites of Special Scientific Interest (SSSI). IRZs are intended as a tool for local planning authorities to identify when specific types of development, such as industrial developments, may require consultation with Natural England regarding their potential impact on statutory designated sites.

Table 3.1: Statutory Designated Sites

Site Name	Distance from Site and orientation	Ecological Importance	Qualifying features/Description	Potential constraint
South-west London Waterbodies Ramsar and Special Protection Area (SPA)	4.9km south-west	This site contains species of international importance.	This Site consists of a series of open water bodies with associated mesophile grassland, improved grassland and broadleaved deciduous woodland. It hosts the Annex II species northern shovler and Gadwall.	Yes – a Habitats Regulations Assessment (HRA) may be required.
Windsor Forest and Great Park Special Area of Conservation (SAC)	10.55km south-west	This site contains habitats and species of international importance.	This Site is a royal park associated with the Windsor Castle Estate. It contains the Annex I habitats 'Old acidiophilous oak woods with Quercus robur on	No

			sandy plains' and 'Atlantic acidophilous beech forests with Ilex and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae or Ilici-Fagenion*)'. It also contains the rare violet click beetle (*Limoniscus violaceus*).	
Richmond Park SAC	12.1km south-east	This site contains at least one species of international importance.	Important site, with many areas of woodland, water bodies, and grassland. It is designated for hosting a population of stag beetle.	No
Burnham Beeches SAC	13km north-west	This site contains at least one habitat of international importance.	This site is both a SAC and a part of a National Nature Reserve. The Site is a woodland famous for its ancient, pollarded trees. It contains the Annex I habitat 'Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (*Quercion robori-petraeae or Ilici-Fagenion*)'.	No
Staines Moor SSSI	4.55km west	This Site contains habitats and species of national importance.	This site follows a small section of the River Colne. It contains alluvial meadows, scrub, woodland and three reservoirs. These habitats supports a variety of rare	Yes – The Site is within the IRZ. Consultation with Natural England may be required.

			terrestrial and aquatic flora as well as more than 130 species of birds, 60 species of molluscs and some of the oldest anthills in Britian.	
Wraysbury Reservoir SSSI	4.75km west	This site contains species of national importance	This site consists of an artificial reservoir which supports nationally important wintering birds, including cormorant (*Phalacrocorax carbo*), great crested grebe (*Podiceps cristatus*) and shovler (*Anas clypeata*).	Yes – The Site is within the IRZ. Consultation with Natural England may be required.
Wraysbury and Hythe End Gravel Pits SSSI	5km south-west	This site contains species of national importance	This site contains four gravel pits which have since become flooded and have become important standing bodies of water. The site also contains grassland, scrub and woodland. The site supports populations of nationally important waterfowl and rare invertebrate species, such as riffle beetle (*Elmidae* sp.) and white legged damselfly (*Platycnemis pennipes*).	Yes – The Site is within the IRZ. Consultation with Natural England may be required.

Non-statutory designated nature conservation sites

3.4 The Site is not subject to any non-statutory nature conservation designations. Nine non-statutory sites designated as Sites of Importance for Nature Conservation (SINC) are present within 2km of the Site (see Table 3.2).

Table 3.2: Non-Statutory Designated Site

Site Name	Grade	Distance from Site and orientation	Ecological Importance	Qualifying features/ Description	Potential constraint
London's Canals	Metropolitan	1.7km north	This site contains species of local importance.	This site hosts a range of rare aquatic flora, including narrow-leaved water plantain, ridgid hornwood, shining pondweed as well as a variety of fish, dragonflies and water fowl. This Site has been designated as it is an important local amenity to provide wildlife in a heavily built up area.	No
Carp Ponds and Broads Dock	Metropolitan	1.15km north	This site contains species of local importance.	This site contains three ponds and a small length of a canal which host a variety of London rare species, such as great yellow-cress, lesser water-parsnip and marsh-marigolds. These habitats and species support a large diversity of aquatic invertebrates species and kingfishers.	No
Lower Colne	Metropolitan	275m west	This site contains species of both local and national importance.	Part of the wider River Colne system, this is a chalk stream that feeds water meadows nearby. These habitats support locally rare invertebrate species as well as the	No

				nationally rare river wort drop, unbranched bur-reed, great yellow crest and bladder sedge. It also contains London's only population of pennyroyal.	
Wall Garden Farm Sand Heaps	Borough I	400m east	This site contains species of national importance.	This former industrial site contains sand heap that supports a large population of sand martins. Successional ruderal habitat also provides a home for skylarks and aerial plankton.	No
Iron Bridge Road Railsides (formerly The Piggeries)	Borough II	1.7km north	This site contains at least one habitat of local importance.	This site is a railway lineside. It was grazed but has since largely succeeded as dense scrub with extensive bramble, ivy and ragwort cover.	No
St George's Meadow, Southlands Arts Centre	Borough II	1.75km north-west	This site contains species and habitats of local importance.	This site is within the grounds of the Southlands Art Centre. It contains a range of habitats, including species rich grassland, hedges, ponds marshy/swampy areas. It hosts a range of plant species, such as yellow iris, meadow leaved cranesbill and branched burweed.	No

Stockley Business Park Lakes and Meadows	Borough II	1.8km north-east	This site contain species and habitats of local importance.	This site consists of the grounds of a business park that contains a variety of habitats, such as ponds, grassland, scattered trees and scrub. It is popular for water fowl, such as mallard, coot and moorhen as well as invertebrates such as ruddy darter dragonfly and giant pondskater.	No
Stockley Road Rough	Local	1km north	This site contains habitats and species of local importance.	This site is a stretch of land between the A408 (Stockley Road) and golf complex. It contains dense scrub, tall herbs and grass. It contains a variety of plant species, such as hemlock, yarrow and hawthorn.	No
Field Close Open Space Roughs	Local	1.35km south-east	This site contains habitats and species of local importance.	This is an area set aside for wildlife with rough grassland, scrub and ruderal habitats. It hosts a variety of plant species, such as knapweed, hawthorn and hazel.	No

Habitat inventories and landscape-scale conservation initiatives

Ancient woodland

3.5 There were no records of ancient woodland within a 2km radius of the Site according to the Ancient Woodland Inventory (Natural England, 2022).

Habitats of Principal Importance

3.6 The Site is within 2km of two priority habitats, traditional orchard and deciduous woodland. The nearest priority habitat is an unnamed area of deciduous woodland 150m north of the Site (Natural England, 2022).

UKHAB SURVEY

Site character

3.7 The Site consisted of the ground of the former Sipsons Garden Centre that was being used as a servicing area for delivery vehicles as well as storage area. It is within a rural area of north-west London, with a landscape that contains a mix of industrial and agricultural use. The majority of the Site was covered by a mosaic of grassland and ruderal habitats, with pockets of dense scrub and scattered trees. Built habitats were also present, including three buildings; a security hut, greenhouses and a wooden bar/shed type building and associated concrete and tarmac hardstanding.

3.8 UKHabitat types are mapped in Appendix 1, Figure 2 and areas are given in Table 3.3 below alongside their JNCC Phase 1 equivalent and an assessment of habitat condition in accordance with the Biodiversity Net Gain 4.0 Technical Supplement (Panks *et al*,. 2022).

3.9 A description of dominant and notable species and the composition of each habitat is provided below, with a species list (including all scientific names) provided in Appendix 2. Photographs are located in Appendix 3. The habitat condition forms are presented in full in Appendix 4.

Table 3.3: Habitat Areas

Phase 1 Habitat	UKHab Primary Habitat	UKHab Secondary Habitat	UKHab Tertiary habitat	Condition	Extent (ha)	%
C3.1 – Tall ruderal	G4 – Modified grassland	81 – Ruderal or ephemeral	N/A	Moderate	1.41	48.6
M1 - Hardstanding	U1B – Developed land and sealed surfaces	N/A	N/A	N/A	0.69	23.8
A2.1 – Dense/ continuous scrub	H3D – Bramble scrub	N/A	N/A	Moderate	0.308	10.6
B2.2 – Neutral semi-improved grassland	G4 – Modified grassland	N/A	N/A	Moderate	0.284	9.8
J3.6 - Buildings	U1B5 – Buildings	N/A	N/A	N/A	0.105	3.6
C3.1 – Tall ruderal	G4 – Modified grassland	16 – Tall forbs	N/A	Moderate	0.102	3.5
3.1 – Scattered trees	G4 – Modified grassland	16 – Tall forbs	200 – Trees	N/A	N/A	N/A
3.1 – Scattered trees	G4 – Modified grassland	N/A	200 - Trees	N/A	N/A	N/A

Habitat Description

U1B – Developed land and sealed surfaces

3.10 A large part of the Site contained concrete and tarmac hardstanding (Appendix 3., Photograph 1.). Parts of this hardstanding had encroachment from bramble, elder and ivy.

U1B5 – Buildings

3.11 The Site contained three buildings; a security hut at the entrance of the Site (Appendix 3., Photograph 5.), a greenhouse (Appendix 3., Photograph 6.) and an old wooden bar/shed type building (Appendix 3., Photograph 7.).

G4 – Modified grassland

3.12 There were two distinct patches of grassland in the west of the Site (Appendix 3., Photograph 2.). These areas were regularly mown and subject to grazing from rabbits. The species identified within this habitat were dominant cocksfoot, abundant lesser burdock, cow parsley, occasional perennial rye grass, clover, Yorkshire fog, cleavers, meadow buttercup, yarrow with rare common plantain, speedwell sp. common daisy and common dandelion.

3.13 One of these patches contained scattered trees of Lawson cypress and holm oak.

16 – Tall Forbs

3.14 A dense patch of nettle was found in the north-west of the Site. This patch was dominated by nettle with occasional teasel, white nettle, lesser burdock, common dock and rare buddleia.

81 – Ruderal or Ephemeral

3.15 The majority of the Site consisted of a large patch of ruderal habitat (Appendix 3., Photograph 3). This was largely unmanaged and was subject to heavy poaching from parked vehicles. Species include abundant lesser burdock, frequent bitter dock, common tansy, cow parsley, occasional creeping buttercup, meadow buttercup, ribwort plantain, wild radish, knapweed, common sowthistle, Guernsey fleabane, common tansy, common ragwort, ground ivy rare common mugwort, foxglove, hawkweed oxtongue, common mallow, spear thistle, goats rue and an unknown aster species.

H3D – Bramble scrub

3.16 There were dense patches of scrub in the north-east, south-west and south-east of the Site. These patches were largely unmanaged and contained encroaching English elm, hawthorn, rowan, sycamore and an unknown willow species. This habitat was dominated by bramble with occasional blackthorn.

200 –Trees

3.17 The Site contained two distinct tree lines and two individual Lawson cypress trees. One of these tree lines was dominated by holm oak. The other tree line contained frequent cherry plum with rare cherry, elder, holly, rowan, crab apple and small leaved lime. The ground flora of this habitat was similar to the tall forbs habitat.

PROTECTED, NOTABLE AND INVASIVE SPECIES ASSESSMENT

3.18 The potential for the Site to support protected and/or notable species has been assessed using criteria provided in Table 2.2 and is based on the results of the desk study and observations made during the survey of habitats at the Site. Those legally protected species not referred to in Table 3.4 and 3.5 below have been scoped out as it is considered that the Site does not contain habitats suitable to support them.

3.19 Key pieces of statute are summarised in Section 1 and set out in greater detail in Appendix 5.

Table 3.4: Protected, notable and invasive species assessment

Ecological feature	Status[10][11]	Likelihood of occurrence	Ecological importance	Potential constraint
Bats: Roosting	HR WCA S5	**Low:** The Site contained one building (B3) with low suitability for roosting bats. The two other buildings (B1 and B2) within the Site were assessed as having negligible suitability for roosting bats. This follows from the findings of the previous PEA undertaken in 2018 (John Wenman Ecological Consultancy, 2018). Table 3.5 provides the full details of the PRA. The trees within the Site were assessed as having negligible suitability for roosting bats. There was one previous European Protected Species Mitigation Licence (EPSML) within 2km of the Site. This was a licence to destroy a resting space belonging to brown long eared and soprano pipistrelle	Bats that may be using the Site are likely to be of site importance.	**Yes:** There is a risk that the demolition of B3 may result in the destruction of a bat roost or in the disturbance of roosting bats.

[10] The following abbreviations have been used to signify the legislation afforded different species: HR = Conservation of Habitats and Species Regulations 2017 (as amended); WCA S1 = Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); WCA S5 = Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); WCA S9 = Schedule 9 of the Wildlife and Countryside Act 1981 (as amended); PBA = Protection of Badgers Act 1992.

[11] The following abbreviations have been used to signify the policy of conservation assessments applying to notable species: SPI = Species of Principal Importance under the NERC Act 2006; LBAP = Local Biodiversity Action Plan species; BoCC = Birds of Conservation Concern - amber list / red list (Stanbury *et al*., 2021); and/or RD/NN = red data book/nationally notable species (JNCC, undated).

Foraging/commuting		bats 1.6km south-west of the Site from 2014-2017. The desk study returned numerous records of bats. This includes species such as common pipistrelle, soprano pipistrelle, daubentons, noctule, brown long eared and records from unknown bat species. The nearest record of a bat was from common pipistrelle 580m south from 2019. The most recent record of a bat was from an unknown species of pipistrelle 1.8km north-west from 2021. The most common species recorded was soprano pipistrelle, with 13 previous records. **Low:** The patches of scrub and lines of trees within the Site are largely isolated by the busy roads surrounding the Site. They are not thought to be useful for commuting bats. The trees, scrub and ruderal habitat may provide limited foraging habitat for bats. The previous PEA report mentioned that previous bat surveys identified four common pipistrelles foraging within the Site (John Wenman Ecological Consultancy, 2018).		**Yes:** Works are not anticipated to impact commuting or foraging bats.

Birds: Breeding	WCA Sections 1-8	**High:** Birds nests were found within the trees and building B3 within the Site. Other suitable nesting habitat included dense scrub and scattered trees. A previous PEA (John Wenman Ecological Consultancy, 2018) identified pellets belonging to either kestrel or buzzard. The desk study returned numerous records of breeding birds. This includes records of London Priority Species such as song thrush, mistle thrush and lesser whitethroat and Section 41 species, such as house sparrow. There were also records of Schedule 1 protected species, such as brambling, firecrest, red kite, redwing, fieldfare, goshawk and hobby.	Nesting birds are likely to be of site importance.	**Yes:** There is a risk that works will result in the accidental disturbance
Red kite	Sch 1	**Negligible:** The Site contained ruderal and grassland habitat suitable for foraging red kites, however trees on site were not typical for nesting red kite. The desk study returned 35 records of red kite within 2km of the Site, with the nearest record 1.5km south of the Site from 2017 and the most	Red kite is a species of national importance.	**No:** The trees on Site were not typical of those used by nesting red kite.

		recent 1.7km south-east of the Site from 2019.		
Reptiles	WCA S5	**Low:** Although the Site contained a mosaic of ruderal, grassland and scrub habitats, the surrounding roads make it difficult for migrating reptiles to access the Site. The desk study returned one previous record of grass snake 1.7km west of the Site from 2004.	All reptile species are of national importance.	**Yes:** There is a risk that vegetation clearance may result in the accidental killing or injuring of reptiles.
Stag beetle	S41	**Low:** The desk study returned a large number of records of this species (64). The nearest record was 285m south of the Site. The most recent record was from 1.7km north-west from 2022. However, only two of the trees within the Site had exposed decaying wood features suitable for stag beetles. The Site is not thought to have high value for stag beetle.	Stag beetle are a species of national importance.	**Yes:** While works are not anticipated to directly impact stag beetles, provisions to enhance the sites suitability for this priority species is recommended.
Dormouse	HR WCA S5	**Negligible:** The Site is functionally isolated to dormouse by the M4 to the north and east, Sipson Road to the west and Sipson Lane to the south. The habitats are not connected to any larger, well-connected habitats.	Hazel dormouse is a species of National Importance	**No:** Works are not anticipated to impact dormice.

		The desk study returned no previous records of hazel dormice. Although dormice have been recorded as being present within the London area (Peoples Trust for Endangered Species, 2013), it is generally known that they are only found within the London Boroughs of Bromley and Croydon, which are connected to counties with large populations of dormice (London Natural History Society, 2023).		
Great crested newt	HR WCA S5	**Negligible:** The Site contained no ponds or ditches. Although the Site contained scrub and ruderal habitat that may be useful for hibernating great crested newts, the surrounding roads makes the site functionally inaccessible to migrating great crested newts. The desk study returned three previous records of great crested newts. The nearest record was 1.7km north-west from 2017. The most recent record was 1.8km north-west of the Site from 2021. Aerial imagery identified 2 ponds 200m north-west and 300m north-west of the Site. There were also 10 standing waterbodies within a	Great crested newts are a species of national importance	**No:** Works are not anticipated to impact great crested newts.

		cement works 115m east and 260m north-east of the Site. However, the Site is functionally isolated to great crested newts by the surrounding M4, Sipsons Road and Sipsons Lane. MAGIC returned no previous returns of EPSML applications or survey returns for great crested newts within 2km of the Site.		
Hedgehog	S41 NERC	**Moderate:** the Site contained scrub, grassland and ruderal habitat suitable for foraging hedgehogs. The desk study returned 54 previous records of hedgehogs. The nearest record is possibly within the same field connected to the Site 280m south of the Site from 2017. The most recent record was 640m north from 2021.	Hedgehogs are a species of national importance.	**Yes:** There is a risk that log and leaf pile clearance may result in the accidental killing or injuring of hedgehogs.
Badger	PBA	**Negligible:** No badgers or signs of badgers were identified during the Site visit. Absence of banks within the Site and the Sites flat topography makes the Site unsuitable for badgers to create setts. The desk study returned no previous records of badgers.	Badgers are a species of national importance.	**No:** Works are not anticipated to impact badgers.

Invasive plants	WCA S9	**Negligible:** No invasive non-native species were identified during the PEA survey. The desk study returned numerous records of both London Invasive species and schedule 9 invasive species.	The ecological importance of invasive species has been assessed as none.	**No:** Works are not anticipated to result in the accidental spread of invasive non-native species.

Table 3.5: Preliminary Bat Roost Assessment

Building / Structure	Description	Potential Roost Features (PRFs)	Factors influencing suitability for bats	Building suitability	Evaluation
B1	Security Hut – Steel cabin used for security at the entrance of the Site.	- No PRF identified.	- This building contained no features suitable for roosting bats.	Negligible	Roosting bats are not anticipating to be using this building.
B2	Greenhouse – A glass and steel greenhouse that was used as a storage area. This was damaged with large holes within the ceiling.	- No PRF identified.	- This building contained no features suitable for roosting bats.	Negligible	Roosting bats are not anticipating to be using this building.
B3	Barn – A wooden panel barn that was used for storage. It contained a sloped roof with asbestos sheeting. This building had some damage with parts of the wooden panels, windows and roofing damaged.	- Building contained cavities within the walls which could be accessed by damaged panels or holes within the panels. - Gaps around the doors and between roofing sheets provided suitable features for crevice dwelling bats. - Gaps around aeration feature.	- The inside of the building was subject to high light levels from holes within the roof. - The Site contained small sections of tree lines, scrub, grassland and ruderal habitats that may be useful for foraging bats. There were other, larger foraging habitats within 2km of the Site which include hedgerows, woodland and gardens. Bats foraging within these habitats may find and use the PRF within this building.	Low	There is a risk that demolition of this building may result in the accidental disturbance or destruction of bat roosts.

NATURE CONSERVATION EVALUATION

3.20 The Site is not subject to any nature conservation designations. It contained small areas of common and widespread habitats, none of which are Habitats of Principal Importance. It is situated within a suburban area surrounded with heavy industry facilities and roads.

3.21 The trees, scrub, grassland and ruderal habitat provide important ecosystem services including reducing urban heat island effect and flood alleviation. However, given that these habitats are common in the area, the habitats on site are considered to be of Site importance for ecosystem services.

3.22 The habitats on the Site were suitable for a range of noteworthy species, including Species of Principal Importance and London BAP species, as reported in the desk study or recorded during the survey, as follows:

- slow worm and other widespread species of reptile;
- Buzzard and other widespread but declining species of birds that are also species of conservation concern[12];
- Stag beetle;
- hedgehog; and
- invertebrates associated with widespread habitats such as small heath butterfly *Coenonympha pamphilus*.

3.23 The habitats at the Site and populations of the above species are likely to be of Site importance. It is unlikely that the Site would support rare species, or diverse assemblages or large populations of any noteworthy species.

3.24 Records for soprano pipistrelle and brown long-eared bats, which are both Species of Principal Importance, were provided in the desk study. It is not possible to confirm the importance of bat populations that may be present at the Site until further

[12] Birds of Conservation Concern - amber list / red list (Stanbury *et al.,* 2021);

surveys have been undertaken. Recommendations for further survey are provided in Section 4.

4 Recommendations

4.1 This section summarises the potential impacts on habitats and notable species that may be present at this Site. It also sets out the recommendations for further survey and mitigation where required. The impact assessment is preliminary and further detailed assessment and surveys will be required to assess impacts and design suitable mitigation, where appropriate.

FURTHER SURVEY AND MITIGATION

4.2 For each constraint identified as being of importance at greater than the site level, all mitigation options provided follow the established Mitigation Hierarchy as set out in Section 5.2 of BS42020:2013. This seeks as a preference to avoid impacts then to mitigate unavoidable impacts, and, as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures. The measures set out below will address no net loss of biodiversity, although no formal calculation of losses and gains has been carried out. Features deemed important at the site level only are considered here only where further survey and/or mitigation is necessary to ensure legal compliance.

4.3 In the absence of mitigation, the following key ecological issues have been identified:

- the Site is within the Zone of Influence of one internationally designated site;
- the Site is within the IRZ of three SSSI;
- roosting bats;
- reptiles;
- common breeding bird species; and
- priority species (stag beetle and hedgehogs).

STATUTORY DESIGNATED SITES

4.4 The Site is within 4.9km of the South-west London Waterbodies Ramsar and SPA. Although these internationally designated sites have no defined Zone of Influence, the Sites close proximity may require a HRA to identify if works are likely to impact these internationally designated sites.

4.5 The Site is within the IRZ of three SSSI's; Stainesmoor SSSI, Wraysbury Reservoir SSSI and Wraysbury and Hythe End Gravel Pits SSSI. One of the triggers of the IRZ the Site is within are industrial developments that may alter air quality. There is a possibility that the construction and operation of this new centre could temporarily or permanently alter air quality within the area. Consultation with Natural England may be required to enquire if works are likely to impact these three nationally designated sites.

BATS

4.6 All British species of bats are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Habitats and Species Regulations 2017 (as amended). Under this legislation, it is an offence to capture, kill or injure bats. It is also an offence to disturb, damage or destroy a bat roost.

4.7 Building B3 was assessed as having low suitability for roosting bats. As B3 is planned to be demolished, there is a risk that works may lead to the permanent destruction of a bat roost or in the accidental killing or injuring of roosting bats.

4.8 Following best practice (Collins, 2023), it is recommended that demolition is preceded by one dusk emergence survey of B3 to observe if roosting bats are utilising it. This would need to be conducted between May-August.

4.9 If possible, a complete internal inspection of building B3 should be carried out before this survey. This will need to be completed by an experienced ecologist with a bat surveying licence.

BREEDING BIRDS

4.10 All breeding birds and their nests are protected under the Wildlife and Countryside Act 1981 (as amended).

4.11 Bird nests were found within Building B3 and within two of the trees within the Site. The scrub was also assessed as being suitable to support nesting birds.

4.12 Any vegetation clearance of trees,mor scrub, or works to building B3 should be undertaken outside the nesting bird season (March -August inclusive.)

4.13 Where sensitive timing is not possible, a nesting bird check must be carried out within 48 hours of the start of works to ensure that there is no accidental disturbance to nesting birds. This would involve a suitably qualified ecologist conducting a visual inspection of all features of all buildings and vegetation which may host nesting birds. This would include an internal and external inspection of the building. A repeat of this may be required if construction lapses for more than 48 hours. If an active bird's nest is identified during work, works must stop, and a suitably qualified ecologist must establish an appropriate buffer area in which works will be prohibited while the nest is still active. The suitably qualified ecologist will need to undertake additional nesting bird checks to confirm when the nest is no longer active.

REPTILES

4.14 All species of reptile are protected from killing or injuring under the Wildlife and Countryside Act 1981 (as amended).

4.15 The Site contained a mosaic of ruderal, grassland and scrub that may be useful for foraging reptiles. At least one record of a grass snake was identified 1.7km from the Site.

4.16 As construction is likely to involve vegetation removal, there is a risk that reptiles may be unintentionally disturbed, injured or killed as a result. Reptile surveys within these habitats are recommended to identify the presence of reptiles on the Site and

to inform if further mitigation measures are required. Seven surveys should be carried out in ideal weather conditions, between March and September (Froglife, 1999).

SPECIES OF PRINCIPAL IMPORTANCE

Hedgehog

4.17 The Site contained large areas of dense scrub, grassland and ruderal habitat suitable for foraging hedgehogs. The desk study returned records of hedgehogs that were likely made within the field connected to the Site.

4.18 Leaf and log pile clearance on site should be undertaken outside of the hibernation period (November – March inclusively) and during the hedgehog active season. This will ensure any hedgehogs present are not hibernating and therefore reduce the risk of death or injury if disturbed. During removal or disturbance, the piles should be searched for hedgehog by a suitably qualified ecologist. If any are found, they will be moved to suitable nearby habitat.

4.19 If breeding hedgehog with dependant young are found or suspected during clearance works, the breeding nest should be avoided and protected until the hedgehog/s and young have dispersed. If necessary, an ecologist should be contacted to determine the best course of action.

4.20 Any removal of habitats suitable for hedgehogs (scrub, woodland, hedgerows) should be replaced and where possible enhanced to benefit the local hedgehog population.

Stag beetle

4.21 The desk study identified 64 previous records of stag beetle.

4.22 It is recommended that measures are implemented to enhance the Sites suitability for stag beetles as in the Ecological Enhancements section below.

COMMON WILD MAMMALS

4.23 The Site has been confirmed as being used by foxes and rabbits.

4.24 Care should be taken when removing any scrub to ensure that any trapped wild mammals are not accidentally harmed or killed.

4.25 If mammal holes are at risk of being collapsed or destroyed an ecologist must be consulted who will confirm if a fox den or rabbit warren is present and will advise on appropriate mitigation measures.

ENVIRONMENTAL BEST PRACTICE

4.26 Environmental best practice should include the appropriate storage of fuels and chemicals to minimise the risk of accidental spillage. Sources of best construction practice and environmental management include CIRIA Guidance (Conolly and Charles, 2005) and various DEFRA/Environment Agency Guidelines (2016) and Environment Agency pollution prevention guidelines (2007). This guidance relates to various pieces of legislation, including the environmental damage (prevention and remediation) regulations 2009;

4.27 No deposition of materials/soils from construction on retained habitats;

4.28 Use of screens and other dust suppression practices to prevent contamination of nearby habitats.

4.29 Appropriate air quality management to control and limit dust air pollution in accordance with best practice by the Institute of Air Quality (2014, 2016 and 2018).

4.30 Retained trees should be protected in accordance with British Standards Institution guidelines – Trees in relation to design, demolition and construction (BSI, 2012) BS 5837:2021-, BSI, London.

4.31 Covering all open trenches, pipes and excavations overnight to ensure no terrestrial mammals or nesting birds become trapped.

FURTHER SURVEY REQUIREMENTS

4.32 Table 4.1 lists further survey requirements as recommended in the constraints section.

Table 4.1: Further survey requirements

Ecological Feature	Survey Requirement	Number of surveys and seasonal considerations
Roosting bats	Dusk emergence survey. An experienced and licenced ecologist will require access to the inside of building B3 to conduct an internal inspection.	At least one dusk emergence survey will be required to be carried out for building B3 between May-August. Further roost characteristic surveys may be required if bats or signs of bats are found in B3.
Reptiles	Reptile felt survey	Seven survey visits should be carried out in suitable weather conditions between March – September (Froglife, 1999).
Nesting birds	Nesting bird check of all buildings and vegetation as well as to site.	A check for nesting birds will need to be implemented if construction is planned during the nesting bird season (March to August inclusive). This will involve a search of all areas of buildings planned to be demolished and any vegetation planned to be cleared with potential to support nesting birds prior to the start of works by an experienced ecologist. Another search may be required if clearance works take longer than 48 hours. If an active nest is found, consultation with an experienced ecologist is required before further work in the vicinity of the nest continues.

OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

4.33 Planning policy at the national and local level and strategic biodiversity partnerships encourage inclusion of ecological enhancements in development projects. Ecological enhancements can also contribute to green infrastructure and ecosystem services such as storm water attenuation and reducing the urban heat island effect. Measures set out below can be used to achieve a net gain in biodiversity. Please note, however, that no formal calculations have been provided in this instance.

4.34 The following measures would be suitable for integration into the Site's design.

Wildlife lawns

4.35 It is recommended that the remaining grassland is managed in a way to enhance biodiversity. This should include a new cutting regime to create a varied sward height to provide more ecological niches for invertebrates. Fertilizers should be avoided to prevent aggressive species, such as thistles, from dominating this habitat.

Tree planting and creation of hedgerows

4.36 Plant stock should be sourced from a local supplier and ensure it is of local provenance. This will minimise the risk of introducing any diseases and improve plant establishment and growth.

4.37 Hedgerows should be extending in length and cut on a 2-3 year rotation to give a variety of heights and side growth, and to ensure plenty of flowers, berries and fruit. To achieve this, sections of hedgerow could be cut in different years or opposite side cuts in alternative years.

Sustainable urban-drainage system (SuDs) and aquatic habtiats.

4.38 Relative to alternative measures, waterbodies provide high potential value to wildlife and are, therefore, recommended as a mechanism to enhance the importance of the Site for biodiversity. The opportunity to create rainwater gardens, bird baths, reed beds, bioswales, bioretention planters, attenuation ponds or ditches with marginal planting should be explored. These could form part of the SuDs that may be required with the new housing. Any new water feature(s) should be created with naturalistic sinuous and sunken margins, with shallow edges and where possible, linked to an extended swale allowing an overflow during extended wet weather. To help establish vegetation, the pond margins and swale should be planted with marginal plants, using plug plants and a seed mix such as Emorsgate and EP1. Should there be safety concerns about open water, a post and rail fence (providing gaps for amphibians, mammals and birds to access the water) could be installed.

Bird boxes

4.39 It is recommended that bird nesting opportunities are created on the Site post-development. Bird boxes suitable for declining species such as house sparrow (SPI, London BAP and Hackney BAP) should be installed. The inclusion of woodcrete bird boxes (or equivalent) are recommended as they are available in a range of designs, are long lasting compared to wooden boxes and insulate occupants from extremes of temperature and condensation. House sparrow boxes should be located at least 3m in height, out of direct sunlight but not obscured by dense vegetation and adjacent to dense hedgerows and wildflower meadow to maximise foraging opportunities and away from areas of high foot traffic. The boxes should be cleaned out yearly during the winter months (September-February) and old boxes should be replaced or repaired as necessary.

Bat boxes

4.40 Bat boxes should be installed on the Site post-development. Woodcrete boxes are recommended as they include a broad range of designs, are long lasting compared to wooden boxes and insulate occupants from extremes of temperature and condensation. Bat boxes should be positioned between 3-5m above ground level facing south-east to south-west in a location that will not be lit by artificial lighting. The use of integrated bat boxes that can be incorporated into the fabric of the new floors is also recommended as this will create long-term roost resources for local bat populations.

Low impact lighting strategy

4.41 A Low Impact Lighting Strategy should be implemented in order to minimise the potential of excess light disturbing bats outside the Site boundary and to compliment the bat enhancement measures recommended in this report. This should include;

- The level of artificial lighting, including floor lighting, should be kept to an absolute minimum;

- Where this does not conflict with health and safety and/or security requirements, the Site should be kept dark during peak bat activity periods (0 to 1.5 hours after sunset and 1.5 hours before sunrise);
- Lighting required for security or for safety reasons should use a lamp of no greater than 2000 lumens (150 Watts) and should comprise of sensor-activated lamps;
- Lights utilising LED technology are the preferred option as these lights do not emit on the UV spectrum, are easily controllable in terms of direction/spill and can be turned on or off instantly;
- Avoid the use of sodium or metal halide lamps, these gas lamps require a lengthy period in which to turn off and the diffuse nature of the light emitted makes light spillage a significant problem;
- Lights required for night-time deliveries or security patrols could be set to activate with pressure activated sensors set into the ground;
- Lighting should be directed to where it is needed to minimise light spillage. This can be achieved by limiting the height of the lighting columns and by using as steep a downward angle as possible and/or a sheaf/hood/cowl that directs the light below the horizontal place and restricts the lit area;
- Artificial lighting should not directly illuminate any confirmed or potential bat roosting features or habitats of value to commuting/foraging bats. Similarly, any newly planted linear features or compensatory bat roosting features should not be directly lit; and
- Lighting design computer programs can be used to predict the potential impacts of light spillage.

Green roofing

4.42 To demonstrate the highest feasible and viable sustainability standards in line with London Plan Policies (Greater London Authority, 2021) it is recommended that a specification for a biodiverse roof be drawn up by a company with a proven track

record in delivering these features in London. Any biodiverse green roof should support at least 25 plant species.

4.43 A biodiverse green roof would provide additional benefits such as protecting and prolonging the life of the roof membrane, reducing building energy use by insulating the building in winter and keeping it cooler in summer, providing a SuDS function by reducing storm water run-off from the roof, reducing the urban heat island effect and local air/noise pollution. Combining a biodiverse roof with PV panels (biosolar roof) would also provide further benefits, such as the cooling effect the vegetation has on the PV cells, increasing their productivity in hot weather, as well as resulting in a more efficient use of roof space.

4.44 The green roof should follow UK standards (GRO, 2014) and include additional habitat features such as deadwood, varying substrate depths and areas of bare rocky substrate. This will provide good habitat for a range of invertebrates and birds including London and Hackney Biodiversity Action Plan (BAP) species. The London Living Roofs and Walls Technical Report (Greater London Authority, 2008) and the Environment Agency Green Roof Toolkit (2008) should also be consulted on when designing this new green roofing.

Green walls

4.45 It is recommended that green walls or trellis structures are created to provide vertical opportunities for wildlife and maximise greenery. Recommended species include hop, wild honeysuckle, jasmine, and common ivy. These species provide nectar for bumblebees and potential nest sites for different nesting bird species. Honeysuckle is a known plant favoured by the garden tiger moth, a London BAP species. Hop supports buttoned snout moth, a nationally declining species for which London has become a stronghold.

Hedgehog friendly walls and fences

4.46 Any new walls and fencing installed within the Site should be designed to preserve access through the Site. Any new boundaries installed should include holes that are 13cm wide and 13cm tall to allow hedgehogs to pass the barrier.

Stag beetle habitats

4.47 The Site should be enhanced to improve its suitability for stag beetles. This should include the creation of log pile habitats. Designs of this should include half buried wood[13]. Where works require the removal of trees, wood should be kept to create these new habitats.

[13] https://ptes.org/wp-content/uploads/2016/11/Build-a-log-pile-for-stag-beetles.pdf

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Appendix 1: Maps

Figure 1: Site Context Map

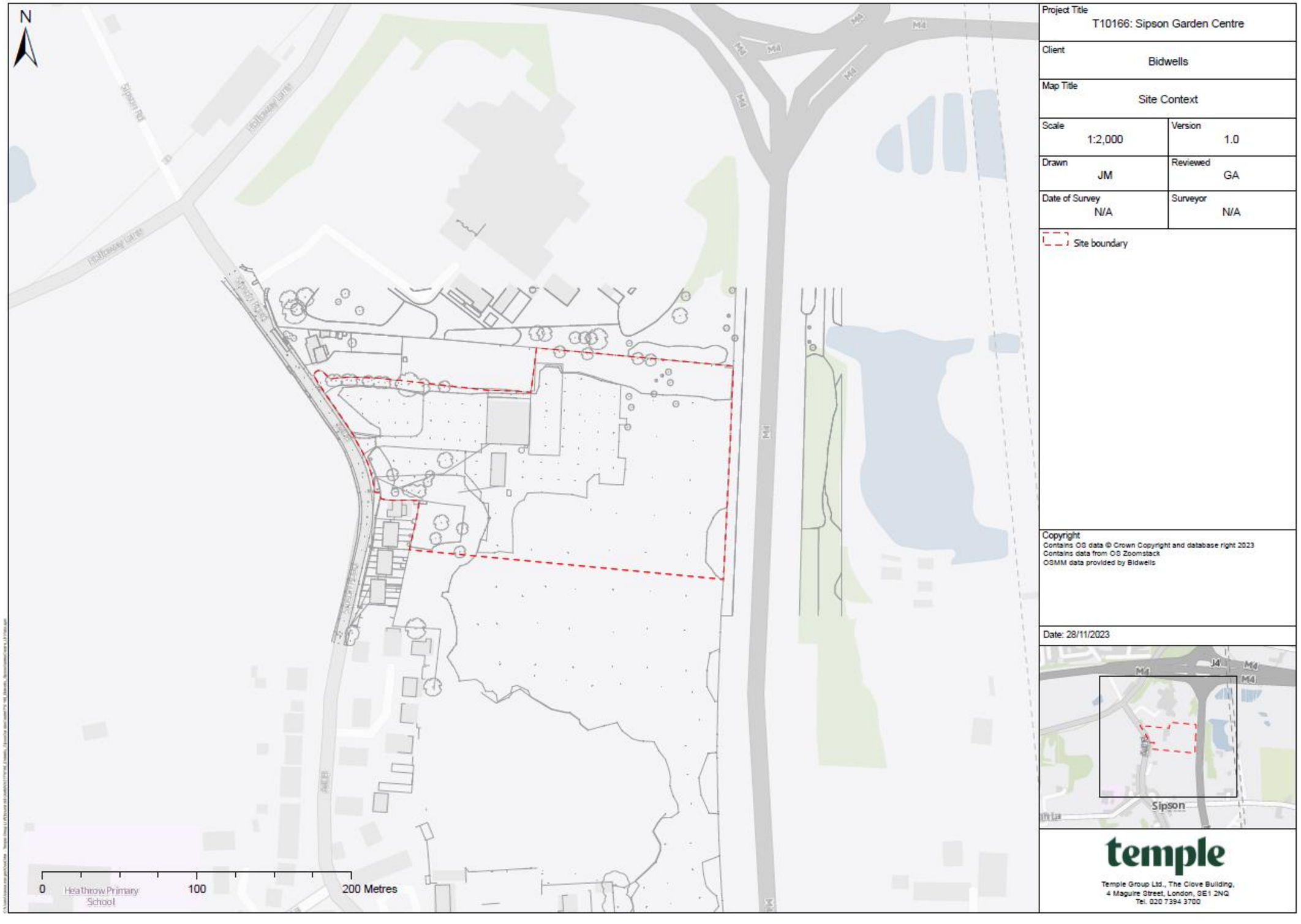
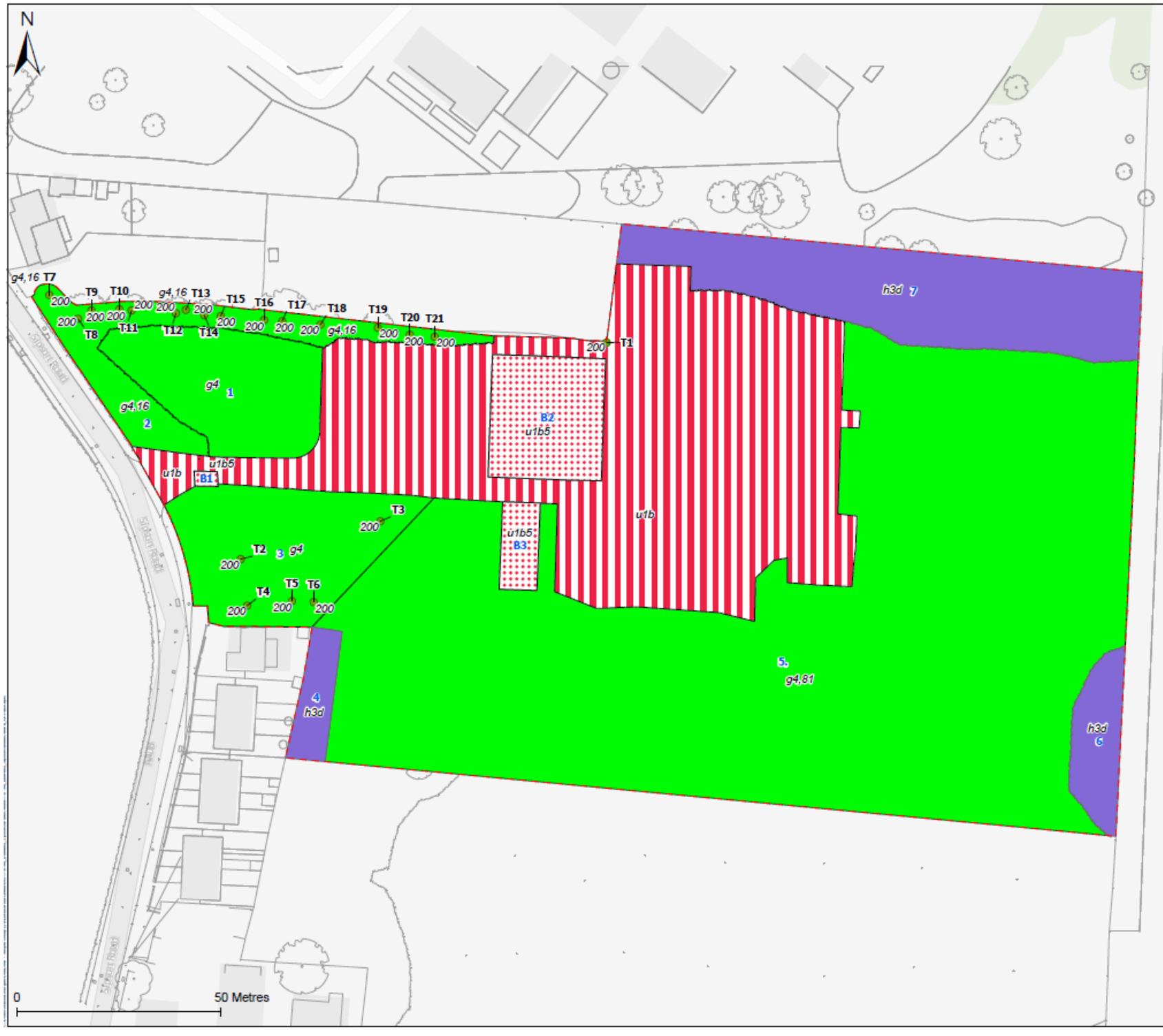


Figure 2: Habitat Survey Map



Project Title
T10166: Sipson Garden Centre

Client
Bidwells

Map Title
UK Habitat Baseline

Scale	Version
1:850	1.0
Drawn	**Reviewed**
JM	HJ
Date of Survey	**Surveyor**
14/11/23	JW

Site boundary

Primary Habitat

- g4 - Modified grassland
- h3d - Bramble scrub
- u1b - Developed land, sealed surface
- u1b5 - Buildings
- Scattered tree

Secondary habitat

16 - Tall forbs

81 - Ruderal or ephemeral

200 - Tree

Date: 28/11/2023

temple
Temple Group Ltd., The Clove Building,
4 Maguire Street, London, SE1 2NQ
Tel. 020 7394 3700

Appendix 2: Species List

Botanical Species List for Sipsons Garden Centre, Sipson, London compiled from Phase 1 habitat survey carried out on the 14th November 2023.

Scientific nomenclature and common names for vascular plants follow Stace (2019) and Blockeel and Long (1998) for bryophyte species. Please note that this plant species list was generated as part of a Phase 1 habitat survey, does not constitute a full botanical survey and should be read in conjunction with the associated results section of this PEA.

Abundance was estimated using the DAFOR scale and additional notes taken as follows:
D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally
c=clumped, e=edge only, g=garden origin, p=planted, y = young, s=seedling or sucker, t=tree, h=hedgerow, w=water

Scientific Name	Common Name	Abundance	Qualifier
Dactylis glomerata	Cocksfoot	D	
Urtica dioica	Nettle	D	
Rubus fruticosus	Bramble	D	
Anthriscus sylvestris	Cow parsley	A	
Arctium minus	Lesser burdock	A	
Prunus cerasifera	Cherry plum	F	
Rumex obtusifolius	Bitter dock	F	
Tanacetum vulgare	Common tansy	F	
Achillea millefolium	Yarrow	O	
Centaurea nigra	Knapweed	O	
Conyza sumatrensis	Guensey fleabane	O	
Dipsacus fullonum	Teasel	O	
Galium aparine	Cleaver	O	
Holcus lanatus	Yorkshire fog	O	
Jacobaea vulgaris	Common ragwort	O	
Lamium album	White nettle	O	
Lolium perenne	Perennial rye grass	O	
Raphanus raphanistrum	Wild radish	O	
Plantago lanceolata	Ribwort plantain	O	
Prunus spinosa	Blackthorn	O	
Pulicaria dysenterica	Common fleabane	O	
Ranunculus acris	Meadow buttercup	O	
Ranunculus repens	Creeping meadow buttercup	O	
Sonchus oleraceus	Common sowthistle	O	
Trifolium repens	White clover	O	
Acer pseudoplatanus	Sycamore	R	
Artemisia vulgaris	Common mugwort	R	
Aster	Unknown aster species	R	
Bellis perennis	Common daisy	R	
Buddleja davidii	Buddleia	R	
Chamaecyparis lawsoniana	Lawson cypress	R	
Cirsium vulgare	Spear thistle	R	
Crataegus monogyna	Hawthorn	R	

Digitalis purpurea	Foxglove	R	
Galega officinalis	Goats rue	R	
Glechoma hederacea	Ground ivy	R	
Hedera helix	Ivy	R	
Ilex aquifolium	Holly	R	
Malus sylvestris	Crab apple	R	
Malva sylvestris	Mallow	R	
Picris hieracioides	Hawkweed oxetongue	R	
Plantago major	Common plantain	R	
Prunus avium	Cherry	R	
Prunus avium	Elder	R	
Quercus ilex	Holm oak	R	
Rumex obtusifolius	Common dock	R	
Salix	Unknown willow species	R	
Sambucus nigra	Elder	R	
Sorbus subg. Sorbus	Rowan	R	
Taraxacum officinale	Common dandelion	R	
Tilia cordata	Small leaved lime.	R	
Ulmus minor 'Atinia'	English elm	R	
Veronica persica	Unknown speedwell species	R	

Appendix 3: Photographs

Photograph 1
View of the centre of the Site with tarmac hardstanding.

Photograph 2
View of grassland with line of trees in the background, facing north.

Photograph 3
View of ruderal/ephemeral habitat, facing south.

Photograph 4
View of scattered tree within the Site, facing north-west.

Photograph 5
View of dense bramble scrub, facing north-east.

Photograph 6
View Building B1, facing north-west.

Photograph 7
View Building B2, facing north.

Photograph 8
View of Building B3, facing south-east.

Photograph 9
View of aeration feature on top of Building B3.

Photograph 10
View of holes leading into cladding of Building B3.

Photograph 11
View of gaps between and underneath the asbestos sheeting on building B3.

Appendix 4: Habitat Condition Assessments

Habitat Condition Assessment Proforma 1: Line of trees.

CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS			
Date	14.11.2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	N/A
Weather conditions	11°C, 8 oktas, no wind, heavy showers.		
Surveyor name(s)	Jordan Whitcombe	Unique polygon reference(s)	T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21
Project / development name	Sipsons Garden Centre	Metric 4.0 habitat type	Line of trees
Site name or location	Sipsons Garden Centre	Condition assessment required? (y/n)	Y
Onsite or offsite?	Onsite	Condition sheet used	Line of trees
Reason for assessment (if not baseline condition survey)	Assess habitats for BNG assessment.		
Limitations (if applicable)	No limitations identified.		

Habitat description
Line of young and semi-mature trees consisting of cherry, cherry plum, elder, small leaved lime, crab apple and rowan.

Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	**TOTAL**
Result	P	F	P	F	P									3
Photo ref														

Target note ref													
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N					Condition (Good/Moderate/Poor):	Moderate						
Suggested enhancement interventions to improve condition score	Planting new native trees and hedgerow creation.												

Habitat Condition Assessment Proforma 2: Line of trees

CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS			
Date	14.11.2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	N/A
Weather conditions	11°C, 8 oktas, no wind, heavy showers.		
Surveyor name(s)	Jordan Whitcombe	Unique polygon reference(s)	T4, T5, T6
Project / development name	Sipsons Garden Centre	Metric 4.0 habitat type	Line of trees
Site name or location	Sipsons Garden Centre	Condition assessment required? (y/n)	Y
Onsite or offsite?	Onsite	Condition sheet used	Line of trees
Reason for assessment (if not baseline condition survey)	Assess habitats for BNG assessment.		
Limitations (if applicable)	No limitations identified.		

Habitat description
Row of three semi-mature holm oak trees.

Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	**TOTAL**
Result	F	P	F	P	P									3
Photo ref														
Target note ref														

Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N	Condition (Good/Moderate/Poor):	Moderate

Suggested enhancement interventions to improve condition score	Planting new native trees and hedgerow creation.

Habitat Condition Assessment Proforma 3: Modified grassland

CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS														
Date	14.11.2023						Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)			N/A				
Weather conditions	11°C, 8 oktas, no wind, heavy showers.													
Surveyor name(s)	Jordan Whitcombe						Unique polygon reference(s)			1, 3				
Project / development name	Sipsons Garden Centre						Metric 4.0 habitat type			Grassland type: low distinctiveness				
Site name or location	Sipsons Garden Centre						Condition assessment required? (y/n)			Y				
Onsite or offsite?	Onsite						Condition sheet used			Modified grassland				
Reason for assessment (if not baseline condition survey)	Assess habitats for BNG assessment.													
Limitations (if applicable)	No limitations identified.													
Habitat description														
Patches of grassland with patches of locally dominant of ruderal habitat. This habitat was regularly mown and subject to rabbit grazing. Large parts of this grassland was heavily poached by parked vehicles.														
Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria. For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.														
Criterion	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	**TOTAL**
Result	P	F	P	F	F	P	P							4
Photo ref														
Target note ref														
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):			Moderate				

Suggested enhancement interventions to improve condition score	New cutting regime to encourage diversity of sward heights to create new niches for invertebrates.

Habitat Condition Assessment Proforma 4: Sparsley vegetated land – Tall forbs

CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS			
Date	14.11.2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	N/A
Weather conditions	11°C, 8 oktas, no wind, heavy showers.		
Surveyor name(s)	Jordan Whitcombe	Unique polygon reference(s)	2
Project / development name	Sipsons Garden Centre	Metric 4.0 habitat type	Urban Habitat Type
Site name or location	Sipsons Garden Centre	Condition assessment required? (y/n)	Y
Onsite or offsite?	Onsite	Condition sheet used	Sparsely vegetated land – Tall forbs
Reason for assessment (if not baseline condition survey)	Assess habitats for BNG assessment.		
Limitations (if applicable)	No limitations identified.		

Habitat description
Dense ruderal habitat dominated by nettles.

Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	**TOTAL**
Result	F	P	P											2
Photo ref														
Target note ref														

Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N	Condition (Good/Moderate/Poor):	Moderate

Suggested enhancement interventions to improve condition score	New cutting regime to encourage diversity of sward heights to create new niches for invertebrates.

Habitat Condition Assessment Proforma 5: Sparsley vegetated land – Tall forbs

CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS

Date	14.11.2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	N/A
Weather conditions	11ºC, 8 oktas, no wind, heavy showers.		
Surveyor name(s)	Jordan Whitcombe	Unique polygon reference(s)	5
Project / development name	Sipsons Garden Centre	Metric 4.0 habitat type	Urban Habitat Type
Site name or location	Sipsons Garden Centre	Condition assessment required? (y/n)	Y
Onsite or offsite?	Onsite	Condition sheet used	Sparsely vegetated land – Ruderal/ephemeral
Reason for assessment (if not baseline condition survey)	Assess habitats for BNG assessment.		
Limitations (if applicable)	No limitations identified.		

Habitat description

Large area of ruderal habitat with patches of locally dominant grass and encroaching bramble. Large areas of this habitat were poached or eroded from vehicle movement that was parked on this.

Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	**TOTAL**
Result	F	P	P											2
Photo ref														
Target note ref														

Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N	Condition (Good/Moderate/Poor):	Moderate

Suggested enhancement interventions to improve condition score	New cutting regime to encourage diversity of sward heights to create new niches for invertebrates.

Habitat Condition Assessment Proforma 6: Urban – Individual tree

CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS														
Date	14.11.2023						Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)				N/A			
Weather conditions	11°C, 8 oktas, no wind, heavy showers.													
Surveyor name(s)	Jordan Whitcombe						Unique polygon reference(s)			T2				
Project / development name	Sipsons Garden Centre						Metric 4.0 habitat type			Individual tree				
Site name or location	Sipsons Garden Centre						Condition assessment required? (y/n)			Y				
Onsite or offsite?	Onsite						Condition sheet used			Individual tree – Urban tree				
Reason for assessment (if not baseline condition survey)	Assess habitats for BNG assessment.													
Limitations (if applicable)	No limitations identified.													
Habitat description														
Individual semi-mature lawson cypress tree.														
Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria. For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.														
Criterion	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	**TOTAL**
Result	F	P	F	P	F	P								2
Photo ref														
Target note ref														
Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N						Condition (Good/Moderate/Poor):			Moderate				

Suggested enhancement interventions to improve condition score	New cutting regime to encourage diversity of sward heights to create new niches for invertebrates.

Habitat Condition Assessment Proforma 7: Urban – Individual tree

CONDITION ASSESSMENT PROFORMA FOR USE WITH BIODIVERSITY METRIC 4.0 - AREA BASED HABITATS			
Date	14.11.2023	Metric 4.0 survey reference (if condition assessment of this polygon relates to a wider habitat survey)	N/A
Weather conditions	11°C, 8 oktas, no wind, heavy showers.		
Surveyor name(s)	Jordan Whitcombe	Unique polygon reference(s)	T2
Project / development name	Sipsons Garden Centre	Metric 4.0 habitat type	Individual tree
Site name or location	Sipsons Garden Centre	Condition assessment required? (y/n)	Y
Onsite or offsite?	Onsite	Condition sheet used	Individual tree – Urban tree
Reason for assessment (if not baseline condition survey)	Assess habitats for BNG assessment.		
Limitations (if applicable)	No limitations identified.		

Habitat description
Individual semi-mature lawson cypress tree.

Allocate pass 'P' or fail 'F'. Allocate 'NA' to any irrelevant criteria numbers where condition sheet contains fewer than 13 criteria.
For Woodland & Intertidal condition sheets, allocate scores of '1' '2' or '3' against each criteria assessed.

Criterion	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	**TOTAL**
Result	F	P	F	P	F	P								2
Photo ref														
Target note ref														

Are any criteria non-negotiable? (Y/N) If Yes are they passed?	N	Condition (Good/Moderate/Poor):	Moderate

Suggested enhancement interventions to improve condition score	New cutting regime to encourage diversity of sward heights to create new niches for invertebrates.

Appendix 5: Legislation and Planning Policy

Important Notice: This section contains details of legislation applicable in England and Wales only (i.e. not including Scotland, the Isle of Man, Northern Ireland, the Republic of Ireland or the Channel Islands) and is provided for general guidance only. While every effort has been made to represent the current (at the time of writing) situation with respect to the UK's position outside of the EU and to ensure accuracy throughout, this section should not be relied upon as a definitive statement of the law.

Over the past few years, three important bills have been published which are intended to shape how growing pressures on the environment post-Brexit (post-transition period) are tackled. Both the Agriculture Bill and Fisheries Bill gained Royal Assent in November 2020 and are now the Agriculture Act 2020 and Fisheries Act 2020 respectively; and, more recently, the Environment Bill was passed into law in November 2021, becoming the Environment Act 2021. *N.B. as environment policy is a devolved matter, most of this Act applies to England only.*

A LEGISLATION AFFORDED TO SPECIES

The objective of the EC Habitats Directive[14] is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by **The Conservation of Habitats and Species Regulations 2017 (as amended)** and **The 'Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended)**.

Various amendments to the 2017 Regulations in England and Wales have been made through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. These changes came into effect on the 1 January 2021 following the UK's departure from the EU and the end of the Transition Period. The changes are largely limited to 'operability changes' that will ensure the Regulations can continue to have the same working effect as before.

[14] Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Since the passing of the Wildlife & Countryside Act 1981, various amendments have been made, details of which can be found on www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000).

As well as delivering long-term targets to reduce waste and improve resource efficiency and improve air and water quality targets, the **Environment Act 2021** aims to halt the decline of nature by 2030, mandates Biodiversity Net Gain for developments in England and amends the Wildlife and Countryside Act 1981 (as amended) to introduce an additional purpose for granting a protected species licence in relation to development which is 'for reasons of overriding public interest'. The Act also introduces the Office for Environmental Protection (OEP), which will be a new public body intended to hold government and public authorities to account, although the government will be able to issue guidance to the OEP on how it enforces policies and legislation.

Some of the key biodiversity elements in the Act that will have a bearing on species protection in the UK include:

- A strengthened biodiversity duty on Local Planning Authorities;
- Biodiversity net gain to ensure developments, including Nationally Significant Infrastructure Projects (NSIP), deliver at least 10% increase in biodiversity;
- Local Nature Recovery Strategies to support a Nature Recovery Network;
- Duty upon Local Authorities to consult on street tree felling;
- Strengthen woodland protection enforcement measures;
- Conservation Covenants;
- Protected Site Strategies and Species Conservation Strategies to support the design and delivery of strategic approaches to deliver better outcomes for nature;

- Introduces the power for the Habitats Regulations to be amended or 'refocused' to 'to deliver creative public policy thinking that delivers results'.

This section does not provide further detail on the Environment Act 2021 as, at the time of writing (November 2021), the Act, in its final form, has not been published and it remains to be seen how and when the various elements will be enacted at a national and local level.

Other legislative Acts affording protection to wildlife and their habitats include:

- Salmon and Freshwater Fisheries Act 1975;
- Deer Act 1991;
- Protection of Badgers Act 1992;
- Wild Mammals (Protection) Act 1996;
- Countryside and Rights of Way (CRoW) Act 2000;
- Natural Environment & Rural Communities (NERC) Act 2006;
- The Eels (England and Wales) Regulations 2009; and
- Environment (Wales) Act 2016.

Species and species groups that are protected or otherwise regulated under the aforementioned legislation, and that are most likely to be affected by development activities, include herpetofauna (amphibians and reptiles), badger, bats, birds, dormouse, invasive species, otter, plants, red squirrel, water vole and white clawed crayfish.

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations 2017 (as amended), which includes smooth snake, sand lizard, great crested newt, natterjack toad, all bat species, otter, dormouse and some plant, invertebrate and fish species, are given below. **These should be read in conjunction with the relevant species sections that follow.**

- In the Habitats Directive, the term 'deliberate' is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.

- The Conservation of Habitats and Species Regulations 2017 (as amended) does not define the act of 'migration' and therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered where relevant.
- In order to obtain a mitigation licence for species protected under the Conservation of Habitats and Species Regulations 2017 (as amended), the application must demonstrate that it meets all of the following three 'tests': i) the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment; ii) that there is no satisfactory alternative and iii) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

BATS

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 43 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats);
- Deliberate disturbance of bat species as:

  a) to impair their ability:
    - to survive, breed, or reproduce, or to rear or nurture young; or
    - to hibernate or migrate.

  b) to affect significantly the local distribution or abundance of the species.
- Damage or destruction of a breeding site or resting place; and
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) in respect to sub-sections 9 (4) (b) and (c) and 9 (5) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance while in their place of shelter (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect development works?

The appropriate licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost[15].

BIRDS

All wild birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). A wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Among other things, the legislation makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy an egg of any wild bird; or
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

[15] Garland and Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. **150**. The Mammal Society, Southampton.

Certain species of bird, for example the barn owl *Tyto alba*, black redstart *Phoenicurus ochruros*, hobby *Falco subbuteo*, bittern *Botaurus stellaris* and kingfisher *Alcedo atthis* receive additional special protection under Schedule 1 of the Act. This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young.
- Intentional or reckless disturbance of dependent young of such a bird.

How is the legislation pertaining to birds liable to affect development works?

To avoid contravention of the Wildlife and Countryside Act 1981 (as amended), works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction is to undertake work outside the main bird nesting season which typically runs from March to August[16]. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Those species of bird listed on Schedule 1 are also protected against disturbance during the nesting season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest. It should be noted that there is no threshold under which disturbance is not an offence, that is to say that disturbance need not be 'significant' for an offence to be committed.

While it is possible to obtain a licence to permit some activities that would otherwise constitute an offence, these can only be issued for specific purposes set out in the Act. This includes damage to crops, to preserve public health or safety and to preserve air

[16] It should be noted that this is the main breeding period. Breeding activity may occur outside this period (depending on the particular species, geographical location of the site and vagaries of the season in any particular year) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

safety, but does not include development, some land management and recreational activities and damage to property.

HERPETOFAUNA (AMPHIBIANS AND REPTILES)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, great crested newt *Triturus cristatus* and pool frog *Pelophylax lessonae* receive full protection under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 43 prohibits:

- Deliberate killing, injuring or capturing of species listed on Schedule 2;
- Deliberate disturbance of any Schedule 2 species as:
  - to impair their ability:
    - to survive, breed, or reproduce, or to rear or nurture young; and
    - in the case of animals of a hibernating or migratory species, to hibernate or migrate.
  - to affect significantly the local distribution or abundance of the species.
- Deliberate taking or destroying of the eggs of a Schedule 2 species;
- Damage or destruction of a breeding site or resting place; and
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

With the exception of the pool frog, these species are also listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect to sub-sections 9 (4) (b) and (c) and 9 (5). The pool frog is afforded protection in respect of sub-sections 9(4) (b) and (c) for England only. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance while in their place of shelter (at any level);
- Intentional or reckless obstruction of access to any place of shelter or protection; and
- Selling, offering or exposing for sale, possession or transporting for purpose of sale (excluding pool frog).

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Species such as the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis* are listed in respect to sub-section 9 (1) & (5). For these species, it is prohibited to:

- Intentionally kill or injure these species; and
- Sell, offer or expose for sale, possess or transport for purpose of sale these species, or any part thereof.

Common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris* and palmate newt *L. helveticus* are listed in respect to sub-section 9 (5) only which affords them protection against sale, offering or exposing for sale, possession or transport for the purpose of sale.

How is the legislation pertaining to herpetofauna liable to affect development works?

The appropriate licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect the breeding sites or resting places of those amphibian and reptile species protected under The Conservation of Habitats and Species Regulations 2017 (as amended). A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the Wildlife and Countryside Act 1981 (as amended).

OTHER INVERTEBRATES

Three species of invertebrate are afforded protection under Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended): the large blue

butterfly *Phengaris arion*, Fisher's estuarine moth *Gortyna borelii lunata* and the little whirlpool ramshorn snail *Anisus vorticulus*. Regulation 43 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species;
- Deliberate disturbance of Schedule 2 species as:
  a) to impair their ability:
    (i) to survive, breed, or reproduce, or to rear or nurture young;
    (ii) to hibernate or migrate.
  b) to affect significantly the local distribution or abundance of the species.
- Damage or destruction of a breeding site or resting place; and
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

These species, and numerous other invertebrates, including the Norfolk hawker *Aeshna isosceles*, marsh fritillary *Euphydryas aurinia*, purple emperor *Apatura iris*, freshwater pearl mussel *Margaritifera margaritifera* and medicinal leech *Hirudo medicinalis*, are also protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). The degree to which the various invertebrate species are protected by this Act varies widely, ranging from full protection of the animal and its habitat to protection from sale only. Useful summaries of the level of protection afforded individual species can be found at https://hub.jncc.gov.uk/assets/478f7160-967b-4366-acdf-8941fd33850b.

For those afforded full protection, it is an offence to:

- Intentionally kill, injure or take (capture) a wild Schedule 5 invertebrate;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- Intentionally or recklessly disturb Schedule 5 invertebrates while they are occupying a structure or place used for shelter or protection; and
- Sell, offer or expose for sale, or have in his possession or transport for the purpose of sale, any live or dead Schedule 5 invertebrate or part thereof.

How is the legislation pertaining to protected invertebrates liable to affect development works?

A mitigation licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect invertebrate species protected under The Conservation of Habitats and Species Regulations 2017 (as amended). A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed and rear young). The licences are to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

There is no provision in law for the issuing of licences to permit the killing, injuring or taking of protected invertebrates, the damage, destruction or obstruction of access to places of shelter or protection, or the disturbance of invertebrates for the purposes of development. In situations where there is potential for impact, it must be shown that all reasonable effort has been made to avoid contravening the legislation, for example, by ensuring adequate surveys and mitigation measures are in place, that the use of alternative sites has been explored and that there has been liaison with the relevant countryside agency (e.g. Natural England or Natural Resources Wales). It will be necessary to carefully plan any development activities in areas with protected invertebrates; this is likely to require appropriate timing of works with measures to ensure minimal loss of habitat.

WILD MAMMALS (PROTECTION) ACT 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to:

- Mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any

wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

NON-NATIVE SPECIES (FAUNA)

Under Section 14 (1) of the Wildlife and Countryside Act 1981 (as amended), it is an offence to release, or allow to escape into the wild, any animal that is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state, or is listed on Schedule 9 of the Act. Examples of species included on Schedule 9 are signal crayfish *Pacifastacus leniusculus*, American mink *Neovison vison*, grey squirrel *Sciurus carolinensis* and European pond terrapin *Emys orbicularis*. In the main, Schedule 9 species are those that are already established in the wild, but which continue to pose a threat to the conservation of native biodiversity and habitats, such that further releases should be regulated. The Schedule also includes some native species, such as barn owl *Tyto alba*, to ensure that any releases or re-introduction programmes are undertaken in consultation with the relevant authorities and in accordance with best practice guidelines.

How is the legislation pertaining to non-native faunal species liable to affect development works?

In most cases, development works are unlikely to infringe the legislation. This is because such operations are unlikely to result in the release or escape of non-native faunal species. However, there may be circumstances, particularly where works involve watercourses or water bodies, which have the potential to exacerbate the spread of e.g. signal crayfish or certain fish or amphibian species. If this is deemed a possibility, it will be necessary to ensure appropriate preventative measures are in place prior to and during the works.

PLANTS AND FUNGI

All wild plants are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence for an 'unauthorised' person to intentionally uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Certain rare species of plant and fungi, for example some species of orchid, red-tipped cudweed *Filago lutescens*, spiked speedwell *Veronica spicata*, holly-leaved naiad *Najas marina*, field cow wheat *Melampyrum arvense* and sandy stilt puffball *Battarraea phalloides* are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) in respect of Section 13. This prohibits any person:

- Intentionally picking, uprooting or destruction of any wild Schedule 8 species; and
- Selling, offering or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or part thereof.

In addition to the legislation outlined above, several plant species, such as slender naiad *Najas flexilis*, fen orchid *Liparis loeselii* and early gentian *Gentianella anglica*, are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2017 (as amended). These are species of European importance. Regulation 45 makes it an offence to:

- Deliberately pick, collect, cut, uproot or destroy a wild Schedule 5 species; and
- Be in possession of, or control, transport, sell or exchange, or offer for sale or exchange any wild live or dead Schedule 5 species or anything derived from such a plant.

How is the legislation pertaining to protected plants liable to affect development works?

A mitigation licence issued by the relevant countryside agency (e.g. Natural England, Natural Resources Wales) will be required for works liable to affect species of plant listed under The Conservation of Habitats and Species Regulations 2017 (as amended). The licence is to derogate from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

INVASIVE PLANT SPECIES

Under Section 14 (2) of the Wildlife and Countryside Act 1981 (as amended), it is an offence to plant or otherwise cause to grow in the wild any species of plant listed on Part II of Schedule 9. Schedule 9 plant species include Japanese knotweed *Fallopia japonica*, giant

hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera*. In the main, Schedule 9 species are those that are already established in the wild, but which continue to pose a threat to the conservation of native biodiversity and habitats, such that further releases should be regulated.

How is the legislation pertaining to invasive plants liable to affect development works?

Although it is not an offence to have these plants on your land per se, it is an offence to cause these species to grow in the wild. Therefore, if they are present on site and development activities (for example movement of spoil, disposal of cut waste or vehicular movements) have the potential to cause the further spread of these species to new areas, it will be necessary to ensure appropriate measures are in place to prevent this happening prior to the commencement of works.

As a rule, planting on managed land (private gardens, estates and amenity planting, for example), where it is expected that the spread of the plant will be kept under control, and where the plant will not have an adverse impact, is not regarded as planting in the wild and thus would not constitute an offence. However, where the plant is inadequately managed or contained and is likely to have an adverse effect, it may. Whether or not planting is an offence should therefore be judged on a case by case basis, taking into account the potential impacts on habitats and native flora and fauna, and the existence or extent of management practices to be employed[17].

PLANTS: INJURIOUS WEEDS

Under the Weeds Act 1959 any land owner or occupier may be required prevent the spread of certain 'injurious weeds' such as spear thistle *Cirsium vulgare*, creeping thistle *Cirsium arvense*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, and common ragwort *Senecio jacobaea* onto agricultural land, particularly grazing areas or land which is used to produce conserved forage. It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes

[17] Defra (2010) Guidance on Section 14 of the Wildlife and Countryside Act, 1981. [ARCHIVED CONTENT] (nationalarchives.gov.uk)

a ragwort control code of practice[18] as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines on how to prevent the spread of this species but is not legally binding.

B EUROPEAN AND NATIONAL LEGISLATION AFFORDED TO SITES AND HABITATS

As for certain species described above, habitats and sites are also protected directly through the Wildlife & Countryside Act 1981 (as amended), The Conservation of Habitats and Species Regulations 2017 (as amended) and The 'Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) through the notification, classification or designation of various protected sites as detailed below.

In addition, The Environment Act 2021 and the Water Framework Directive indirectly afford protection to non-designated habitats through the duties placed on public and private bodies to promote nature conservation and biodiversity, for example, the creation of Local Nature Recovery Strategies (LNRS) and associated Species Conservation and Protected Site strategies, and to reduce or avoid harmful activities. Many of these duties and targets form the basis for national and local planning policy and wider conservation strategies and are not covered in detail here.

STATUTORY SITE DESIGNATIONS: NATIONAL

Nationally important areas of special scientific interest, by reason of their flora, fauna, or geological or physiographical features, are notified by the countryside agencies as statutory **Sites of Special Scientific Interest** (SSSI) under the National Parks and Access to the Countryside Act 1949 and latterly the Wildlife & Countryside Act 1981 (as amended). As well as underpinning other national designations (such as **National Nature Reserves** which are declared by the countryside agencies under the same legislation), the system also provides statutory protection for terrestrial and coastal sites which are important within a European context (formerly referred to as part of the Natura 2000 network and recently amended to the National Site Network in line with the UK's departure from the EU) and globally (such as Wetlands of International Importance) - see subsequent sections

[18] Defra (2004) Code of Practice on How to Prevent the Spread of Ragwort: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69264/pb9840-cop-ragwort.pdf

for details of these designations. Improved provisions for the protection and management of SSSI have been introduced by the Countryside and Rights of Way Act 2000.

The Wildlife & Countryside Act 1981 (as amended) also provides for the making of **Limestone Pavement Orders**, which prohibit the disturbance and removal of limestone from such designated areas, and the designation of **Marine Nature Reserves**, for which byelaws must be made to protect them.

STATUTORY SITE DESIGNATIONS: INTERNATIONAL

Special Protection Areas (SPAs), together with **Special Areas of Conservation** (SACs) form the basis of the **National Site Network** (until recently, these were part of the Natura 2000 network whilst the UK was part of the EU). SPAs are identified and classified by the Government under the EC Birds Directive (Council Directive 2009/147/EC (formerly 79/409/EEC)) on the Conservation of Wild Birds) via the mechanisms set out in the Habitats Regulations (as applicable at the time of classification).

SPAs are areas of the most important habitat for rare (listed on Annex I of the Directive) and migratory birds within the European Union. Protection afforded SPAs in terrestrial areas and territorial marine waters out to 12 nautical miles (nm) is given by The Conservation of Habitats & Species Regulations 2017 (as amended). The 'Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) provide a mechanism for the classification and protection of European Marine Sites or EMS (SPAs and SACs) in UK offshore waters (from 12-200 nm).

SACs are identified and designated under the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) via the mechanisms set out in the Habitats Regulations (as applicable at the time of designation). These are areas which have been identified as best representing the range and variety of habitats and (non-bird) species listed on Annexes I and II to the Directive within the European Union. SACs in terrestrial areas and territorial marine waters out to 12 nautical miles are protected under The Conservation of Habitats & Species Regulations 2017 (as

amended). The 'Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) provide a mechanism for the designation and protection of European marine sites or EMS (SACs and SPAs) in UK offshore waters (from 12-200 nm).

Ramsar sites are listed under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and wise use, in particular recognizing wetlands as ecosystems that are globally important for biodiversity conservation. Wetlands can include areas of marsh, fen, peatland or water and may be natural or artificial, permanent or temporary. Wetlands may also incorporate riparian and coastal zones adjacent to the wetlands. Ramsar sites are underpinned through prior notification as Sites of Special Scientific Interest (SSSI) and as such receive statutory protection under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CRoW) Act 2000. Policy statements have been issued by the Government highlighting the special status of Ramsar sites. This effectively extends the level of protection to that afforded to sites in England and Wales which have been designated under the EC Birds and Habitats Directives as part of the Natura 2000 network and now the National Site Network (e.g. SACs and SPAs).

STATUTORY DESIGNATIONS: LOCAL

Under the National Parks and Access to the Countryside Act 1949 **Local Nature Reserves** (LNRs) may be declared by local authorities after consultation with the relevant countryside agency. LNRs are declared for sites holding special wildlife or geological interest at a local level and are managed for nature conservation and provide opportunities for research and education and enjoyment of nature.

STATUTORY PROTECTION OF AQUATIC HABITATS

Water Framework Directive and The Environment Act 2021

Aquatic habitats are also afforded protection under The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, which transposes the Water Framework Directive 2000/60/EC (The WFD). At its core it aims to prevent deterioration of the water environment and improve water quality by managing water in natural river

basin districts, rather than by administrative boundaries. It looks at ecological, physico-chemical, quantitative and morphological aspects of the water environment and requires that improvements take account of economic aspects, including costs and benefits. Plans to improve the status of water bodies are set out in River Basin Management Plans (RBMPs). The Directive aims for 'good status' of all ground and surface water (rivers, lakes, transitional water and coastal waters) in the EU and the UK. The Environment Agency and Natural Resources Wales are the competent authorities for river basin planning in England and Wales.

Any works which could affect the hydro-morphology, ecology or water quality of any classified waterbody up to 1nm out to sea requires an assessment under the WFD to demonstrate how any adverse impacts will be mitigated and, where possible, the status of the waterbody enhanced in order to achieve the required good status targets. Construction must have no permanent, unmitigated effects which cause any deterioration in the current status of any surface-water or groundwater body. If a WFD assessment shows an activity will either cause a deterioration in the status of a water body or jeopardise a water body achieving good status, it may then be necessary to consider whether it meets the criteria for an Article 4(7) exemption[19].

The Environment Act also places a new statutory duty on government to produce a plan to reduce discharges from storm overflows, on water companies and the Environment Agency to publish data on storm overflow operation and on water companies to monitor the water quality upstream and downstream of storm overflows and sewage disposal works. The Act also contains a new duty on the water sector to create drainage and sewerage management plans and enables the revocation or variation of permanent abstraction licences where the change is necessary to protect the environment. This is because some older abstraction licences do not take account of fluctuating water availability and may enable too much water to be taken from the environment.

[19] https://circabc.europa.eu/sd/a/e0352ec3-9f3b-4d91-bdbb-939185be3e89/CIS_Guidance_Article_4_7_FINAL.PDF

NON-STATUTORY DESIGNATIONS

Areas considered to be of local conservation interest may be designated by local authorities as a **Wildlife Site**, under a variety of names such as **Local Wildlife Sites** (LWS), **County Wildlife Sites** (CWS), **Listed Wildlife Sites** (LWS), **Local Nature Conservation Sites** (LNCS), **Sites of Biological Importance** (SBIs), **Sites of Importance for Nature Conservation** (SINCs), or **Sites of Nature Conservation Importance** (SNCIs). The criteria for designation may vary between counties.

Together with the statutory designations, these are defined in Local Plan documents under the Town and Country Planning system and are a material consideration when planning applications are being determined. The level of protection afforded to these sites through local planning policies may vary between counties.

C PLANNING POLICY

NATIONAL PLANNING POLICY FRAMEWORK

The National Planning Policy Framework replaced PPS9 and emphasises the need for sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and priority species (see Section D below). An emphasis is also made for the need for ecological networks via preservation, restoration and re-creation. The protection and recovery of priority species is also listed as a requirement of planning policy. In determining planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from adverse harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

THE NATURAL ENVIRONMENT AND RURAL COMMUNITIES ACT 2006 AND THE BIODIVERSITY DUTY

Section 40 of The Natural Environment and Rural Communities (NERC) Act requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

LOCAL PLANS

Hillingdon Strategic Policies (2012) and Hillingdon Unitary Development Plan (2007) are the relevant policies relating to ecological requirements for planning applications.

Hillingdon Strategic Policies: Part 1

The Council will review all the Borough grade Sites of Importance for Nature Conservation (SINCs). Deletions, amendments and new designations will be made where appropriate within the Hillingdon Local Plan: Part 2- Site Specific Allocations Local Development Document. These designations will be based on previous recommendations made in discussions with the Greater London Authority.

Hillingdon's and geological conservation will be preserved and enhanced with particular attention given to:

1. The conservation and enhancement of the nature state of:
    - Harefield Gravel Pits;
    - Colne Valley Regional Park;
    - Fray's Farm Meadows; and
    - Harefield Pit.

2. The protection and enhancement of all Sites of Importance for Nature Conservation. Sites with Metropolitan and Borough Grade 1 importance will be protected from any adverse impacts and loss. Borough Grade 2 and Sites of Local Importance will be protected from loss with harmful impacts mitigated through appropriate compensation.
3. The protection and enhancement of populations of protected species as well as priority species and habitats identified within the UK, London and the Hillingdon Biodiversity Action Plans.
4. Appropriate contributions from developers to help enhance Sites of Importance for Nature Conservation in close proximity to development and to deliver/ assist in the delivery of actions within the Biodiversity Action Plan.
5. The provision of biodiversity improvements from all development, where feasible.
6. The provision of green roofs and living walls which contribute to biodiversity and help tackle climate change.
7. The use of sustainable drainage systems that promote ecological Connectivity and natural habitats.

The Council will implement Policy EM7 by:

- Raising the profile of the biodiversity and geological interests both locally, regionally and nationally;
- Supporting, improving and managing biodiversity interests and local geological sites through the planning process.
- Protecting and where feasible extend habitat and improve ecosystems throughout the borough and to areas beyond, by maintaining existing trees, native vegetation (adaptable to climate change) and open space and provide new areas of such London Borough of Hillingdon 116 Hillingdon Local Plan: Part 1 - Strategic Policies (Adopted November 2012) 8 Core Policies - Environmental Improvement vegetation (including the linking of existing fragmented areas) for the benefit of wildlife in accordance with the local Biodiversity Action Plan.
- Seeking and pooling contributions in accordance with the Planning Obligations Supplementary Planning Document towards the implementation of actions contained within Hillingdon's Biodiversity Action Plan.

- Working with partners, private landowners and other utility providers to achieve multi-functional use of land use that promotes and enhances biodiversity, adds to the green grid or achieves other open space outcomes, including improved accessibility.
- Working with local community groups/partners when reviewing the Biodiversity Action Plan.

Hillingdon Unitary Development Plan

Within the Hillingdon Unitary Development Plan, policies EC1, EC2, EC3, EC4, EC5 and EC6 relate to ecology and biodiversity requirements for developments.

- EC1: The Planning authority will not permit developments which would adversely affect the integrity of Site of Special Scientific Interest , or be unacceptably detrimental to sites of metropolitan or borough (Grade I) importance for nature conservation, designated local nature reserves and other nature reserves. If development is proposed on or in the near vicinity of such sites, applicants must submit an ecological assessment where considered appropriate by the local planning authority to demonstrate that the proposed development will not have unacceptable ecological effects.
- EC2: The local planning authority will promote nature conservation as a positive land use and will take nature conservation interests into account in considering proposal development of land especially within sites of Borough (Grade II) local importance, as defined by the London Ecology Unit. The protection of species afforded by the Wildlife and Countryside act 1981 (Amended 1985) will be a material consideration. Where appropriate the local planning authority may ask applicants to submit an ecological assessment before it determines development proposals.
- EC3: The local planning authority will require proposals for development in the vicinity of Sites of Nature Conservation Importance to have regard to the potential effects on such sites changes in the water table and of air, water, soil and other effects which may
- EC4: The local planning authority will continue to monitor existing Site of Nature Conservation Importance, in particular those vulnerable to development, and will seek

to identify new sites suitable for designation as Local Nature Reserves following appraisals of land for nature conservation opportunities.

- EC5: In determining Planning applications the local planning authority may require certain on-site ecological features to be retained in new developments and seek to enhance the nature conservation and ecological interest of sites or create new habitats through the use of planning conditions attached to planning permissions or through planning agreements negotiated with developers.
- EC6: Where existing derelict, damaged and temporarily vacant land has ecological, educational, recreation and social potential for the enjoyment and protection of nature of where justified by the ecological interest of the land or the needs of the local area, the local planning authority will seek to ensure the land or part of it is maintained temporarily or permanently as wildlife habitat.

D BIODIVERSITY ACTION PLANS (BAPs)

Since the publication of the UK BAP in 1994, new strategies and frameworks have resulted in the development of biodiversity issues and changes in the terminology used to describe these habitats and species in England. This has been brought about through the replacement of the previous England Biodiversity Strategy with *Biodiversity 2020: A Strategy For England's Wildlife and Ecosystem Services* (2011) and the replacement of the UK BAP itself with the *UK Post-2010 Biodiversity Framework* (2012). All previous UK BAP species and habitats are still of material consideration in the planning process but are now referred to as Habitats and Species of Principal Importance (as described under the NERC Act 2006 above).

The distribution of BAP/priority habitats has been used to identify Biodiversity Opportunity Areas at a regional scale through Biodiversity Strategies/Partnerships. They represent a strategic landscape scale approach to habitat creation, restoration or expansion. They represent regional priority areas of opportunity to restore and create key habitats. They are therefore a spatial representation of targets for Habitats of Principal Importance and are areas of opportunity, not constraint.

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- Haywards Heath: Unit 6 Basepoint; John De Mierre House, 20 Bridge Road, Haywards Heath, RH16 1UA. T: +44 (0)20 7394 3700
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