Preliminary Ecological Appraisal and Preliminary Roost Assessment

Eastcote Lawn Tennis Club, 12 Kaduna Close, Pinner, Middlesex, HA5 2PZ

Eastcote Lawn Tennis Club

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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 Eastcote Lawn Tennis Club to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Eastcote Lawn Tennis Club, 12 Kaduna Close, Pinner, Middlesex, HA5 2PZ (hereafter referred to as "the site"). The survey was required to inform a planning application to change existing floodlighting on five courts to LEDs, and to add floodlighting to the sixth court (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.

Ref	***Summary of Survey Findings***	***Foreseen Impacts***	***Recommendations*** *Measures required to adhere to guidance, legislation and planning policies.*
Habitats and flora	The site contains deciduous woodland which is listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Also, the river Pinn is located onsite, and further notable habitats are present within 2km. Other habitats within the site are common and widespread and have low ecological value.	No direct impacts to any notable habitats will occur as a result of the proposed development. However, due to the proximity of the site to deciduous woodland and the river Pinn, indirect effects such as pollution or tree damage could occur during construction. The proposed development will not result in any loss of habitat onsite, only the addition of further lighting.	Best practice measures to minimise the possibility of pollution and tree damage must be implemented during construction.
Roosting bats (B1-B4)	All four buildings (B1-B4) onsite have negligible value for roosting bats due to a lack of potential roost features.	Bats are very unlikely to be roosting within these buildings 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	Semi-natural woodland, the river Pinn and species poor hedgerows could be used by local bat populations for foraging and commuting. These could also be used by bats dispersing from nearby roosts outside of the site.	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.	A low impact lighting strategy will be adopted for the site during and post-development.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Eastcote Lawn Tennis Club to undertake a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) at Eastcote Lawn Tennis Club, 12 Kaduna Close, Pinner, Middlesex, HA5 2PZ (hereafter referred to as "the site"). The survey was required to inform a planning application for to change existing floodlighting on five courts to LEDs, and to add floodlighting to our sixth court (hereafter referred to as "the proposed development"). A plan showing the proposed development will be provided in Appendix 1 when available.

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 10547 88700 and has an area of approximately 0.79ha comprising amenity grassland, semi-natural woodland, species poor hedgerows, scattered trees, hard standing, four buildings and the river Pinn. It is surrounded by residential properties within Pinner and tree lined boundaries in all directions.

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 review of the magic.gov.uk database for statutory designated sites within a 2km radius of the site. Landscape value and the presence of notable habitats as well as granted European Protected Species Licence (EPSL) and notable species records held on magic.gov.uk database has also been considered where these are within influencing distance of the site.

Existing biological records including notable species and non-statutory designated sites within a 2km radius were obtained from Greenspace Information for Greater London.

2.2 Field Survey

The survey was undertaken by Beth Ellison-Perrett BSc (Hons) MSc, Consultant (Accredited Agent to Natural England Bat Licence Number: 2018-33540-CLS-CLS) on 21st July 2022.

Preliminary Ecological Appraisal

An extended habitat survey was undertaken, following the methodology set out in UK Habitat Classification User Manual (UK Habitat Classification Working Group, 2018). 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. Botanical species lists were compiled with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).

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.

Preliminary Roost Assessment

The PRA focussed on four built structures and trees which will be affected by the proposed development as well as providing an overview of the wider site and the surrounding landscape for bat roosting, foraging and commuting habitat.

<u>For any surveyed buildings</u>:

A non-intrusive visual appraisal was undertaken from the ground, using binoculars to inspect the external features of the buildings 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. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows. An endoscope was used to complete a close-up inspection of any accessible features, where appropriate.

<u>For any surveyed trees</u>:

A visual inspection was undertaken from ground level using binoculars and, where accessible and safe to do so, an internal inspection of any features which bats could use for roosting was completed using an endoscope, torch and ladders.

<u>Suitability Assessment</u>

Built structures and trees 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 and Table 2 for trees 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.

Table 2: Features of a tree that are correlated with use by bats

Classification	***Feature of tree and its context***
Moderate to high	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. Trees with high suitability could support roosts of high conservation value such as maternity or hibernation roosts.
Low	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential to be 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.
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.

Specific limitations to the PRA were the lack of internal access to all four buildings, due to a lack of accessible loft hatches to view the roof void in B1. Also, the internal loft space could not be accessed in B2, B3 and B4 on this occasion as the occupiers were unavailable.

The survey was undertaken in summer when foliage was present on the trees and this obscured visibility in places.

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 Designated Sites

Details of any 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 Ruislip Woods Site of Special Scientific Interest (SSSI). The proposed development type is not listed as a possible high risk with regard to this designation.

Table 3: Statutory designated sites within 2km radius of the site

Designated site name	Distance from site (approx.)	Reasons for notification from Natural England and Greenspace Information for Greater London
Ruislip Woods National Nature Reserve (NNR)	395m west	Ruislip Woods NNR consists of 4 principal areas: Mad Bess Wood, Bayhurst Wood, Park Wood and Copse Wood. Ruislip Woods National Nature Reserve is the largest block of ancient, semi-natural woodland in Greater London and includes one of the most extensive oak/hornbeam coppice woods in southeast England.
Ruislip Woods Site of Special Scientific Interest (SSSI)	395m west	The main species of trees in the woods include English oak, sessile oak, hornbeam, beech, silver birch, wild service tree, aspen, rowan, field maple, crack willow, wild cherry, hazel and holly. Cattle are grazed in Poor's Field each year to maintain the level of the vegetation. Wild mammals include foxes, hedgehogs, stoats, weasels, mink and badgers. Several species of bat also live in the woods.
Ruislip Local Nature Reserve (LNR)	465m south	Ruislip Local Nature Reserve supports a species-rich association of willow carr, tall fen and swamp communities. Additional diversity is provided by the juxtaposition of the woodland with areas of acidic grassland, neutral grassland and open heath.

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: 21/07/2022	
Temperature	21°C
Humidity	65%
Cloud Cover	100%
Wind	5mph
Rain	None

Habitats and Flora

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

- u1b5 buildings
- u1b 530 developed land- tennis courts
- g4 230 66 amenity grassland, frequently mown garden
- r2 river Pinn
- w1h5 37 semi-natural woodland
- u1e 69 fence
- h2b species poor hedgerow

A description and photographs of each habitat are provided in Table 5.

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

Habitat Type	***Habitat description***	***Photograph***
g4 230 66 amenity grassland	To the north-west of the site, located between the tennis courts and B3 and B4 is an area of amenity grassland, which is subject to constant mowing, resulting in a sward of approximately 2-5cm in length. Species composition is poor, comprising predominantly cocks foot and perennial ryegrass, with an abundance of clover and creeping buttercup. Also, frequently observed are daisies and plantain with the occasional germander speedwell. The amenity grassland will not be removed in the proposed plans.	

h2b species poor hedgerow	Along the western boundary of the site is a species poor hedgerow. This is comprised of predominately cherry laurel with cypress, buddleia and greenstem forsythia. This hedgerow will not be removed during the proposed development and is already adjacent to the lighting on the tennis courts.	
w1h5 342 37 semi-natural woodland	To the south-east of the site, surrounding the river is an area of deciduous woodland which is a mix of broadleaf and coniferous woodland. The woodland is comprised of sycamore, hornbeam, ash, oak, cherry laurel, holly, horse chestnut, beech, yew and hawthorn. This woodland will not be removed during the proposed development and is already adjacent to the lighting on the tennis courts. The trees were checked for any possible roosting features for bats. None of the trees had any obvious woodpecker holes or wounds/ fractures which could have been used as a roost.	

u1b 530 developed land- tennis courts	Throughout the site there is hard standing which is comprised of concrete and block paving as well as Astro turf. The Astro turf is used for the tennis courts and the block paving surrounded the fenced in courts. These areas are of negligible habitat value for protected species.	 

u1b5 buildings	There are four buildings within the site boundary, the main clubhouse (B1), the outbuilding (B2) and two residential blocks (B3 and B4). These buildings are all tightly sealed with no roosting features which bats could use. More information on these four buildings can be found within the Preliminary Roost Assessment section of this report (table 6).	
u1e 69 fence	Surrounding the tennis courts and along the northern boundary is intact fencing. The northern boundary fencing (pictured opposite) is comprised of concrete pillars and wooden panel fencing, both of which are in excellent condition with no broken or missing sections. The fencing around the tennis courts is small wire chain link mesh which is also in excellent condition with no gaps or missing/ broken sections. The fencing will remain in place and will not be affected by the proposed development.	

r2 river Pinn	Along the south-east boundary of the site is the river Pinn. The river, at the time of the survey was very shallow and had very steep banks which have been reinforced along most of the banks which were checked for signs of water vole and otter. No holts or burrows were observed along the banks of the river Pinn. Also, the water is clear and free from any submergent or bankside (with the exception of ivy) vegetation which could have been used for cover for water voles. The river will not be affected by the proposed plans as the site already has floodlights in place, along the edge of the woodland surrounding the river.	 

Fauna

Bats

There are four EPSLs within 2km of the site involving common pipistrelle, soprano pipistrelle and brown long eared bats. The closest EPSL is located 110m east and involves the damage of a resting place for common pipistrelle, soprano pipistrelle and brown long eared bats. The woodland and river onsite are excellent habitats for commuting and foraging bats; however, the surrounding site is very urban with small pockets of woodland and tree lined boundaries scattered throughout. The site already has floodlights on five out of the six courts which are adjacent to the woodland. 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

B1 Exterior **B1 – north-eastern and north-western elevations (pictured opposite).** B1 is a detached two-storey brick-built building with a gabled roof clad in interlocking concrete roof tiles. The roof tiles are in very good condition with no raised tiles under which bats could roost. The doors and windows are UPVC and appear in excellent condition with no suitable bat roosting sites. The brickwork around the building appears in excellent condition with no gaps or cracks within which crevice-dwelling bats could roost. The brick gable end is in very good condition with no gaps around the tops of the gable ends and no missing mortar under the roof tiles.	

B1 – south-western elevation (pictured opposite). There are timber soffits and bargeboards around the building which are in good condition with no gaps in which bats could roost or gain access into the soffit box. The roof tiles on the south-western elevation are in very good condition with no raised tiles under which bats could roost.	

B1 – south-eastern elevation (pictured opposite). The brick gable end is in very good condition with no gaps around the tops of the gable ends and no missing mortar under the roof tiles. The barge boards are also in very good condition with no missing or damaged sections in which bats could enter the soffit box.	

B1 Interior

There was no access into the loft space due to a lack of accessible loft hatch in B1. This has been taken into account within this report.

B1 Evidence of bats

There was no evidence of bat use (e.g. bat droppings) found on external features. However, this kind of evidence is easily weathered away on the exterior of buildings and is rarely visible.

B1 Breeding birds and other incidental observations

There was no evidence of nesting birds located externally on the survey building.

B2 Exterior

B2 – south-western and north-western elevations (pictured opposite).

B2 is a semi-detached single-storey brick-built building with a gabled roof clad in interlocking concrete roof tiles. The roof tiles are in very good condition with no raised tiles under which bats could roost.

A section of the ridge tiles has been removed and replaced with lead flashing (circled in red) on B2. The ridge and lead flashing are all tightly sealed with no raised or missing sections of mortar in which bats could use to enter B2.

The doors and windows are UPVC and appear in excellent condition with no suitable bat roosting sites.

The brick gable end is in very good condition with no gaps around the tops of the gable ends and no missing mortar under the roof tiles.

The south-western elevation is also clad in a small section of vertical wooden boarding which is in very good condition with no warped or missing sections in which bats could roost behind.

B2 – north-eastern elevations (pictured opposite).

The roof tiles are in very good condition with no raised tiles under which bats could roost.

There are timber soffits and bargeboards around the building which are in good condition with no gaps in which bats could roost or gain access into the soffit box.

The brickwork around the building appears in excellent condition with no gaps or cracks within which crevice-dwelling bats could roost.

B2 Interior

There was no access internally in B2. This has been taken into account within this report.

B2 Evidence of bats

There was no evidence of bat use (e.g. bat droppings) found on external features. However, this kind of evidence is easily weathered away on the exterior of buildings and is rarely visible.

B2 Breeding birds and other incidental observations

There was no evidence of nesting birds located externally on the survey building.

B3 Exterior

B3 – north-eastern and north-western elevations (pictured opposite).

B3 is a detached two-storey brick-built building with a gabled roof clad in interlocking concrete roof tiles. The roof tiles are in very good condition with no raised tiles under which bats could roost.

The doors and windows are UPVC and appear in excellent condition with no suitable bat roosting sites.

The brickwork around the building appears in excellent condition with no gaps or cracks within which crevice-dwelling bats could roost.

The brick gable end is in very good condition with no gaps around the tops of the gable ends and no missing mortar under the roof tiles.

There are hanging tiles on the north-western elevation of B3 which are in excellent condition with no raised tiles and no gaps in which bats could roost.

B3 – south-eastern and south-western elevations (pictured opposite).

The roof tiles on the south-eastern elevation are in very good condition with no raised tiles under which bats could roost.

There are hanging tiles on the south-eastern elevation of B3 which are in excellent condition with no raised tiles and no gaps in which bats could roost.

B3 Interior

There was no access internally in B3. This has been taken into account within this report.

B3 Evidence of bats

There was no evidence of bat use (e.g. bat droppings) found on external features. However, this kind of evidence is easily weathered away on the exterior of buildings and is rarely visible.

B3 Breeding birds and other incidental observations

There was no evidence of nesting birds located externally on the survey building.

B4 Exterior

B4 – north-eastern and north-western elevations (pictured opposite).

B4 is a detached two-storey brick-built building with a gabled roof clad in interlocking concrete roof tiles. The roof tiles are in very good condition with no raised tiles under which bats could roost.

The doors and windows are UPVC and appear in excellent condition with no suitable bat roosting sites.

The brickwork around the building appears in excellent condition with no gaps or cracks within which crevice-dwelling bats could roost.

The brick gable end is in very good condition with no gaps around the tops of the gable ends and no missing mortar under the roof tiles.

There are hanging tiles on the north-western elevation of B4 which are in excellent condition with no raised tiles and no gaps in which bats could roost.

B4 – south-eastern and south-western elevations (pictured opposite).

The roof tiles on the south-eastern elevation are in very good condition with no raised tiles under which bats could roost.

There are hanging tiles on the south-eastern elevation of B4 which are in excellent condition with no raised tiles and no gaps in which bats could roost.

The brick gable end is in very good condition with no gaps around the tops of the gable ends and no missing mortar under the roof tiles.

B4 Interior

There was no access internally in B4. This has been taken into account within this report.

B4 Evidence of bats

There was no evidence of bat use (e.g. bat droppings) found on external features. However, this kind of evidence is easily weathered away on the exterior of buildings and is rarely visible.

B4 Breeding birds and other incidental observations

There was no evidence of nesting birds located externally on the survey building.

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***	***Biological records data***
Amphibians	Great crested newts exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton *et al.* 2001). As such, the great crested newt metapopulation known to be present 910m south and 1915m west are not suitably connected to the site. A review of aerial imagery indicates the presence of one pond within 500m of the site, located 110m north within deciduous woodland which would provide suitable terrestrial opportunities for amphibians which, in turn would reduce the likelihood of amphibians, including great crested newts from venturing across a main road, which is constantly busy, towards the site. The pond is separated from the site by urban infrastructure including tarmac roads, buildings, and extensive managed grassland, which is regularly mown resulting in a short sward length. These landscape features are suboptimal for great crested newts due to a lack of refuge from predation. As a result, given the distance of this pond from the site, these landscape features are likely to represent a significant barrier to dispersal eliminating connectivity to the site for great crested newts. The habitats onsite are predominately hard standing, in the form of tennis courts and concrete paths. Although, the semi-natural woodland to the east of the site could provide suitable terrestrial habitat for amphibians, the woodland is surrounded by two very busy roads on the north and east and hard standing and buildings which are in constant use.	A review of the MAGIC database returned no granted EPSL, class licence or pond survey records for great crested newts within 500m of the site. However, there are 2 EPSLs- 910m south and 1915m west of the site which are for the destruction of a GCN resting place. There is one record for great crested newts within 2km of the site. The record is located 490m south-west. This record of GCN is located within a residential area, with fencing and tarmac roads, which are likely to represent a significant barrier to dispersal eliminating connectivity to the site for great crested newts.
Reptiles	The habitats recorded on site are suboptimal as the site is predominately hard standing and a section of amenity grassland, which may provide foraging opportunities but is very open and exposed which increases the risk of predation. The semi-natural woodland could provide suitable places for reptiles to seek shelter but there aren't any habitats which reptiles could bask within. Furthermore, the tennis courts (the area to be affected) is surrounded on all sides with small wire chain link mesh which is also in excellent condition with no gaps or missing/ broken sections. The remainder of the surrounding area	There are three records of reptiles within 2km of the site. These include a record of a slow worm 931m east, a grass snake 1763m south-east and a common lizard 1763m south-east.

	is in constant use as a car park, with other buildings and two fast and busy main roads to the north and east, preventing dispersal and decreasing connectivity to the site.	
Badgers	No evidence, in the form of paw prints, latrines, fur or setts themselves, was observed onsite. In addition, the site itself is flat with minimal vegetation and therefore has little to offer in the way of foraging or sett excavation habitat. The woodland onsite could provide suitable foraging habitat for badgers but is surrounded by busy roads and hard standing and buildings, causing the woodland to be fragmented from surrounding woodland.	No records of badgers within 2km of the site.
Hazel Dormouse	No evidence of dormice was found within the site. It is not anticipated that dormice are present on the site due to the lack of suitable of the habitats present. Furthermore, for isolated habitats in the UK, research indicates that dormice require 20ha of woodland habitat to support a viable population (Bright *et al.* 1994). There are no areas of woodland present on or directly adjacent to the site that are big enough (20ha) to support dormice.	No records of dormice within 2km of the site.
Hedgehog	No evidence of hedgehogs was found on site. The habitats recorded on site are suboptimal as the site is mainly hard standing and amenity grassland structure which is very exposed. The woodland onsite could provide suitable foraging habitat for hedgehogs but is surrounded by busy roads and hard standing and buildings, causing the woodland to be fragmented from surrounding woodland.	There is one record of a hedgehog within 2km of the site. This record is located 268m north-west within a residential area with fencing and tarmac roads, which are likely to represent a significant barrier to dispersal eliminating connectivity to the site for hedgehogs.
Otter	There is no evidence of otters onsite, no holts, spraints or latrines were observed along the bank of the river Pinn. Additionally, the banks are very steep with no vegetation and are predominately covered with sandbags and metal props which prevent otters from creating holts within the riverbank. Furthermore, immediately to the west and east of the river and woodland is hard standing, in the form of tennis courts and busy main roads which create a barrier and decreases connectivity to suitable foraging habitat. The river was very shallow and has no obvious fish or aquatic life.	No records of otters within 2km of the site.
Water Vole	There is no evidence of water voles onsite and the banks of the river Pinn are very steep with no vegetation and are predominately covered with sandbags and metal props which prevent water voles from burrowing within the riverbank. Furthermore, immediately to the west and east of the river and woodland is hard standing, in the form of tennis courts and busy main roads which create a barrier and	No records of water vole within 2km of the site.

	decreases connectivity to suitable foraging habitat. The river was very shallow and has no obvious fish or aquatic life.	
Birds	No evidence of nesting birds was observed onsite, however, the species poor hedgerows and semi-natural woodland have good habitat value for nesting birds.	There are 63 species of birds recorded within 2km of the site. The closest being a record for a Mistle Thrush located 1km away.

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 to change existing floodlighting on five courts to LEDs, and to add floodlighting to our sixth court.

Table 8: Evaluation of the site and any ecological constraints

Ref	***Summary of Survey Findings***	***Foreseen Impacts***	***Recommendations*** *Measures required to adhere to guidance, legislation and planning policies.*	***Biodiversity Enhancements*** *The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021)*
Designated sites	There are three statutory sites within 2km of the site, the closest being Ruislip Woods National Nature Reserve (NNR) located 395m west from the site. The site lies within the impact risk zone for Ruislip Woods SSSI and the proposed development is not listed as a possible high risk for this designation. There are 16 non-statutory sites within 2km of the site, the closest being Ruislip Woods and Poor's Field.	No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the urban location of the site with surrounding physical barriers.	None.	None.
Habitats and flora	The site contains deciduous woodland which is listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act	No direct impacts to any notable habitats will occur as a result of the proposed development. However, due to the proximity of the site to deciduous woodland and the river Pinn, indirect	Best practice measures to minimise the possibility of pollution and tree damage must be implemented during construction.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development: • Native tree, hedgerow and shrub planting.

	(2006). Also, the river Pinn is located onsite, and further notable habitats are present within 2km. Other habitats within the site are common and widespread and have low ecological value.	effects such as pollution or tree damage could occur during construction. The proposed development will not result in any loss of habitat onsite, only the addition of further lighting. The habitats onsite are already exposed to lighting from the tennis court floodlights.		Species-specific enhancement opportunities are detailed later in this table.
Amphibians	A review of the MAGIC database returned two granted EPSL records for great crested newts within 2km of the site. There is one pond within 500m which is located within woodland, creating suitable terrestrial habitat, which in turn reduces the need for GCN to venture into sub-optimal habitat where the chances of predation are very high.	No impacts are anticipated on amphibians, including great crested newt, as a result of the proposed development.	None.	None.
Reptiles	Reptiles are unlikely to be present due to low value habitats and surrounding barriers (fencing, buildings and hard standing) which prevent connectivity.	No impacts are anticipated on reptiles as a result of the proposed development. As the proposed development will not result in any loss of habitat onsite, only the addition of further lighting.	None.	None.

	Although, the woodland onsite could provide shelter for reptiles, if they were able to gain access onsite.			
Roosting bats (B1-B4)	All four buildings (B1-B4) onsite have negligible value for roosting bats due to a lack of potential roost features.	Bats are very unlikely to be roosting within these buildings 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 mature trees around the site boundaries or 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.
Foraging and commuting bats	Semi-natural woodland, the river Pinn and species poor hedgerows could be used by local bat populations for foraging and commuting. These could also be used by bats	The proposed development will not result in the removal of any habitats which could be used by foraging or commuting 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.	The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for foraging bats:

	dispersing from nearby roosts outside of the site.	The proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas. However, the habitats onsite are already exposed to lighting from the tennis court floodlights. This includes floodlights positioned on courts 1-5 along the edge of the semi-natural woodland and therefore, the addition of lights for the sixth court will not increase light levels exponentially.	• 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.	• Planting of native tree, shrub and hedgerows to increase foraging opportunities.
Badger	Badgers are anticipated to be absent due to lack of suitable habitat including lack of setts, latrines, badger fur or prints were observed onsite.	No impacts are anticipated on badgers as a result of the proposed development.	None.	None.
Hazel dormouse	No evidence of dormice was found within the site. It is not anticipated that dormice are present on the site due to the	No impacts are anticipated on hazel dormice as a result of the proposed development.	None.	None.

	lack of suitable of the habitats present.			
Hedgehog	No evidence of hedgehogs was found on site. The woodland onsite could provide suitable foraging habitat for hedgehogs but is surrounded by busy roads and hard standing and buildings, causing the woodland to be fragmented from surrounding woodland.	No impacts are anticipated on hedgehogs as a result of the proposed development. As the proposed development will not result in any loss of habitat onsite, only the addition of further lighting.	None.	None.
Otter	There is no evidence of otters onsite, no holts, spraints or latrines were observed along the bank of the river Pinn (located 15m east of the tennis courts). Additionally, the banks are very steep with no vegetation and are predominately covered with sandbags and metal props which prevent otters from creating holts within the riverbank.	Only new lighting is proposed and on such small scale that no impacts are anticipated on otter plus the watercourse is generally unsuitable for otters	None.	None.
Water vole	There is no evidence of water voles onsite, and the banks of the river Pinn are very steep	No works will be undertaken within 5m of the top of the banks of the watercourse. Therefore, no impacts are anticipated on	None.	None.

	with no vegetation and are predominately covered with sandbags and metal props which prevent water voles from burrowing within the riverbank.	water vole as a result of the proposed development.		
Birds	No evidence of nesting birds onsite, however, the semi-natural woodland and species poor hedgerow would create suitable nesting opportunities if used. These trees will remain in-situ.	No impacts are anticipated on nesting birds as a result of the proposed development.	None.	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.

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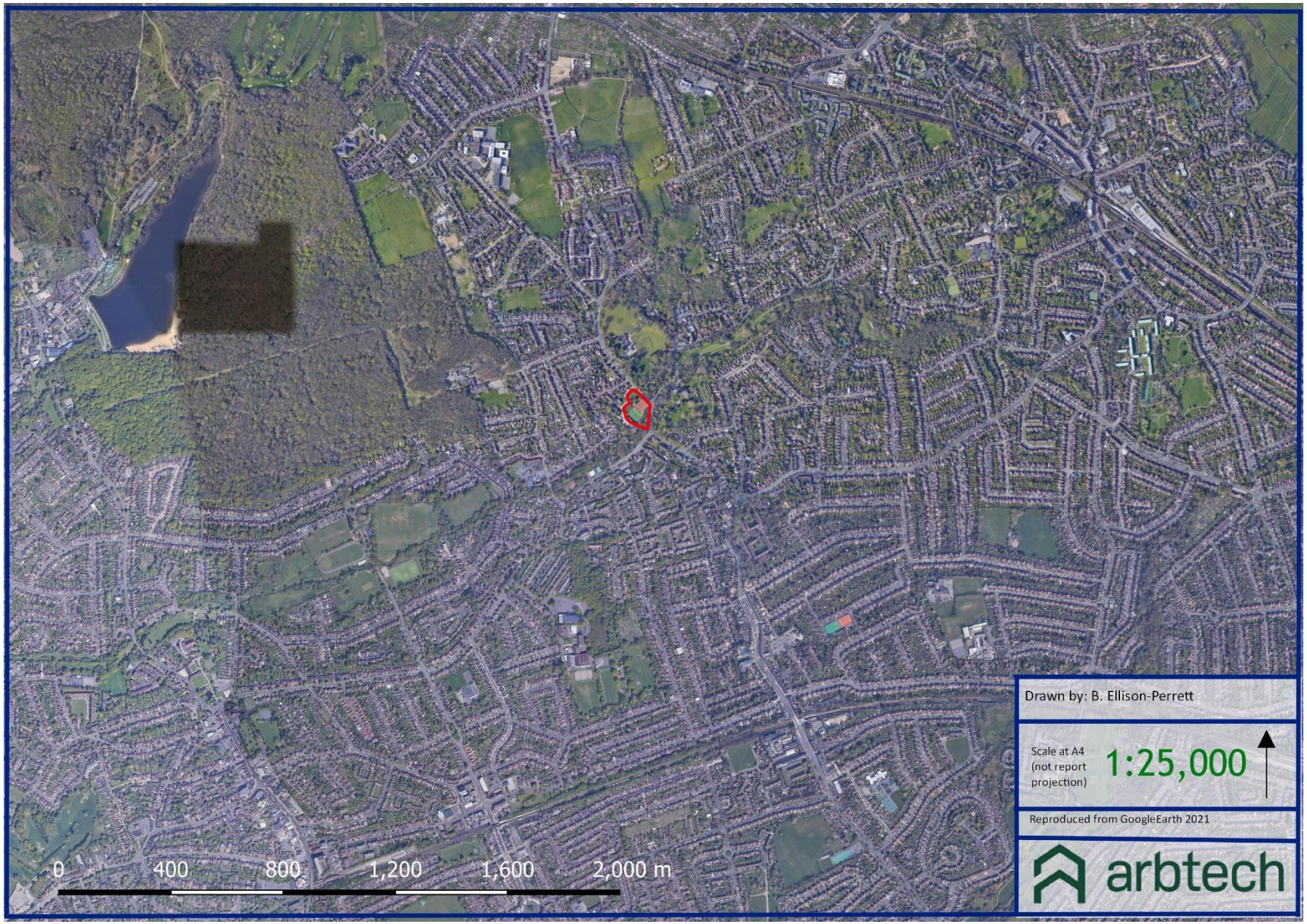
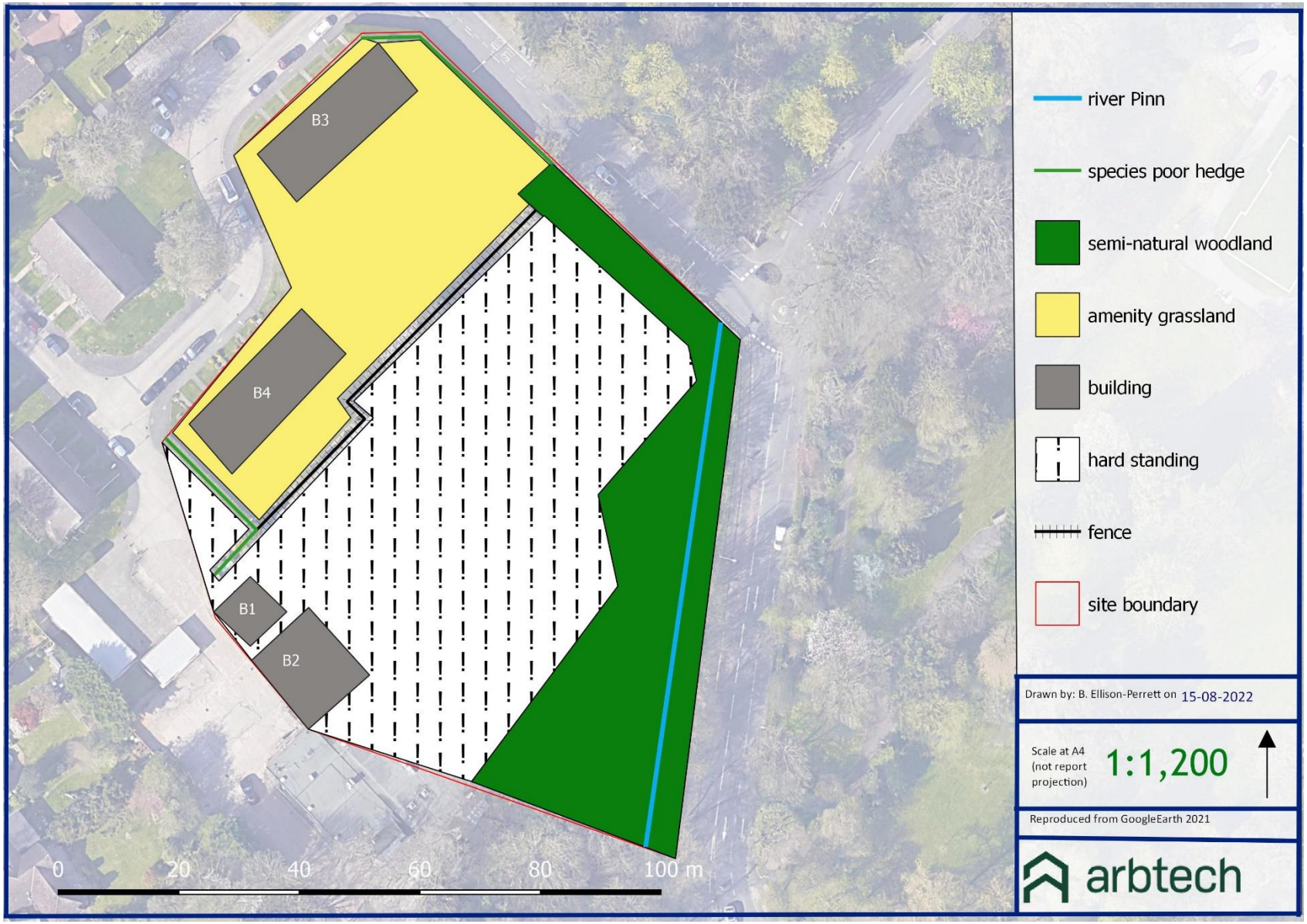
Appendix 1: Proposed Development Plan

Not available at the time of writing this report.

Appendix 2: Site Location Plan



Appendix 3: Habitat Survey Plan



Appendix 4: Legislation and Planning Policy

LEGAL PROTECTION

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 (the Wild Birds Directive) 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 1000 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, both within and outside Natura 2000 sites.

Annex V species (over 90): 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.

The Conservation of Habitats and Species Regulations 2017 (as amended) form the legal basis for the implementation of the Habitats and Birds Directives in terrestrial areas and territorial waters out to 12 nautical miles 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 Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) aims to promote the maintenance of biodiversity by requiring the Secretary of State to take measures to maintain or restore wild species listed within the Regulations at a favourable conservation status.

The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

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 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.

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.