



Preliminary Ecological Appraisal and Preliminary Roost Assessment

Land at the Rear of 14 Bawtree Avenue, Uxbridge, UB8 1PU

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Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

This approach is enshrined in Government planning guidance, for example, paragraph 174 of the National Planning Policy Framework for England.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Amar Sidhu to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Land at the Rear of 14 Bawtree Avenue UB8 1PU (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the existing sheds and erection of two semi-detached 3-bedroom houses with private gardens and car parking area (hereafter referred to as “the proposed development”).

The following is work you will need to commission to obtain planning permission and to comply with legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in Table 8 of this report.

Feature	Foreseen Impacts	Recommendations <i>Measures required to adhere to guidance, legislation and planning policies.</i>
Reptiles	Grassland, scrub and piles of earth & deadwood will be removed during construction. The loss of such habitats is likely to be inconsequential to local reptile populations owing to the presence of more extensive habitat locally. However, site clearance could result in the death or injury of reptiles, if present.	Given the size and possible impacts of the proposed development, further surveys are considered disproportionate. A precautionary working method will be implemented during construction, including the following measures: • Site clearance will be undertaken outside of the reptile hibernation season (November to February) insofar as is possible. • A toolbox talk will be given to contractors regarding the possible presence of reptiles at the site. • A pre-commencement inspection of the site will be undertaken for reptiles. • A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 15cm and left overnight to allow any reptiles to disperse. The vegetation can then be cleared to ground level and must be maintained at this level for the duration of construction to deter reptiles from the working area. • Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent reptiles from utilising these areas. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • In the unlikely event that a reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist.
Roosting bats (B1)	Bats are very unlikely to be roosting within B1 and as such, there are not anticipated to be any impacts on bats in this location as a result of the proposed development.	In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.

Foraging and commuting bats	The proposed development will result in the loss of small areas of shrubs and hedgerow but given the presence of more extensive and better-connected areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats.	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light. • Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.
Hedgehog	Deadwood, hedgerows and shrubs will be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to the presence of more extensive habitat locally.	A precautionary working method will be implemented during construction, including the following measures: • A toolbox talk will be given to contractors regarding the possible presence of hedgehogs at the site. • A pre-commencement inspection of the site will be undertaken for hedgehogs. • If any hedgehogs are found in the working area these should be moved by hand to a vegetated area along the site boundaries or in retained habitats away from disturbance. • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape.

		• The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.
Birds	Hedgerows and shrubs will be removed during construction. The loss of such habitats is likely to be inconsequential to local bird populations owing to the presence of more extensive habitat locally. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Amar Sidhu to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Land at the Rear of 14 Bawtree Avenue UB8 1PU (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the existing sheds and erection of two semi-detached 3-bedroom houses with private gardens and car parking area (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

The aim of the PEA was to obtain data on existing ecological conditions, and to conduct a preliminary assessment of the likely significance of ecological impacts on the proposed development. The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging or commuting.

No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author’s knowledge, by any other consultancy.

1.2 Site Context

The site is located at National Grid Reference TQ 05570 84583 and has an area of approximately 0.1ha comprising a derelict garage/shed, trees, shrubs and scrub. It is surrounded by urban residential roads with Fray’s River to the west and Fassnidge Park to the south.

A site location plan is provided in Appendix 2.

1.3 Scope of the Report

The PEA element of this report describes the baseline ecological conditions at the site, evaluates habitats within the survey area in the context of the wider environment and describes the suitability of those habitats for notable or protected species. It identifies possible ecological constraints as a result of the proposed development and summarises the requirements for further surveys and mitigation measures to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation.

The PRA element of this report provides a description of all features suitable for roosting, foraging and commuting bats and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It provides information on possible constraints to the proposed development as a result of bats and summarises the requirements for any further surveys to inform subsequent mitigation proposals, achieve planning or other statutory consent and to comply with wildlife legislation.

To achieve this, the following steps have been taken:

- A desk study has been carried out.
- A field survey has been undertaken to record baseline information on the site and surrounding area including habitat types and their suitability for notable or protected species, including roosting bats.

- Invasive plant and animal species (such as those listed on Schedule 9 of the Wildlife & Countryside Act) have been identified.
- Potential impacts on features of value, as a result of the proposed development, have been identified.
- Recommendations for further surveys and mitigation have been made.
- Opportunities for the enhancement of the site for biodiversity have been set out.

2.0 Methodology

2.1 Desk Study

The desk study included a 2km radius review of statutory designated sites and notable habitats as well as a 2km radius review of granted European Protected Species Licence (EPSL) and notable species records held on magic.gov.uk database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps. Existing biological records including notable species and non-statutory designated sites within a 2km radius were obtained from Greenspace Information for Greater London CIC (GiGL).

2.2 Field Survey

The survey was undertaken by James Fielding PhD BA (Hons), Graduate Ecologist (Accredited Agent under Natural England Bat Licence Number- 2016-22119-CLS-CLS) on 14/01/2022.

Preliminary Ecological Appraisal

An extended habitat survey was undertaken, following the methodology set out in *Phase 1 Habitat Survey Methodology* (JNCC, 2010). All land parcels are described and mapped and, where appropriate, target notes provide supplementary information on habitat conditions, features too small to map to scale, species composition, structure and management.

During the survey, habitats were assessed for their suitability to support protected species, and field signs indicating their presence recorded. The assessment takes into consideration the findings of the desk study, the habitat conditions on site and in the context of the surrounding landscape, and the ecology of the protected species.

Ponds on and adjacent to the site were assessed for their suitability to support great crested newts *Triturus cristatus* using the *Habitat Suitability Index (HSI) Assessment Methodology* (Oldham et al, 2000).

Preliminary Roost Assessment

The PRA focussed on one build structure (a shed) which will be demolished in the proposed development as well as providing an overview of the wider site and the surrounding landscape for bat roosting, foraging and commuting habitat.

For any surveyed buildings:

A non-intrusive visual appraisal was undertaken from the ground, using binoculars to inspect the external features of the building for features which bats could use for roosting, including access or egress points and for signs of bat use including droppings, scratch marks, insect remains and urine smear marks. An internal inspection of the building was also made, including the living areas and any accessible roof spaces, using a torch and ladders.

Suitability Assessment

Built structures were categorised according to the likelihood of bats being present and the types of roost that the identified features could support. This is summarised in Table 1 for buildings below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 1: Features of a building that are correlated with use by bats

Classification	Feature of building and its context
Moderate to high	Buildings or structures with features of particular significance for larger numbers of roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known or likely roosts (based on historical data). Buildings with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Low	A small number of possible roost sites or features, used sporadically by individual or small numbers of bats. Potential roost features may be suboptimal for reasons such as shallow depth, poor thermal qualities or upwards orientation with exposure to inclement weather or predators. Habitat suitable for foraging in close proximity, but isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.
Negligible	Unsuitable for use by bats.

2.3 Limitations

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

The survey was completed during the sub-optimal survey period limiting the identification of ground flora species. In particular, a heavy frost was present on the day of the survey, limiting vegetative ID.

These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

3.0 Results and Evaluation

3.1 Desk Study Results

A summary of desk study results is provided below.

The data search contains confidential information that is not suitable for public release and has been analysed and summarised for presentation in this report. Full records data can be provided upon request.

Designated Sites

Details of any statutory and non-statutory designated sites within a 2km radius of the site, including their reasons for notification, are provided in Table 3 below.

The site lies within the impact risk zone for Denham Lock Wood and Kingcup Meadows and Oldhouse Wood Sites of Special Scientific Interest (SSSIs). The proposed development is not listed as a possible high risk with regard to these designations.

Table 2: Statutory and non-statutory designated sites within 2km radius of the site

Designated site name	Distance from site (approx.)	Reasons for notification
Denham Lock Wood (SSSI)	~1100m north	Denham Lock Wood is a diverse area of open mire and wet woodland which shows a zonation of wetland habitats occurring rarely in Greater London. The woodland herb flora is particularly varied and reflects subtle differences in topography and drainage. The site occupies a low-lying and poorly drained area on the floor of the Colne Valley. Generally the water table is at or near the soil surface through most of the year and in parts there is periodic flooding as a result of local variations in topography. These conditions have favoured the establishment of distinctive ecological transitions from open flood plain mire, through willow carr to wet valley alderwood. Woods of alder <i>Alnus glutinosa</i> and crack willow <i>Salix fragilis</i> dominate a major part of the site and also form a scattered understorey within a derelict plantation of poplar. On the more waterlogged ground the willow characteristically occurs as a dense tangle of fallen and leaning trees. These support assemblages of epiphytic mosses, ferns and herbs and add to the varied woodland structure. In drier parts a shrub layer is present comprising mainly hazel coppice <i>Corylus avellana</i>. Other shrubs such as grey willow <i>Salix cinerea</i> and the locally uncommon guelder rose <i>Viburnum opulus</i> also occur and in places form a transitional carr between the woodland and open mire. The open areas of flood plain mire are characterised by plant communities typical of a rich fen habitat. A mix of greater pond-sedge <i>Carex riparia</i> and lesser pond-sedge <i>Carex acutiformis</i> is widely dominant and locally occurs in association with common reed <i>Phragmites australis</i> and reed canary-grass <i>Phalaris arundinacea</i>. Other well-represented species include meadowsweet <i>Filipendula ulmaria</i>, purple loosestrife <i>Lythrum salicaria</i>, and common comfrey <i>Symphytum officinale</i>. These communities grade into a more open sedge-dominated sward on the waterlogged soils under the carr and woodland. In places where the watertable falls there is a particularly diverse woodland herb flora which shows an interesting pattern of plant associations. Included among the range of species present are bugle <i>Ajuga reptans</i>, male-fern <i>Dryopteris filixmas</i>, herb Robert <i>Geranium robertianum</i>, dog's mercury <i>Mercurialis perennis</i>, bramble <i>Rubus fruticosus</i>, red campion <i>Silene dioica</i> and shade tolerant plants of the open mire habitat. Derelict drains support other herbs such as marsh-marigold <i>Caltha palustris</i>, an uncommon species in Greater London due to the decline of similar wetland areas.

Denham Country Park Local Nature Reserve (LNR)	~1500m north	A public park and local nature reserve, it has notable wildlife including herons, kingfishers, damselflies and dragonflies.
Denham Quarry Park (LNR)	~1500m north	The park is home to a mix of wildlife including herons, kingfishers, damselflies and dragonflies which make their homes in the wet meadows and the flooded quarry.
Frays Valley (LNR)	~1600m north	The LNR lies within Colne Valley Park and includes two Special Sites of Scientific Interest at Fray's Farm Meadow and Denham Lock Wood, five wet gravel pits, Harefield Place Nature Reserve, a small part of Harefield Golf Course, a small part of Denham Lock Meadow adjacent to the Frays River and the length of Frays River within these boundaries. The whole of the LNR contains a wide diversity of habitats. The flooded gravel pits provide valuable habitat for wildfowl, and Fray's Farm Meadows represent some of the last remaining examples of wet alluvial grassland in Greater London and are important for a variety of plant species. A number of ancient woodland herbs that are extremely uncommon in Greater London and the protected Desmoulin's Whorl snail (<i>Vertigo moulinsiana</i>) are present in Denham Lock Woods.
Fray's Farm Meadows (LNR)	~1800m north	Fray's Farm Meadows are one of the last remaining examples of relatively unimproved wet alluvial grassland in Greater London and the Colne Valley. The meadows contain a variety of grassland communities which range from the grazed grassland of sweet vernal-grass <i>Anthoxanthum odoratum</i>, crested dog's-tail <i>Cynosurus cristatus</i> and perennial rye-grass <i>Lolium perenne</i> through to areas of tall sedge dominated marshy grassland with lesser pond sedge <i>Carex acutiformis</i> and reed-grass <i>Glyceria maxima</i>. The linear features of the site - ditches, hedges and railway embankment - add further habitat diversity, and contribute to the richness of plants and animals present. In addition to the commoner sedges and grasses the meadows contain a number of species characteristic of old grassland such as lady's smock <i>Cardamine pratensis</i> and large bird's trefoil <i>Lotus uliginosus</i>. Also found are plants like ragged robin <i>Lychnis flos-cuculi</i>, and marsh marigold <i>Caltha palustris</i> which are becoming increasingly uncommon in the London area due to habitat destruction. Purple loosestrife <i>Lythrum salicaria</i> and common skullcap <i>Scutellaria galericulata</i> grow along ditch banks while water plantain <i>Alisma plantago-aquatica</i>, water cress <i>Rorippa nasturtium-aquaticum</i>, water forget-me-not <i>Myosotis scorpioides</i> and amphibious bistort <i>Polygonum amphibium</i> are amongst the common plants in the ditches. The Fray's River has a similar flora to the ditches but also includes arrow-head <i>Sagittaria sagittifolia</i>. The entomological interest of the site is well documented with a good variety of dragonflies and butterflies recorded from this section of the Colne Valley. The meadows also provide good cover for waders and wildfowl throughout the year and wintering species include Jack snipe, snipe, lapwing, teal and shoveler. With the loss of washland areas throughout London the site becomes increasingly valuable as a relict habitat.
Kingcup Meadows and Old House Wood (SSSI)	~1950m north-west	Kingcup Meadows and Oldhouse Wood constitutes an intimate mosaic of habitats adjacent to the River Alderbourne, which includes woodland, unimproved pastures and semi and unimproved meadowland. The fields are comprised of dry grassland, wet grassland and areas of fen and swampy vegetation. g. Old anthills are a feature of the unimproved dry grassland. The grasses here include red fescue <i>Festuca rubra</i> and crested dog's tail <i>Cynosurus cristatus</i> , with herbs such as devil's-bit scabious <i>Succisa pratensis</i> , cat's-ear <i>Hypochoeris radicata</i> , common knapweed <i>Centaurea nigra</i> and ox-eye daisy <i>Leucanthemum vulgare</i> .
Non-statutory sites		

Uxbridge Ponds Site of Importance for Nature Conservation (SINC)	~600-1000m north-east	Three ponds in Uxbridge which support amphibians, including two which are breeding ponds for great crested newts. These three ponds in Uxbridge support important populations of amphibians, including the specially protected great crested newt in two of the ponds. The northern pond has full public access, but there is no access to the other two. Park Road Pond (Brearley Close Pond) has equal areas of open standing water and emergent vegetation, including great reedmace (<i>Typha latifolia</i>), yellow iris (<i>Iris pseudacorus</i>) and soft rush (<i>Juncus effusus</i>). Gipsywort (<i>Lycopus europaeus</i>), celery-leaved buttercup (<i>Ranunculus sceleratus</i>) and water-plantain (<i>Alisma plantago-aquatica</i>) are also present. The waterbody itself contains bladderwort (<i>Utricularia australis</i>), which is very rare in London, along with occasional water-starwort (<i>Callitriche stagnalis</i>). It is dominated in parts by parrot's-feather (<i>Myriophyllum aquaticum</i>), an invasive introduced species, which requires control. The pond has frequent trees and shrubs around the southern edge whereas the northern part grades into a small area of wet woodland dominated by common alder (<i>Alnus glutinosa</i>) and crack willow (<i>Salix fragilis</i>) with an understorey of grey willow (<i>Salix cinerea</i>). Uxbridge Common Pond is set in mown grassland and scattered trees and is dominated by reed sweet-grass (<i>Glyceria maxima</i>) and the highly-invasive New Zealand Pigmyweed (<i>Crassula helmsii</i>) as well as parrot's-feather. The locally scarce mare's-tail (<i>Hippuris vulgaris</i>) and white water-lily (<i>Nymphaea alba</i>) are present in the pond with trifold bur-marigold (<i>Bidens tripartita</i>) and clustered dock (<i>Rumex conglomeratus</i>) at the margins. The bank is dominated by a mix of creeping bent (<i>Agrostis stolonifera</i>), perennial rye-grass (<i>Lolium perenne</i>) and Yorkshire fog (<i>Holcus lanatus</i>) with scattered shrubs and trees including crack willow, white willow (<i>Salix alba</i>) and ash (<i>Fraxinus excelsior</i>). The northern edge of the common consists of sandy soil with an acid grassland and scrub flora. Abundant sheep's sorrel (<i>Rumex acetosella</i>) is present, with occasional gorse (<i>Ulex europaeus</i>) and broom (<i>Cytisus scoparius</i>). Both pond and common would benefit from appropriate management. Uxbridge College Pond is heavily shaded by grey willow, weeping willow (<i>Salix x sepulcralis</i>) and sycamore (<i>Acer pseudoplatanus</i>) and covered by common duckweed (<i>Lemna minor</i>). No emergent plants are visible. The pond supports great crested newts and common frogs. The surrounding woodland is contiguous with that of the railway embankment.
London's Canals (SINC)	~1000m south-west and beyond	London's canals provide a home for many fish and aquatic plants, and are a great way to enjoy the natural world in some of the city's most built-up areas. London's canals support a wide range of aquatic flora, amongst which are found a number of locally uncommon species. These include narrow-leaved water plantain (<i>Alisma lanceolatum</i>), rigid hornwort (<i>Ceratophyllum demersum</i>) and shining pondweed (<i>Potamogeton lucens</i>), all species of clean, clear waters. Many waterside plants, including several London rarities, also grow on the brickwork and banks of the canal. The canals also support an important invertebrate fauna (including several species of dragon/damselflies), a diverse fish community, and breeding waterfowl. London's network of canals fulfill an important function in allowing nature into heavily built-up environments. The towpath and associated areas of waste ground, especially in East London, support a number of uncommon species of disturbed ground. The whole of the Grand Union Canal system in London, including the Regent's and Hertford Union Canals, is included in this single Metropolitan site.
Frays River at Uxbridge Moor (SINC)	~1000m south-west	This section of the Fray's River flows through urban Uxbridge and Cowley; those parts adjacent to open spaces such as Rockingham Recreation Ground hold a reasonable diversity of wetland plants and waterfowl, which are appreciated by local people. Stands of reed sweet-grass (<i>Glyceria maxima</i>), reed canary-grass (<i>Phalaris arundinacea</i>) and fool's water-cress (<i>Apium nodiflorum</i>) at the water's edge provide refuge and foraging for moorhen and potential habitat for dragonflies and damselflies. Vegetation beneath the water's surface includes fennel-leaved pondweed (<i>Potamogeton pectinatus</i>) and also water-starwort (<i>Callitriche sp.</i>). There are two small wooded islands within the river, situated between private houses and industry. Crack willow (<i>Salix fragilis</i>) seems to be dominant, with occasional poplars (<i>Populus sp.</i>). Mallards and mute swans nest on these islands. The river forms a valuable wildlife corridor through this built-up area. There is public access along parts of Fray's River, but not to the islands.

Uxbridge Common Meadows (SINC)	~1200m north-east	The River Pinn meanders through this large area of old meadows, hedgerows and small woods. The river is heavily shaded and as a result very few aquatic plants are found. Crack willow (<i>Salix fragilis</i>) is frequent along the banks and branched bur-reed (<i>Sparganium erectum</i>) is dominant in some of the less-shaded areas with occasional water chickweed (<i>Myosoton aquaticum</i>). A wide, wooded ditch and the section of the River Pinn to the south of the railway and north of Sweetcroft Lane are both rich in plant species; the former includes abundant yellow iris (<i>Iris pseudacorus</i>) and frequent yellow loosestrife (<i>Lysmachia vulgaris</i>), the latter an uncommon species in London. The section of the Pinn that runs under the railway is a good wildlife corridor with a wide strip of riparian vegetation. The main part of the site comprises grasslands of locally-dominant false oat-grass (<i>Arrhenatherum elatius</i>), perennial rye-grass (<i>Lolium perenne</i>) and Yorkshire fog (<i>Holcus lanatus</i>) with abundant sheep's sorrel (<i>Rumex acetosella</i>) and frequent yarrow (<i>Achillea millefolium</i>). Hedgerows separating the sports fields are dominated by hawthorn (<i>Crataegus monogyna</i>) with blackthorn (<i>Prunus spinosa</i>) and English elm (<i>Ulmus procera</i>). A shaw (a narrow strip of woodland) exists as a field boundary and may be a remnant of ancient woodland. The canopy is dominated by oak (<i>Quercus</i> sp.) and hornbeam (<i>Carpinus betulus</i>). Field maple (<i>Acer campestre</i>), blackthorn, and hawthorn are the major understorey shrubs, with bramble (<i>Rubus fruticosus</i> agg.), ivy (<i>Hedera helix</i>), hairy brome (<i>Bromopsis ramosus</i>) and ground-ivy (<i>Glechoma hederacea</i>) forming the ground flora. Woodland has developed along the railway embankment with crack willow and grey willow (<i>S. cinerea</i>) at the wetter base with English oak (<i>Quercus robur</i>), ash (<i>Fraxinus excelsior</i>) and sycamore (<i>Acer pseudoplatanus</i>) over hawthorn (<i>Crataegus monogyna</i>) and English elm (<i>Ulmus procera</i>) higher up the slopes.
Little Britain (SINC)	~1500m south	A section of the Colne Valley with a remarkable variety of wildlife habitats, including lakes, rivers, scrub, areas of wasteland, woodland and grassland. This area of the Colne valley has a remarkable variety of habitats including lakes, rivers, scrub, areas of wasteland, woodland and neutral grassland. The Colne and Frays rivers are clean, fast flowing and support an interesting range of marginal habitats, including valuable areas of wet woodland. Unbranched bur-reed (<i>Sparganium emersum</i>) and water dock (<i>Rumex hydrolapathum</i>) both occur in the Frays. Of particular importance are the areas of unimproved floodplain grassland, which support a lush flora including the nationally scarce tasteless water-pepper (<i>Polygonum mitis</i>) and London rarities marsh arrowgrass (<i>Triglochin palustre</i>), marsh speedwell (<i>Veronica scutellata</i>) and sharp-flowered rush (<i>Juncus acutiflorus</i>), as well as abundant ragged-robin (<i>Lychnis flos-cuculi</i>). The lakes were originally gravel pits which now attract various breeding and wintering birds, despite the heavy angling presence. Other former pits have been landfilled and capped, and now support early successional communities, scrub and young woodland. The site supports specially-protected water voles and there are also recent reports of otters in the vicinity. The area is also of importance for bats, with noctule, Daubenton's bat and soprano pipistrelle all present in good numbers.
Mid Colne Valley (SINC)	~1500m north	A section of the Colne Valley with a remarkable range of high-quality wetland habitats, including three Sites of Special Scientific Interest. This section of the Colne Valley includes a diverse range of high quality habitats. Several waterways include the Frays River, from which 53 species of aquatic and wetland plants have been recorded. The unimproved wet pastures of Frays Farm Meadows (a Site of Special Scientific Interest and Local Nature Reserve managed by the London Wildlife Trust and Hillingdon Natural History Society) support a very rich flora, including locally uncommon species such as marsh-marigold (<i>Caltha palustris</i>) and ragged-robin (<i>Lychnis flos-cuculi</i>).

Common Plantation and Park Wood (SINC)	~1800m north-east	Common Plantation and The Clump lie to the west of the River Pinn and are split in two by Western Avenue (A40). The canopies of both stands are dominated by pedunculate oak (<i>Quercus robur</i>), sycamore (<i>Acer pseudoplatanus</i>) and ash (<i>Fraxinus excelsior</i>). The understorey of both comprises abundant hawthorn (<i>Crataegus monogyna</i>), wych elm (<i>Ulmus glabra</i>), English elm (<i>Ulmus procera</i>), elder (<i>Sambucus nigra</i>), with frequent holly (<i>Ilex aquifolium</i>) and yew (<i>Taxus baccata</i>) in the northern section. Damp areas support grey, crack and goat willows (<i>Salix cinerea</i>, <i>S. fragilis</i> and <i>S. caprea</i>). The woodland floors are dominated by bramble (<i>Rubus fruticosus agg.</i>), bluebell (<i>Hyacinthoides non-scripta</i>) and cow parsley (<i>Anthriscus sylvestris</i>), with some bracken (<i>Pteridium aquilinum</i>) and hogweed (<i>Heracleum sphondylium</i>). The invasive Indian balsam (<i>Impatiens glandulifera</i>) is frequent in the damper areas. Park Wood lies to the east of the River Pinn and is believed to be a remnant of ancient woodland. The canopy is fairly open and unusually, dominated by ash and wych elm, interrupted by a few pedunculate oak standards. The understorey is particularly rich in shrubs including much blackthorn (<i>Prunus spinosa</i>), hawthorn, spindle (<i>Euonymus europaeus</i>), hazel (<i>Corylus avellana</i>), dogwood (<i>Cornus sanguinea</i>) and field maple (<i>Acer campestre</i>). The ground flora is dominated by bramble and ground-elder (<i>Aegopodium podagraria</i>). The River Pinn flows through the woodland, where dense shade has reduced the aquatic flora to just a few plants of unbranched bur-reed (<i>Sparganium emerum</i>) submerged in the channel and sparse reed canary-grass (<i>Phalaris arundinacea</i>) in an open part just before it flows under the A40 road. The main riparian trees are crack willow and common alder (<i>Alnus glutinosa</i>). Beneath grow Yorkshire fog (<i>Holcus lanatus</i>), bramble and nettle and the exotic species giant hogweed (<i>Heracleum mantegazzianum</i>) and Indian balsam. The river probably provides an excellent route between areas to the north and those to the south of the A40, a major barrier to wildlife dispersal. Some sensitive management, including control of giant hogweed along the riverbanks, is needed to retain the conservation importance of this site.
Harefield Hall and The Lodge (SINC)	~1900m north	This is a complex site with a variety of habitats. The woodland forms part of the golf course and is dominated by pedunculate oak (<i>Quercus robur</i>). Other less abundant species include English elm (<i>Ulmus procera</i>), common lime (<i>Tilia x europaea</i>) and ash (<i>Fraxinus excelsior</i>) over an understorey of yew (<i>Taxus baccata</i>), holly (<i>Ilex aquifolium</i>), cherry laurel (<i>Prunus laurocerasus</i>) and Portugal laurel (<i>P. lusitanica</i>), the latter two being introduced species once used as cover for rearing game-birds. The ground flora is sparse due to the dense shade, but includes bramble (<i>Rubus fruticosus agg.</i>), male and broad buckler ferns (<i>Dryopteris filix-mas</i> and <i>D. dilatata</i>) and the locally scarce butcher's-broom (<i>Ruscus aculeatus</i>). Adjoining the golf course woodland are the gardens of Harefield Hall, a large country house used as a corporate headquarters. There are many scattered trees, some native and some exotic, several of which are very old, including an impressive oak. An old orchard of apple (<i>Malus domestica</i>) trees over a species-rich sward is likely to be valuable for invertebrates. A small pond abuts the orchard and holds a reasonable variety of wetland plants including yellow iris (<i>Iris pseudacorus</i>), gipsywort (<i>Lycopus europaeus</i>) and bittersweet (<i>Solanum dulcamara</i>), with the surface blanketed in duckweed (<i>Lemna minor</i>). The rest of the grounds have a range of habitats, including a small patch of dense yew woodland, more open woodland of oak, silver birch (<i>Betula pendula</i>) and elder (<i>Sambucus nigra</i>) with patches of sheep's fescue (<i>Festuca ovina</i>), grazed pasture, amenity grassland and shrubberies.
Uxbridge and Hillingdon Cemeteries (SINC)	~1900m north-east	These two cemeteries contain flower-rich grassland with mouse-ear hawkweed (<i>Pilosella officinarum</i>), burnet saxifrage (<i>Pimpinella saxifraga</i>), germander speedwell (<i>Veronica chamaedrys</i>) and yarrow (<i>Achillea millefolium</i>) within a sward dominated by red fescue (<i>Festuca rubra</i>). Patches of taller grasses and flowers provide variation. The gravestones and walls are well-vegetated with lichens and bryophytes and are worthy of a further survey. There are scattered native and introduced trees including yew (<i>Taxus baccata</i>), holly (<i>Ilex aquifolium</i>), common lime (<i>Tilia x europaea</i>), monkey puzzle (<i>Araucaria araucana</i>) and other conifers, as well as an area of woodland consisting of pedunculate oak (<i>Quercus robur</i>), ash (<i>Fraxinus excelsior</i>) and sycamore (<i>Acer pseudoplatanus</i>) over elder (<i>Sambucus nigra</i>) and rhododendron (<i>Rhododendron ponticum</i>). Birds seen regularly in the cemeteries include green woodpecker.

Hillingdon Court Park (SINC)	~1900m south-east	This large park consists mostly of amenity grassland with scattered trees, with a small areas of woodland and wetland providing habitat diversity. The park provides access to nature in an area lacking in accessible wildlife sites. The park contains a good range of trees, from young to very old. Around the edges and scattered across the park are native trees and shrubs including beech (<i>Fagus sylvatica</i>), silver birch (<i>Betula pendula</i>), hornbeam (<i>Carpinus betulus</i>) and holly (<i>Ilex aquifolium</i>), and non-native species including sycamore (<i>Acer pseudoplatanus</i>), Turkey oak (<i>Quercus cerris</i>), red oak (<i>Q. rubra</i>) and rhododendron (<i>Rhododendron ponticum</i>). An open clump of trees in the park is dominated by large pedunculate oaks (<i>Quercus robur</i>) with a ground flora of bramble (<i>Rubus fruticosus</i> agg.), Timothy (<i>Phleum pratense</i>), cock's-foot (<i>Dactylis glomerata</i>) and broad-leaved dock (<i>Rumex obtusifolius</i>). The mature trees in the park provide roosting sites for in excess of 100 starlings, a declining species. Some ditches and a damp corner near the bowling green support locally abundant redshank (<i>Persicaria maculosa</i>) and brooklime (<i>Veronica beccabunga</i>) with lesser amounts of cuckooflower (<i>Cardamine pratensis</i>), hard and soft rushes (<i>Juncus inflexus</i> and <i>J. effusus</i>), watercress (<i>Rorippa nasturtium-aquaticum</i>) and marsh bedstraw (<i>Galium palustre</i>), the latter two species being locally scarce. A small wood to the south of Court Drive is dominated by English oak, with English elm (<i>Ulmus procera</i>) and sycamore, over hazel (<i>Corylus avellana</i>), hawthorn (<i>Crataegus monogyna</i>), holly and elder (<i>Sambucus nigra</i>). The ground flora comprises mainly bramble, with common nettle (<i>Urtica dioica</i>), hogweed (<i>Heracleum sphondylium</i>) and ivy (<i>Hedera helix</i>).
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Landscape

A review of aerial photographs (Google Earth) the magic.gov.uk database and OS maps has been undertaken. Collated together, the value of the landscape in terms of biodiversity is described below:

The site is in an urban area of north-west Uxbridge. The immediate surroundings, and the landscape to the south and east, is dominated by urban sprawl. 1km to the south there is an area of parkland, Fassnidge Park, and 500m to the west are several rivers and water features - Fray's River, Shire Ditch and the River Colne, which will provide abundant insect foraging for birds and bats. Further to the west is Colne Valley Regional Park, and 1km to the south-west is Uxbridge Moor. 1km to the north of the site, the landscape is bisected by the A40 which runs east-west and will reduce landscape connectivity.

Notable Habitats

Notable habitats within 2km are listed in Table 3.

Table 3: Notable habitats within 2km of the site

Habitat	Closest distance from site
Deciduous woodland	350m north-west
Ancient woodland	1100m north-east
Good quality semi-improved grassland	1100m north
Lowland fens	1200m north
Traditional orchards	1400m north-west
Woodpasture and parkland	1800m west

3.2 Field Survey Results

The results of the field survey are illustrated in Appendix 3. The weather conditions recorded at the time of the survey are shown in Table 4.

Table 4: Weather conditions during the survey

Date: 16/01/2022	
Temperature	13°C
Humidity	35%
Cloud Cover	0%
Wind	1mph
Rain	None
Notes	Heavy ground frost

Habitats and Flora

The following habitats are present within and adjacent to the site:

- A2.1 Dense continuous scrub
- J1.2 Amenity grassland
- J4 Bare ground
- J2.1 Intact hedge (species poor)
- J2.4 Fence
- J5 Hardstanding
- J2.5 Wall

Small amounts of J1.4 Introduced Shrub and ruderal weeds are present but have been represented with target notes due to their small size.

A description and photograph of each habitat is provided in Table 6.

Table 5: Description and photographs of habitats within and adjacent to the site

Habitat Type	Habitat description	Photograph
A2.1 Dense continuous scrub	The site is dominated by dense continuous scrub, with principal species including common ivy <i>Hedera helix</i> , holly <i>Ilex aquifolium</i> , Leyland cypress <i>Cupressus × leylandii</i> , pussy willow <i>Salix cinerea</i> and cherry laurel <i>Prunus laurocerasus</i> .	
J1.2 Amenity grassland	A very small area of grassland is present in the middle of the site. Heavy frost made species identification difficult but species included perennial ryegrass <i>Lolium perenne</i> , curled dock <i>Rumex crispus</i> , and nettle <i>Urtica dioica</i> .	

J4 Bare ground	The shed on site is surrounded by an area of bare ground and wood chippings.	 14 Jan 2022 10:57:26
J2.1 Intact hedge (species poor) and J2.4 Fence and J5 Hardstanding	The site is subdivided by a chain link fence which is covered by a hedge of holly, bramble <i>Rubus fruticosus</i> and common ivy. A similar hedge/fence is present on the site's western boundary. The eastern side of the site contains a gravel hardstanding drive used for parking. A wooden fence is present on the site's eastern boundary.	 14 Jan 2022 10:43:54

J2.5 Wall	A brick wall with wooden gates is present at the site's southern boundary.	
Target Note 1: Fox scat	Fox scat was found on a raised pipe on site (circled in red). Although not recently deposited and non-pungent, they were likely deposited within the last few months.	

Target Note 2: Introduced shrub	<i>Buddleia davidii</i> (an invasive but naturalized plant species) was recorded at two points on the eastern boundary of the site.	
Target Note 3: Small ruderals and weeds	Several small ruderals and weeds such as curled dock, creeping thistle <i>Cirsium arvense</i> and foxglove <i>Digitalis purpurea</i> are present along the edges of the hardstanding drive on the eastern side of the site. It is possible that if the site was surveyed during summer these would form a mappable sub-region of tall ruderals.	

Target Note 4 : Wood or dirt piles	The site contains several piles of deadwood, heaped earth and piles of debris and trash (circled in red) which could act as refugia for reptiles/amphibians, provide useful foraging habitat for hedgehogs, and act as useful invertebrate habitat (in the case of the deadwood).	
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Fauna

Bats

The results of the PRA are provided in Table 6. No evidence of roosting bats was identified during the survey.

Table 6: Assessment of the suitability of the site for bats

Feature	Photographs
Building B1 Exterior B1 – southern facing (pictured opposite). B1 is a derelict shed/garage structure made of concrete blocks with iron and wooden crossbeams anchored in wooden boards along the top of the walls. The roof and the southern facing are both missing, making the structure completely exposed to the elements. Ivy is growing through and over the walls at several points on the western and eastern sides.	

B1 – northern and western sides (pictured opposite).

The northern side of the structure has a partial gutter attached to the top of the walls with a single drainpipe. These are in poor condition.



B1 – ‘interior’ (pictured opposite). The ‘interior’ of the structure contains wooden and iron crossbeams attached to wooden beams. The iron crossbeams are heavily rusted, whilst the wooden beams are in reasonable condition. The beams are likely too thin and exposed to provide suitable nesting space for bats or birds but could function as a temporary perch for foraging birds. The floor is concrete and no stored items are present.	
B1 Evidence of bats No evidence of bats was found internally or externally on the survey building, although the exposed nature of the structure will mean that any droppings or other bat signs will be weathered away rapidly. This exposed nature will also markedly reduce the suitability of the structure for bats.	No photo

Foraging and Commuting Habitat

The site itself contains shrubs, scrub and hedgerows which could provide foraging habitat for bats and birds.

In the context of the wider habitat, rich foraging habitat lies to the east and south (Fassnidge Park, Fray's River, Shire Ditch, River Colne, Colne Valley Regional Park) but the site itself does not offer good connectivity to these regions due to intervening brightly lit areas and roads, and the shrubs and hedgerows on site do not form an obvious or useful commuting route to access these areas. Of particular note is Little Britain (SINC), which is noted for its rich bat populations including Daubenton's bat *Myotis daubentonii* and soprano pipistrelle *Pipistrellus pygmaeus*.

**Bat Records and granted European Protected Species Licenses (EPSLs)**

The biological records data (BRD) contains records within 2km of three serotine *Eptesicus serotinus*, one Brandt's bat *Myotis brandtii*, 12 Daubenton's bat, 30 noctule bat *Nyctalus noctula*, two Nathusius' pipistrelle *Pipistrellus nathusii*, 24 common pipistrelle *Pipistrellus pipistrellus*, 27 soprano pipistrelle and 10 brown long-eared bat *Plecotus auritus* records. The nearest records were recorded ~850m to the south-west. No breeding roosts are reported in the BRD, and no other roost information has been provided by GiGL.

There is one granted EPSL (2014-3752-EPS-MIT) for the destruction of a common pipistrelle and soprano pipistrelle resting place, 1400m south-west of the site.

No photo

Other Species

An assessment of the suitability of the site for protected or notable species is provided in Table 7.

Table 7: Assessment of the suitability of the site for protected or notable species

Species	Assessment of suitability
Amphibians	Within 2km of the site, there are seven records of common toad <i>Bufo bufo</i> within 2km, with the nearest being 991m from the site. There are 12 records of common frog <i>Rana temporaria</i> (nearest 292 meters, although this record is from 1999). There are three records of great crested newts <i>Triturus cristatus</i> and three granted EPSLs for great crested newts, with the nearest being 652m from the site. Great crested newts are also noted to reside in the Uxbridge Ponds to the south-east of the site. The site itself contains very limited habitat for amphibians. The deadwood and earth piles on site could provide limited trefuge for amphibians, but connectivity to the wider environment and water features are poor. There are no ponds within 500m of the site, although the Shire Ditch runs ~400m to the north-west and could support amphibians and Park Road Pond and Uxbridge Common Pond are ~600m east and north-east of the site.
Reptiles	Within 2km of the site, the BRD contains one record of slow-worm <i>Anguis fragilis</i> (1589m from site), four records of grass snake <i>Natrix helvetica</i> (nearest 1407m away) and one record of common lizard <i>Zootoca vivipara</i> (991m away). There is also one record of an adder <i>Vipera berus</i> within 2km of the site. The site contains a small amount of potential reptile habitat – primarily piles of deadwood, earth and debris which could act as refugia. The site has poor connectivity to the wider environment, with urban surroundings and multiple roads separating the site from the parks to the west.
Badgers <i>Meles meles</i>	There are three records of badgers within 2km of the site. No evidence of badgers was seen on site. The site itself provides a small amount of potential woodland and scrub foraging habitat, but the soil is unsuitable for sett construction and the site is poorly connected to the wider habitat, with several roads and the urban surroundings proving a barrier to dispersal and making the site a poor choice of habitat relative to the much richer habitats to the west.
Hazel Dormouse <i>Muscardinus avellanarius</i>	There are no records of dormice within 2km of the site, and the site itself contains no significant suitable habitat for hazel dormice.
Hedgehog <i>Erinaceus europaeus</i>	There are 19 records of hedgehogs, with the nearest record located 492m from site. The site contains suitable habitat for hedgehogs, with the scrub, shrub and hedgerows providing suitable shelter and foraging. Although the site has poor connectivity to local parks and the surroundings are predominantly rural, small holes in the chain link fencing present on site will allow hedgehogs to access the site from adjacent urban garden habitat.
Otter <i>Lutra lutra</i>	There are no records of otters within 2km of the site, although several of the designated sites within 2km mention otters as present, presumably elsewhere on the watercourses. There are no suitable watercourses on site to provide habitat for otters, and no attractive foraging habitat on site. There are significant barriers - predominantly large amounts of urban roads and housing - between the local rivers and the site, reducing the probability of otters being present.
Water Vole <i>Arvicola amphibius</i>	There are 77 records of water voles occurring within 2km of the site, with the nearest being 886m away from the site. However, there are no suitable watercourses on site to provide habitat for water voles, and no suitable habitat on site for foraging or burrow creation on site. The large amount of urban roads and housing between the local rivers and the site will provide a significant barrier to water vole populations on the nearby rivers.

Birds	There are 887 records of birds within 2km of the site, containing many common bird species as well as red list species such as red kite <i>Milvus milvus</i>, redwing <i>Trudsu ilacus</i>, fieldfare <i>Turdus pilaris</i>, and hawfinch <i>Cooccothrasutes coothraustes</i>. Of note are also nine confidential records of barn owl <i>Tyto alba</i>, as well as nearby records of kingfisher (188m west from the site) and swift (376m north from the site). No direct evidence of nesting was observed on site, but bird droppings and suitable shrubs on site suggest that this is a possibility. The sites shrubs, scrub and hedgerows could provide suitable habitat for birds.
Invertebrates	There are a total of 732 records of invertebrates within 2km of the site. Of these 17 records are molluscs, 17 are damselflies and dragonflies, seven are true bugs, one record is from the alderflies, 218 records are from beetles, 139 are butterflies, 310 are moths, 19 are true flies and four are ants. Deadwood and vegetation on site could provide useful invertebrate habitat, particularly for insects. In particular, the naturalised buddleia on site is highly attractive to bees and butterflies in the summer months.

4.0 Conclusions, Impacts and Recommendations

4.1 Informative Guidelines

A summary of the relevant legislation and planning policies is provided in Appendix 4.

Likelihood of the Presence of Protected Species

Where physical evidence of the presence of protected species is indeterminate during the survey, the habitats on site are evaluated as to their likelihood to provide sheltering, roosting, foraging, basking or nesting habitat.

Where this report supports a planning application, the ecological interest of the study area (i.e. the area covered by the desk study and field survey) and the proposed development has also been evaluated in terms of the planning policies relating to biodiversity.

4.2 Evaluation

Taking the desk study and field survey results into account, Table 8 presents an evaluation of the ecological value of the site and also details any ecological constraints identified in relation to the proposed development which will comprise the demolition of the existing sheds and erection of two semi-detached 3-bedroom houses with private gardens and car parking area.

Table 8: Evaluation of the site and any ecological constraints

Ref	Summary of Survey Findings	Foreseen Impacts	Recommendations <i>Measures required to adhere to guidance, legislation and planning policies.</i>	Biodiversity Enhancements <i>The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021)</i>
Designated sites	The site is not subject to any statutory or non-statutory designation. There are six statutory sites within 2km of the site, the closest being Denham Lock Wood SSSI located 1100m north from the site. The site lies within the impact risk zone for Denham Lock Wood SSSI but the proposed development is not listed as a possible high risk for this designation. There are 10 non-statutory sites within 2km of the site, the closest being Uxbridge Ponds located ~600m from the site.	No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites as well as the urban location of the site with surrounding physical barriers.	None.	None.
Habitats and flora	There are no notable habitats within the site but deciduous woodland, ancient woodland, good quality semi-improved grassland,	No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats as well as the urban location of the site with surrounding physical barriers. The loss of common and widespread habitats of	None.	Habitat creation and enhancement The following habitat creation and enhancement opportunities could be incorporated into the proposed development:

	lowland fens, traditional orchards, woodpasture and parkland habitats are present within 2km of the site, the closest being deciduous woodland located 350m from the site. Habitats within the site are common and widespread and have low ecological value. No protected or notable plant species were recorded during the survey. Buddleia was identified on the site which is an invasive but naturalised species – it is not listed as an invasive, non-native species under Schedule 9 of the Wildlife and Countryside Act 1981.	low ecological value from the site are considered to be inconsequential.		• Native tree, hedgerow and shrub planting. • A green roof on new buildings. Species-specific enhancement opportunities are detailed later in this table.
Amphibians	There are three records of great crested newts, with the nearest being ~650m from the site. 19 records of other amphibians within 500m of the site. Although the site contains a small	No significant impacts are anticipated on amphibians as a result of the proposed development.	None.	None.

	number of earthen piles and other suitable habitat, the lack of ponds within 500m will reduce the probability of amphibians on site and the site overall has a minimal value for amphibians.			
Reptiles	The site contains small amounts of deadwood and earth/debris piles which could be useful to reptiles for shelter. The BRD contains seven records of reptiles within 2km of the site, including a single adder record. However, connectivity to the wider environment on the site is poor.	Grassland, scrub and piles of earth & deadwood will be removed during construction. The loss of such habitats is likely to be inconsequential to local reptile populations owing to the presence of more extensive habitat locally. However, site clearance could result in the death or injury of reptiles, if present.	Given the size and possible impacts of the proposed development, further surveys are considered disproportionate. A precautionary working method will be implemented during construction, including the following measures: • Site clearance will be undertaken outside of the reptile hibernation season (November to February) insofar as is possible. • A toolbox talk will be given to contractors regarding the possible presence of reptiles at the site. • A pre-commencement inspection of the site will be undertaken for reptiles. • A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 15cm and left overnight to allow any reptiles to disperse. The vegetation can then be cleared to ground level and must be maintained at this level for the duration of construction to deter reptiles from the working area. • Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent reptiles from utilising these areas. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • In the unlikely event that a reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for reptiles: • Creation of reptile refugia and hibernacula using debris and brash from site clearance.

Roosting bats (B1)	B1 has negligible value for roosting bats due to a lack of potential roost features.	Bats are very unlikely to be roosting within B1 and as such, there are not anticipated to be any impacts on bats in this location as a result of the proposed development.	In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice.	The installation of a minimum of two bat boxes on retained buildings will provide additional roosting habitat for bats e.g. 2F Schwegler Bat Box (trees) 1FF Schwegler Bat Box (trees) 2FN Schwegler Bat Box (trees) Beaumaris Bat Box (buildings) Vivara Pro Woodstone Bat Box (buildings) Or a similar alternative brand. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. Alternatively, bat boxes could be incorporated into new buildings on the site e.g. Habibat Bat Box Schwegler 1FR Bat Tubes Bat tubes should be inserted into the fabric of the building during construction, positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance and facing landscapes areas, away from artificial light.
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Foraging and commuting bats	The hedgerows and shrubs on site could be used by local bat populations for foraging. However, the small size of these features and their lack of connectivity to any other vegetation features in the immediate vicinity will reduce the value of these areas for commuting.	The proposed development will result in the loss of small areas of shrubs and hedgerow but given the presence of more extensive and better-connected areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats.	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light. • Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. Wall lights and security lights will be 'dimnable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.	(See above)
Badger	Three records of badgers have been recorded within 2km of the site. No	No impacts are anticipated on badgers as a result of the proposed development.	None.	None.

	evidence of badgers was found on site, and the value of the site is minimal for badgers due to its small size and urban location.			
Hazel dormouse	There are no records of dormice within 2km of the site, and the site itself contains no significant suitable habitat for hazel dormice.	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.
Hedgehog	There are 19 records of hedgehogs, with nearby records 492m from the site. The site contains good hedgehog habitat, with scrub, shrubs and piles of deadwood/earth providing shelter and foraging. The site is connected to nearby urban gardens.	Deadwood, hedgerows and shrubs will be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to the presence of more extensive habitat locally.	A precautionary working method will be implemented during construction, including the following measures: • A toolbox talk will be given to contractors regarding the possible presence of hedgehogs at the site. • A pre-commencement inspection of the site will be undertaken for hedgehogs. • If any hedgehogs are found in the working area these should be moved by hand to a vegetated area along the site boundaries or in retained habitats away from disturbance. • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: • Planting fruit bearing trees and species-rich grassland to increase foraging opportunities. • Creation of brash piles or installation of hedgehog houses in shady areas. • Installation of a hedgehog house at a site boundary • Installation of gaps under boundary fencing to enable hedgehogs to move freely through the site.

Otter	There are no records of otters within 2km, and the site itself contains no water courses or other suitable habitat.	No impacts are anticipated on otters as a result of the proposed development.	None.	None.
Water vole	Although there are 77 records of water voles within 2km of the site, there are no suitable watercourses on site to provide habitat for water voles.	No impacts are anticipated on water vole as a result of the proposed development.	None.	None.
Birds	There are 887 records of birds within 2km of the site, containing many common bird species as well as red list species. No direct evidence of nesting was observed on site, but bird droppings and suitable shrubs and shrubs on site suggest that this is a possibility. The sites shrubs, scrub and hedgerows could provide suitable habitat for birds.	Hedgerows and shrubs will be removed during construction. The loss of such habitats is likely to be inconsequential to local bird populations owing to the presence of more extensive habitat locally. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.	Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged.	The installation of a minimum of two bird boxes on mature trees around the site boundaries or on retained buildings will provide additional nesting habitat for birds e.g. Schwegler No 17 Swift Nest Box (buildings) Schwegler 1SP Sparrow Terrace (buildings) Schwegler 1B Nest Boxes (trees) Schwegler 2H Robin Boxes (trees) Woodstone Nest Box (buildings or trees) Or a similar alternative brand. Tree boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree

				trunk where foliage will not obscure the entrance hole.
Invertebrates	There are a total of 732 records of invertebrates within 2km of the site. Deadwood vegetation on site could provide useful invertebrate habitat, particularly for insects. In particular, the buddleia on site is highly attractive to bees and butterflies.	Shrubs, deadwood and scrub will be removed during construction. The loss of such habitats is likely to be inconsequential to local invertebrate populations owing to the presence of more extensive habitat locally.	None.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for invertebrates: • Native tree, hedgerow and shrub planting. • A green roof on new buildings. • Retention of deadwood on the site.

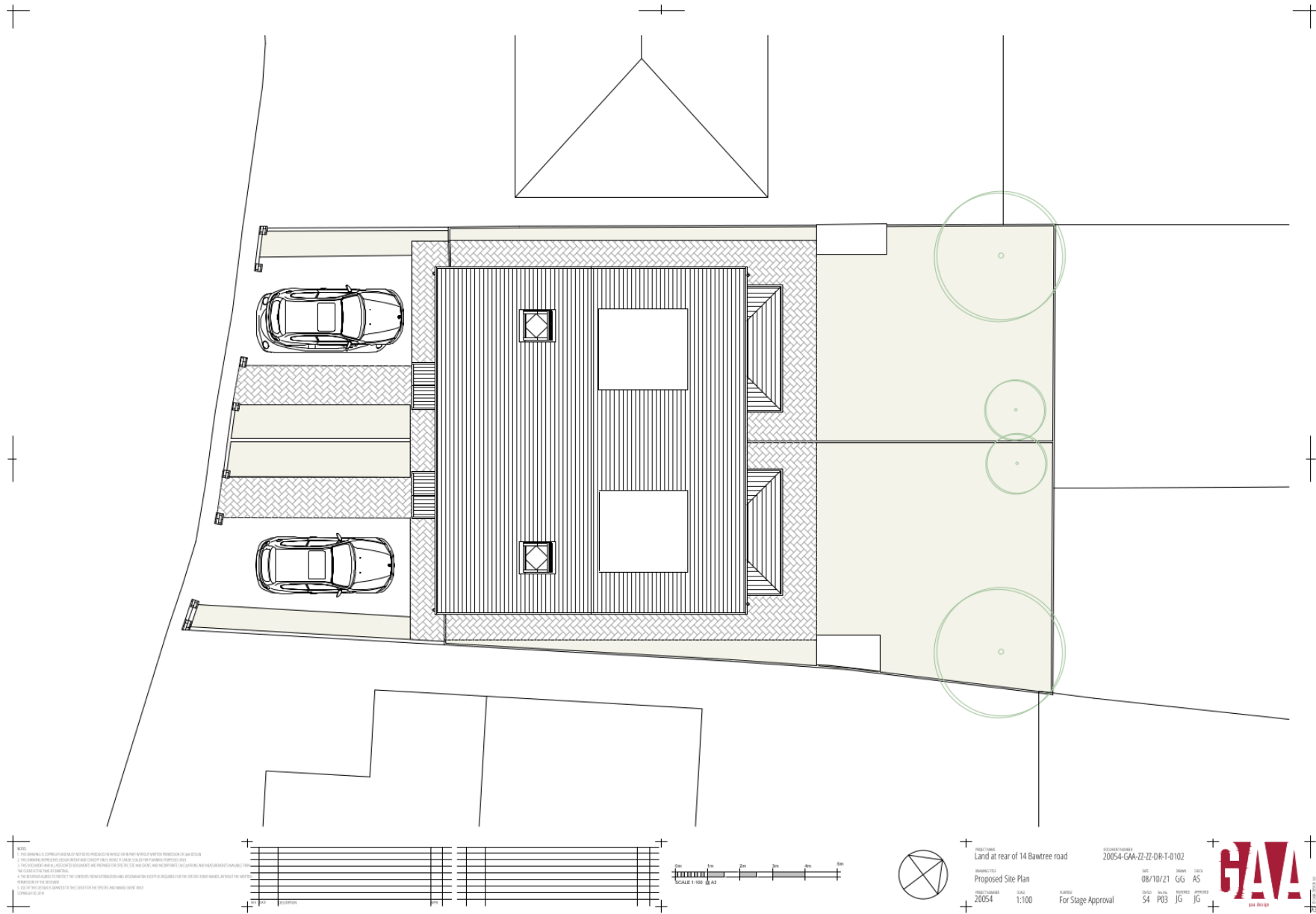
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Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3a: Habitat Survey Plan



Appendix 3b: PRA Survey Plan



Appendix 4: Legislation and Planning Policy

LEGAL PROTECTION

The ***Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*** came into force when Britain left the European Union on 31st January 2020. It covered amendments relevant to this survey to:

- Wildlife and Countryside Act 1981: England and Wales (x1 amendment)
- Conservation of Habitats and Species Regulations 2017 (x29 amendments)

National and European Legislation Afforded to Habitats

International Statutory Designations

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance and are designated under the EC Habitats Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive) and the EC Birds Directive 2009/147/EC on the conservation of wild birds respectively. Both form part of the wider Natura 2000 network across Europe.

Under the Habitats Directive Article 3 requires the establishment of a network of important conservation sites (SACs) across Europe. Over 1,000 animal and plant species, as well as 200 habitat types, listed in the directive's annexes are protected in various ways:

Annex II species (about 900): core areas of their habitat are designated as sites of Community importance (SCIs) and included in the Natura 2000 network. These sites must be managed in accordance with the ecological needs of the species.

Annex IV species (over 400, including many annex II species): a strict protection regime must be applied across their entire natural range within the EU, both within and outside Natura 2000 sites.

Annex V species (over 90): Member States must ensure that their exploitation and taking in the wild is compatible with maintaining them in a favourable conservation status.

SPAs are classified under Article 2 of the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds both for rare bird species (as listed on Annex I) and for important migratory species.

SACs and SPAs up to 12 nautical miles from the coast (i.e. 'territorial waters') are afforded protection in the UK under the Conservation of Habitats and Species Regulations 2017 which consolidate all amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994.

The Conservation of Offshore Marine Habitats and Species Regulations 2017 consolidate and update the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007. The 2017 Regulations introduce amendments which transfer responsibility for European nature conservation in the Welsh offshore region to Welsh Ministers. This gives Welsh Ministers similar powers in Welsh offshore waters to those currently exercised by Scottish Ministers in Scottish offshore waters. These regulations transpose into national law Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive), and elements of Council Directive 2009/147/EC on the conservation of wild birds (Wild Birds Directive) in the

UK offshore area. They came into force on 30th November 2017. These regulations apply to the UK's offshore marine area which covers waters beyond 12 nautical miles, within British Fishery Limits and the seabed within the UK Continental Shelf Designated Area. The Conservation of Habitats and Species Regulations 2017 form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12nm in England and Wales (including the inshore marine area) and to a limited extent in Scotland and Northern Ireland. Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and recognises the importance of wetland ecosystems in relation to global biodiversity conservation. The Convention refers to wetlands as "*areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres*". However, they may also include riparian and coastal zones. Ramsar sites are statutorily protected under the Wildlife & Countryside Act 1981 (as amended 01.04.1996) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. The Government in England and Wales has issued policy statements which ensure that Ramsar sites are afforded the same protection as areas designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs). Further provisions for the protection and management of SSSIs have been introduced by the Nature Conservation (Scotland) Act 2004.

National Statutory Designations

Sites of Special Scientific Interest (SSSI) are designated by nature conservation agencies in order to conserve key flora, fauna, geological or physio-geographical features within the UK. The original designations were under the National Parks and Access to the Countryside Act 1949 but SSSIs were then re-designated under the Wildlife & Countryside Act 1981 (as amended). As well as reinforcing other national designations (including National Nature Reserves), the system also provides statutory protection for terrestrial and coastal sites which are important within the European Natura 2000 network and globally.

Local Statutory Designations

Local authorities in consultation with the relevant nature conservation agency can declare Local Nature Reserves (LNRs) under the National Parks and Access to the Countryside Act 1949. LNRs are designated for flora, fauna or geological interest and are managed locally to retain these features and provide research, education and recreational opportunities.

Non- Statutory Designations

All non-statutorily designated sites are referred to as Local Wildlife Sites (LWS) and can be designated by the local authority for supporting local conservation interest. Combined with statutory designation, these sites are considered within Local Development Frameworks under the Town and Country Planning system and are a material consideration during the determination of planning applications. The protection afforded to these sites varies depending on the local authority involved.

Regionally Important Geological Sites (RIGs) are the most important geological and geomorphological areas outside of statutory designations. These sites are also a material consideration during the determination of planning applications.

The Hedgerow Regulations 1997

The Hedgerow Regulations 1997 are designed to protect 'important' countryside hedgerows. Importance is defined by whether the hedgerow (a) has existed for 30 years or more; or (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

Under the Regulations, it is against the law to remove or destroy hedgerows on or adjacent to common land, village greens, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry and land used for the keeping or breeding of horses, ponies or donkeys without the permission of the local authority. Hedgerows 'within or marking the boundary of the curtilage of a dwelling-house' are excluded.

National and European Legislation Afforded to Species

The Habitats Directive

The EC Habitats Directive aims to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those species of European importance. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (the Conservation Regulations) and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended). This has been amended by the ***Conservation of Habitats and Species Regulations (amendment) (EU Exit) Regulations (2019)*** which continue the same provision for European protected species, licensing requirements and protected sites after the UK leaves the EU.

The following notes are relevant for all species protected under the EC Habitats Directive:

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

The Habitats Regulations do 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.

In order to obtain a European Protected Species Licence (EPSL), the application must demonstrate that it meets all of the following three 'tests':

- 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;
- There is no satisfactory alternative; and
- The action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The Wildlife and Countryside Act (WCA) 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1979, implemented 1982) and implements the species protection requirements of EC Birds Directive 2009/147/EC on the conservation of wild birds in Great Britain (the birds Directive). The WCA 1981 has been subject to a number of amendments, the most important of which are through the Countryside and Rights of Way (CROW) Act (2000).

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

- Deer Act 1991
- Natural Environment & Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992
- Wild Mammals (Protection) Act 1996

Badgers

Badgers *Meles meles* are protected under The Protection of Badgers Act 1992 which makes it an offence to:

- Wilfully kill, injure, take, or attempt to kill, injure or take a badger
- Cruelly ill-treat a badger, including use of tongs and digging
- Possess or control a dead badger or any part thereof
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof
- Intentionally or recklessly disturb a badger when it is occupying a badger sett
- Intentionally or recklessly cause a dog to enter a badger sett
- Sell or offers for sale, possesses or has under his control, a live badger

Effects on development works:

A development licence will be required from the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) for any development works likely to affect an active badger sett, or to disturb badgers whilst they occupy a sett. Guidance has been issued by the countryside agencies to define what would constitute a licensable activity. It is no possible to obtain a licence to translocate badgers.

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the WCA. Among other things, this makes it an offence to:

- Intentionally (or recklessly in Scotland) kill, injure or take any wild bird
- Intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built
- Intentionally take or destroy an egg of any wild bird
- 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.
- Intentionally or recklessly obstruct or prevent any wild bird from using its nest (Scotland only)

Certain species of bird, for example the barn owl, bittern and kingfisher receive additional protection under Schedule 1 of the WCA and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC) and are commonly referred to as “Schedule 1” birds.

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
- In Scotland only, intentional or reckless disturbance whilst lekking
- In Scotland only, intentional or reckless harassment

Effects on development works:

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 in particular is to undertake work outside the main bird nesting season which typically runs from March to August. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Schedule 1 birds are additionally 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.

Amphibians and Reptiles

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita*, pool frog *Pelophylax lessonae* and great crested newt *Triturus cristatus* receive full protection under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
 - To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
 - To impair their ability to hibernate or migrate
 - To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

With the exception of the pool frog, these species are also listed on Schedule 5 of the WCA and they are additionally protected from:

- Intentional or reckless disturbance (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.

Other native species of reptiles are protected solely under Schedule 5, Section 9(1) & (5) of the WCA, i.e. the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. It is prohibited to:

- Intentionally or recklessly kill or injure these species.

Effects on development works:

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works likely to affect the breeding sites or resting places amphibian and reptile species protected under Habitats Regulations. 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 allow derogation 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 WCA.

Water Voles

The water vole *Arvicola terrestris* is fully protected under Schedule 5 of the WCA. This makes it an offence to:

- Intentionally kill, injure or take (capture) water voles
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection
- Intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection

Effects on development works:

If development works are likely to affect habitats known to support water voles, the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) must be consulted. It must be shown that means by which the proposal can be re-designed to avoid contravening the legislation have been fully explored e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable, and measures to ensure minimal habitat loss. Conservation licences for the capture and translocation of water voles may be issued by the relevant countryside agency for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will then only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of works.

Otters

Otters *Lutra lutra* are fully protected under the Conservation Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species

- Deliberate disturbance of species in such a way as:
- To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
- To impair their ability to hibernate or migrate
- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Otters are also currently protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works likely to affect otter breeding or resting places (often referred to as holts, couches or dens) 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, and rear young). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored

Bats

All species are fully protected by Habitats Regulations 2010 as they are listed on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. All bats)
- Deliberate disturbance of bat species in such a way as:
- To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
- To impair their ability to hibernate or migrate
- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are afforded the following additional protection through the WCA as they are included on Schedule 5:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

A European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will be required for works are likely to affect a bat roost or an operation which are likely to result in an illegal level of disturbance to the species will require an EPSM licence. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Hazel Dormice

Hazel dormice *Muscardinus avellanarius* are fully protected under Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Deliberate disturbance of species in such a way as:
- To impair their ability to survive, breed, or reproduce, or to rear or nurture young;
- To impair their ability to hibernate or migrate
- To affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Dormice are also protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

Effects on development works:

Works which are liable to affect a dormice habitat or an operation which are likely to result in an illegal level of disturbance to the species will require a European Protected Species Licence (EPSL) issued by the relevant countryside agency (i.e. Natural England, Natural Resources Wales (NB: Hazel Dormouse are entirely absent from Scotland)). The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

White Clawed Crayfish

There is a considerable amount of legislation in place in an attempt to protect the White-clawed crayfish *Austropotamobius pallipes*. This species is listed under the European Union's (EU) Habitat and Species Directive and is listed under Schedule 5 of the Wildlife and Countryside Act (1981). This makes it an offence to:

- Protected against intentional or reckless taking
- Protected against selling, offering or advertising for sale, possessing or transporting for the purpose of sale

It is also classified as Endangered in the IUCN Red List of Endangered Species. As a result of this and other relevant crayfish legislation such as the Prohibition of Keeping of Live Fish (Crayfish) Order 1996, a series of licences are needed for working with White-clawed and non-native crayfish. These are:

- A licence to handle crayfish (therefore survey work) in England
- A licence for the keeping of crayfish in England and Wales with an exemption for Signal crayfish (England).
- People in the post-code areas listed with crayfish present prior to 1996 do not need to apply for consent for crayfish already established. It does not, however, allow any new stocking of non-native crayfish into waterbodies. Consent for trapping of non-native crayfish for control or consumption is most likely to be granted in Thames and Anglian regions in the areas with "go area" postcodes.
- Harvesting of crayfish is prohibited in much of England and in any part of Scotland and Wales.

Effects on development works:

The relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) will need to be consulted about development which could impact on a watercourse or wetland known to support white clawed crayfish. Conservation licences for the capture and translocation of crayfish can be issued if it can be shown that the activity has been properly planned and executed and thereby contributes to the conservation of the population. The licence will only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of the works.

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.

Legislation Afforded to Plants

With certain exceptions, all wild plants are protected under the WCA. This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) 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, for example some species of orchid, are also fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits any person from:

- Intentionally (or recklessly in Scotland) picking, uprooting or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only)
- 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 UK legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2010. 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
 - 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.

Effects on development works:

A European Protected Species Licence (EPSL) will be required from the relevant countryside agency (i.e. Natural England, Natural Resources Wales, Scottish Natural Heritage) for works which are likely to affect species of planted listed on Schedule 5 of the Conservation or Habitats and Species Regulations 2010. The licence is to allow derogation from the legislation through the application of appropriate mitigation measures and monitoring.

Invasive Species

Part II of Schedule 9 of the WCA lists non-native invasive plant species for which it is a criminal offence in England and Wales to plant or cause to grow in the wild due to their impact on native wildlife. Species included (but not limited to):

- Japanese knotweed *Fallopia japonica*
- Giant hogweed *Heracleum mantegazzianum*
- Himalayan balsam *Impatiens glandulifera*

Effects on development works:

It is not an offence for plants listed in Part II of Schedule 9 of the WCA 1981 to be present on the development site, however, it is an offence to cause them to spread. Therefore, if any of the species are present on site and construction activities may result in further spread (e.g. earthworks, vehicle movements) then it will be necessary to design and implement appropriate mitigation prior to construction commencing.

Injurious weeds

Under the Weeds Act 1959 any landowner or occupier may be required prevent the spread of certain 'injurious weeds' including (but not limited to):

- Spear thistle *Cirsium vulgare*
- Creeping thistle *Cirsium arvense*
- Curled dock *Rumex crispus*
- Broad-leaved dock *Rumex obtusifolius*
- Common ragwort *Senecio jacobaea*

Effects on development works:

It is a criminal offence to fail to comply with a notice requiring such action to be taken. The Ragwort Control Act 2003 establishes a ragwort control code of practice as common ragwort is poisonous to horses and other livestock. This code provides best practice guidelines and is not legally binding.

NATIONAL PLANNING POLICY (ENGLAND)***Environment Act 2021***

The Environment Act 2021 (EA 2021) received Royal Assent on 9 November 2021 and is expected to become fully mandated within the next couple of years. The Act principally creates a post Brexit framework to protect and enhance the natural environment. Through amendments to the Town and Country Planning Act 1990, the Act will require all planning permissions in England (subject to exemptions which is likely to include householder applications) to be granted subject to a new general pre-commencement condition that requires approval of a biodiversity net gain plan. This will ensure the delivery of a minimum of 10% measurable biodiversity net gain. The principal tool to calculate this will be the Defra Biodiversity 3.0 Metric. Works to enhance

habitats can be carried out either onsite or offsite or through the purchase of 'biodiversity credits' from the Secretary of State. However, this flexibility may be removed (subject to regulations) if the onsite habitat is 'irreplaceable'. Both onsite and offsite enhancements must be maintained for at least 30 years after completion of a development (which period may be amended).

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; measurable gains in biodiversity in and around developments are incorporated; and 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 2006, 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 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 PLANNING POLICY

Hillingdon Local Plan Part 1 (adopted 2012)

Policy EM7: Biodiversity and Geological Conservation - 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 biodiversity and geological conservation will be preserved and enhanced with particular attention given to:

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

London Priority Species List (2019)

London BAP priority species can be found here:

<https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/london-priority-species>

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to 'local populations' of EPS and not individuals/site populations.