

# Preliminary Ecological Appraisal

**Site:** LAND AT NHSBT, Unit D,  
South Yorkshire, S75 3FG

**Ref:** 241778 / E1

**Client:** NHSBT



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NHSBT | CLIENT  
LAND AT NHSBT | SITE  
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## SUMMARY

<b>Purpose of the report</b>	This report presents a Preliminary Ecological Appraisal (PEA) survey conducted on Land at Unit D, Capitol Park. The survey is required to inform a planning application. The proposals are for the creation of a storage area with a concrete base and canopy.
<b>Surveys completed</b>	The following surveys were completed on-site: <ul style="list-style-type: none"> <li>• UK Habitat Classification Survey and Habitat Evaluation</li> <li>• Evaluation of protected and notable species</li> </ul>
<b>Results</b>	In summary, the development site itself has a <b>low</b> ecological value due to lack of suitable habitats for protected species. As a result, no further surveys are required for the site itself. However, the site is adjacent to habitats, including hedgerows, mature trees, and woodland, which could support species such as foraging and commuting bats, reptiles, nesting birds, and other wildlife.
<b>Recommendations</b>	To ensure the protection of these adjacent habitats and the species they may support, appropriate mitigation measures and recommendations have been proposed. If these measures are implemented during the development process, the risk of harm to any protected species will be significantly reduced, ensuring compliance with relevant legislation and maintaining the ecological integrity of the area.

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## 1. INTRODUCTION

Indigo Surveys was commissioned by NHSBT to undertake a Preliminary Ecological Appraisal of Land at Unit D, Capitol Park, Dodworth, Barnsley S75 3TZ.

This report has been produced by a suitably qualified ecologist. The results and recommendations contained within this report are the view of the author and the report is based on the information provided by the client, the proposed development and the results of the desk study/survey.

The red line boundary is approximately 0.02 hectares and is primarily comprised of modified grassland. The proposed development site sits within the ownership boundary of Unit 6 in the bottom southwest corner of the commercial vehicle parking and delivery forecourt to the rear of the building. The proposed location sits adjacent to an existing storage canopy. The site is enclosed by a 1.8m high mesh security fence and runs adjacent to notable habitats including a hedgerow, mature trees and woodland habitats that are well-connected to the wider landscape. The red line boundary also includes a section of grassland to the north of the building, which is proposed for habitat enhancements, which is within the ownership boundary of the site.

The main building is situated within a commercially developed area, predominantly surrounded by warehouses and commercial vehicle depots. To the east, the site is bordered by the M1 motorway and its associated infrastructure, while to the south lies a residential neighborhood with gardens, local parks, and allotments. To the west, the site transitions into woodland habitat and open countryside, which adjoins a local golf course featuring grassy areas and mature trees.

The local planning authority is Barnsley Metropolitan Borough Council. The recommendations are based on the site's current conditions as observed during the baseline survey.

## 2. METHODS

The purpose and aims of the survey were to:

- To undertake a Preliminary Ecological Appraisal (including third-party data search) to determine the potential for protected species and/or habitats of conservation value.
- Analyse the results of a third-party biological record search to identify any protected / notable records and nature conservation designations within the local vicinity.
- Determine how the proposed works may impact on these species, habitats, designated sites or areas of nature conservation interest.
- Identify the requirement for further survey work, mitigation, compensation and / or assessment where necessary and propose suitable enhancements.

### *Desk Study Methodology*

Existing ecological and nature conservation data relevant to the site was collated from various sources including the Multi-Agency Geographic Information for the Countryside (MAGIC) online database.

Biological data for this assessment was obtained from The Barnsley Biological Record Centre (BBRC), which serves as the primary source for ecological records and data within the region.

BBRC provided information regarding bats and great crested newts within a 1km radius and non-statutory sites and all other protected / notable records within a 1km radius. MAGIC Maps was used in October 2024 to undertake a 2km search for statutory designated sites for nature conservation and European Protected Species Mitigation Licences. MAGIC Maps was also used in October 2024 to assess whether the site may fall within a Site of Special Scientific Interest (SSSI) Impact Risk Zone (IRZ). All sites and record locations are given at an approximate distance from the site and coarse resolution records have not been analysed. Some records have been given at approximate distances or not included in the report where they are considered confidential; however, none of these records are relevant to the proposed development site.

### *The Ecological Survey Methodology*

The survey was carried out on the 8th of October 2024 arriving at 12:30. The weather was 17°C, sun with scattered clouds and light winds (1/2 Beaufort Scale). No precipitation was encountered during the survey.

The survey was completed in accordance with the Preliminary Ecological Appraisal Guidelines (CIEEM, 2017) and standard methodology published in the UK Habitat Classification User Manual (UK Habitat Classification Working Group, 2018). The survey involved walking over the site, mapping the main habitat types (in accordance with minimum mappable habitat sizes) and compiling a botanical species list and target notes to identify particular areas of interest or concern. Observations on the presence, or potential presence, of other certain protected species (e.g., badgers, nesting birds, reptiles and dormouse) and invasive / non-native species were recorded also. Riparian species (e.g., otter, water vole and white-clawed crayfish) have not been included in the assessment as there are no suitable water features on or adjacent to the site to support these species. The survey does not aim to be a comprehensive assessment of the presence or otherwise of all protected species on the site. There are a wide range of protected species, many of them can occur on one site and most require specialist expertise to locate them and / or seasonally constrained survey techniques to confirm their presence, and this is outside of the scope of this instruction. Phase 2 assessments and surveys have been recommended where appropriate.

Hedgerows on the site were assessed following methodology provided in the Hedgerow Survey Handbook (DEFRA, 2007). Where relevant, a native hedgerow was defined as species-rich if the structural species included at least five native woody species in a surveyed 30m section of the hedgerow. The results were then compiled and assessed against qualifying criteria provided within the Hedgerow Regulations (1997) and the UK Biodiversity Action Plan / NERC Act (2006). Further information regarding legislation, policy and methodology for species relevant to this site and provided in full within Appendix 1 of this report. This is not considered to be an exhaustive list and it may be misleading to rely upon them as the information provided may not be up to date at the time of reading. Where there is doubt as to the current legal position then it is best to seek expert legal advice.

### *Zone of Influence*

The zone of influence refers to the geographic extent of potential impacts of a proposed development. Given the small-scale nature of the development, the zone of influence is considered to be 250m from the application boundary for amphibians and reptiles, 30m for terrestrial mammals such as badgers, and within the area of impact for birds and bats. All other impacts are considered within the site boundary unless otherwise specified.

### *Site Evaluation*

Following the preliminary survey, the site can be classified into one of six groups to establish whether the site is considered to hold ecological value at an international, national, regional, county, district or local / site scale (see Table 1). Targeted survey work is usually required to establish the significance of protected species within the site and this evaluation is only a guide.

**Table 1. This table has been constructed following the CIEEM EclA Guidelines (CIEEM, 2018). It contains definitions of the evaluation brackets thereby indicating the importance of each habitat type and their possible habitat status.**

<b>Ecological Value</b>	<b>Description / Example</b>
<b>International</b>	An internationally designated site or candidate site. This includes habitats or species listed within Special Areas of Conservation, Special Protection Areas, Ramsar Sites, listed under Annex 1 of the Habitats Directive.
<b>National</b>	Sites that are designated at a UK level. This includes Sites of Special Scientific Interest, supporting nationally threatened or rare species.
<b>Regional</b>	Can include a significant population or number of any nationally important species at a regional level.
<b>Country</b>	Can include a feature identified as of critical importance within Section 41 of the NERC Act (2006).

<b>District</b>	Can include a regularly occurring, locally significant population or number of a regionally important species. A Key Habitat type included within the Biodiversity Action Plan or NERC Habitat of Principal Importance.
<b>Local / Site</b>	Designated sites for nature conservation such as Local Wildlife Sites or viable habitat / species populations considered of value at a county level (Local Biodiversity Action Plan species).

### *Survey Limitations*

There are a small number of limitations, but it is considered that an accurate assessment of the site has been obtained:

- The desk study and field survey does not produce a comprehensive plant or animal species list as this will be limited by factors that influence their presence (such as activity and dormancy periods). However, an assessment can be made of the habitats within the survey area particularly given that the majority of the habitats are considered to be modified. It has also been possible to ascertain their corresponding nature conservation value and the potential for them to support any protected or priority species.

### *Report Lifespan*

Given the transient nature of the subject, the survey results are considered valid for up to 12 months.

### 3. RESULTS

#### *Desk Study – Statutory Sites*

The Barnsley Biological Record Centre (BBRC) and MAGIC maps returned no record of statutory sites for nature conservation within a 2km radius of the proposed site. The closest statutory site is Dearne Valley Wetlands SSSI (Sites of Special Scientific Interest) which is located 3.2km southeast of the proposed development.

The Natural England Site of Special Scientific Interest (SSSI) Impact Risk Zones layer (available on MAGIC) was also reviewed to determine whether the site falls within any of the risk layers and therefore could impact SSSIs (or the SSSI components of SACs/SPAs etc.). The site lies within the Site of Special Scientific Interest (SSSI) Impact Risk Zone of Pye Flatts Meadows SSSI which lies approximately four kilometres west of the site.

The Impact Risk Zone at this distance indicates local planning authorities should consult with Natural England for development types including aviation proposals and pig and poultry units. The proposed development does not fall into the above categories, no further consultation with Natural England is required in respect to the proposals and impacts upon the SSSI. It is considered that the site is sufficiently distant from the SSSI that any impact from the proposals can be reasonably discounted.

#### *Desk Study – Non-Statutory Sites*

The Barnsley Biological Record Centre (BBRC) and MAGIC maps returned no records for non-statutory designated sites for nature conservation within a 2km radius of the proposed site.

#### *Desk Study – Priority Habitats*

The Barnsley Biological Record Centre (BBRC) and MAGIC maps returned 8 records for priority habitat sites for nature conservation within a 1km radius of the proposed site.

**Table 2. Summary of Priority Habitats within a 1km Radius of the Application site.**

Designation Reason	ID Number	Distance / Direction from site
Deciduous Woodland	PHID43142703_040585843	40m west
Deciduous Woodland	PHID43174687_040631483	375m northeast
Deciduous Woodland	PHID43200942_040606861	400m east
Deciduous Woodland	PHID43213929_040611313	550m east
Deciduous Woodland	PHID43229052_040533148	650m southeast
Ancient Woodland	1411833	750m northwest
Deciduous Woodland	PHID43197756_040513999	800m south
Deciduous Woodland	PHID43142703_040585843	950m northwest

### *Desk Study – Protected Species Assessment*

Data supplied from The Barnsley Biological Record Centre (BBRC) included records for protected species. A summary of the closest / most relevant records can be seen in Table 3.

**Table 3. Summary of Relevant Protected and Priority Species Records (Bats, Great Crested Newts and all other notable / protected species – 1km).**

Species (Common and Scientific Name)	Description (Number of Records, Closest Location / Direction and Corresponding Date)
<b>Terrestrial Mammals</b>	
<b>Brown Long-eared Bat</b> <i>Plecotus auratus</i>	2 records / 330m NE – 2001
<b>Noctule Bat</b> <i>Nyctalus noctula</i>	1 record / 1km - 1981

<b>Hedgehog</b> <i>Erinaceus europaeus</i>	1 record / 1km - 1995
<b>Amphibian</b>	
<b>Great crested newt</b> <i>Triturus cristatus</i>	1 record / 1km - 1995
<b>Common Toad</b> <i>Bufo bufo</i>	1 record / 90m SW - 2012
<b>Birds</b>	
House sparrow <i>Passer domesticus</i> , Kestrel <i>Falco tinnunculus</i> , Starling <i>Sturnus vulgaris</i> , Song thrush <i>Turdus philomelos</i> , Dunnock <i>Prunella modularis</i> , Bullfinch <i>Pyrrhula pyrrhula</i> , Marsh tit <i>Poecile palustris</i> .	

This report acknowledges the presence of the protected species in Table 3. Their presence and distances to site have been carefully considered in the recommendations and evaluation for both protected and notable species.

#### ***Desk Study – Magic Maps (MAGIC)***

A review of MAGIC Maps revealed no European Protected Species (EPS) licence applications within a 1km radius of the site. This indicates that there have been no recent records of activities requiring mitigation for EPS.

#### ***UK Habitat Classification Survey and Habitat Evaluation***

The results of the UK Habitat Classification Survey are presented below. The habitats on the site have been evaluated as having site value in relation to the immediate surroundings and a regional context.



Planning consent will be sought from Barnsley Metropolitan Borough Council, following a review of local guidance to determine the habitats' strategic significance. The Biodiversity Net Gain Guidance Document for the Local Planning Authorities was consulted.

Where no relevant plan, strategy, or policy exists, professional judgment may be used to classify habitats as having medium strategic significance, particularly if they provide a link between other strategic locations. Ecologist consultants may apply their judgment to this determination, but a strong justification will be required.

*The following habitats and ecological features were recorded within or immediately surrounding the site:*

- **g4** – *Modified Grassland (g4)*

**Table 4. Habitats and features within and immediately surrounding the site**

Habitat / Feature	Habitat / Feature Description	Photograph
<p><b>G4 – Modified Grassland</b></p>	<p>The site is classified as modified grassland (g4), characterised by the predominance of a few fast-growing grass species, with perennial rye-grass <i>Lolium perenne</i> being the most abundant.</p> <p>This habitat is subject to a regular and intensive management regime, including frequent mowing. Species diversity is limited, with additional species such as Dove’s-foot crane’s-bill <i>Geranium molle</i> present, though the frequent management further diminishes its ecological quality and potential to support a broader range of species. The habitat is not highlighted within local conservation or biodiversity action plans.</p>	 <p>Figure 1: View standing east facing west across the development area.</p>  <p>Figure 2: View of the area of grassland proposed for habitat enhancements.</p>

### *Invasive Weeds Assessment*

A thorough assessment was conducted to determine whether any invasive plant species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) are present on the site. No species listed under Schedule 9 were recorded during the site survey. However, it is important to note that the absence of identified Schedule 9 species during the survey does not guarantee their absence from the site. Some invasive species may not have been visible at the time of the assessment due to seasonal growth patterns or may exist in areas not fully accessible during the survey.

### *Evaluation for protected and notable species*

Observations regarding the presence of, or opportunities for, any other protected, rare, or notable faunal species were made during the site visit. Details are provided in Table 5 below.

**Table 5. Assessment of suitability for the site to support protected species.**

Species	Description	Assessment of Ecological Value
<i>Foraging and Commuting Bats</i>	The site provides limited habitats for bats due to its open nature and lack of significant vegetative cover and artificial lighting is present, which reduces its suitability for foraging or commuting bats. However, the site is adjacent to more favourable habitats, including mature hedgerows, trees, and woodland, which offer suitable commuting routes and foraging opportunities for bats in the surrounding area.	The site is assessed as having <b>low-moderate</b> suitability for foraging and commuting bats. Although the grassland on-site is of limited value and the presence of artificial lighting reduces its attractiveness to bats, the adjacent hedgerows, mature trees, and woodland provide foraging opportunities and well-connected commuting routes. These surrounding habitats enhance the site's ecological value for bats, though the artificial security lighting prevents it from being assessed as highly suitable.
<i>Badger</i>	The site, comprising of highly managed grassland, offers negligible suitable habitat for badgers. It is enclosed by a secure and well-maintained security fence,	The site is assessed as having <b>negligible</b> suitability for badgers. The managed grassland, combined with the presence of a security fence, limits the site's value for badger foraging, commuting, or sett-

	<p>which prevents badger movement onto the site. No badger setts, latrines, or foraging signs were identified during the survey, and the surrounding environment is not conducive to badger activity.</p>	<p>building. Badger presence or activity on-site is highly unlikely.</p> <p>Consequently, badgers are not considered a constraint to the development proposals albeit precautionary safeguards will be implemented to ensure the ongoing conservation of local badger populations, if encountered.</p>
<p><i>Reptiles and Amphibians</i></p>	<p>The site itself is comprised of intensively managed grassland, which provides negligible suitable habitat for reptiles due to the lack of structural diversity such as rough grassland or scrub needed for basking, foraging, and shelter. However, the site is connected and adjacent to more suitable habitats along the western boundary, including hedgerows, patches of scrub, and woodland. These adjacent features offer potential basking spots, refugia, and foraging opportunities for reptiles, enhancing the site's ecological value through its connection to the surrounding landscape.</p>	<p>The site is assessed as having <b>low-moderate</b> suitability for reptiles. While the site itself lacks suitable habitat for reptiles, it is connected and adjacent to areas along the western boundary that include hedgerows, scrub, and woodland. These adjacent features provide suitable conditions for reptiles, including basking and commuting routes between nearby optimal habitats.</p> <p>Additional precautionary safeguarding measures are set out in Section 4 below to ensure the species is protected throughout development works and beyond.</p>
<p><i>Great Crested Newts (GCN)</i></p>	<p>The site lacks any water bodies or suitable terrestrial features for great crested newts (GCN). No ponds are located within 250 metres of the site, and the nearest pond, approximately 495 metres to the northwest, is separated by roads and urban infrastructure, limiting</p>	<p>The site is assessed as having <b>negligible</b> suitability for great crested newts. The absence of nearby water bodies, the barriers posed by roads and urban infrastructure conclude that GCN are highly unlikely to use the site. However, in accordance with best practice, Reasonable Avoidance Measures (RAMs)</p>

	<p>any potential for GCN movement. The Natural England Rapid Risk Assessment was conducted and assessed that an offence was highly unlikely.</p>	<p>should be observed during the construction period: careful site clearance, avoidance of works during key active periods for amphibians, and installation of exclusion fencing, if required. These measures will ensure any remote potential risks to GCN are mitigated during construction.</p>
<i>Nesting Birds</i>	<p>The site itself offers limited nesting opportunities for birds. However, it is adjacent to more suitable habitats along the western boundary, including mature trees and a well-established hedgerow. These features provide potential nesting sites for a variety of bird species. In addition, the existing buildings on-site may offer some opportunities for common species of nesting and roosting birds, such as house sparrows or starlings, although no evidence of active nesting birds was observed during the site visit.</p>	<p>The site is assessed as having <b>low-moderate</b> suitability for nesting birds. While the site lacks suitable nesting habitats, the proximity to mature trees and a hedgerow along the western boundary provides nesting opportunities for birds. These features are well-connected to the surrounding landscape. The existing buildings may also support common nesting bird species, even though no active nests were recorded during the site visit.</p> <p>Due to the suitability of habitats surrounding the site to support the nesting of common species, safeguarding measures will be implemented to ensure the safety of breeding birds within the site throughout the development works. Any vegetation removal must avoid the nesting bird season (typically March to September inclusive) or otherwise be checked by a suitably qualified ecologist immediately before clearance / construction to check for nesting birds if undertaken during the nesting season.</p>
<i>Hazel Dormouse</i>	<p>The site offers negligible suitable habitat for hazel dormice, as it lacks</p>	<p>The site is assessed as having <b>negligible</b> suitability for hazel dormice. While the</p>

	<p>the dense woodland and hedgerow structure required for dormouse populations. However, adjacent to the site, there are hedgerows and areas of woodland that could potentially provide suitable habitat for dormice. No evidence of Hazel Dormouse was observed during the survey.</p>	<p>site itself is unsuitable, the adjacent hedgerows and woodland may offer suitable habitat for dormice. However, dormice are highly unlikely to be present on the site itself.</p> <p>Additional precautionary safeguarding measures are set out in Section 4 below to ensure the species is protected throughout development works and beyond.</p>
<p><i>Other</i></p>	<p>Other faunal species were also considered during the site visit, such as hedgehogs.</p> <p>The site offers negligible suitability for hedgehogs due to the presence of a well-maintained security fence, which restricts any movement across the development site. While hedgehogs may use adjacent areas, the secure fencing prevents access to the site, eliminating any potential for sheltering or movement within the development area.</p> <p>The habitats within the site are and are not considered likely to be of particularly elevated value to such species.</p>	<p>The site is assessed as having <b>negligible</b> suitability for hedgehogs.</p> <p>Whilst hedgehogs remain widespread in England, they are listed on Section 41 (S41) of the NERC Act 2006, such that precautionary safeguarding measures are set out in Section 4 below to ensure the species is protected throughout development works and beyond.</p>

Based on the findings above, the site is considered to have varying ecological value, ranging from negligible to moderate for different faunal species. The site provides low-moderate suitability for foraging and commuting bats due to the proximity of hedgerows, mature trees, and woodland, though artificial lighting on-site reduces its overall value. The site offers

negligible suitability for badgers and hedgehogs, as the secure fencing prevents access, and the managed grassland lacks suitable foraging or sheltering habitats. For reptiles, the site is adjacent to more favourable habitats, such as hedgerows and woodland, giving it low-moderate suitability for basking and commuting species. Great crested newts are unlikely to be present due to the absence of nearby water bodies.

In terms of nesting birds, the site offers low-moderate suitability due to the presence of adjacent hedgerows and trees, which provide suitable nesting habitats. However, the managed grassland itself is of limited value. For hazel dormice, the site has negligible suitability, though adjacent hedgerows and woodland could potentially provide habitat.

To safeguard these species, various mitigation and enhancement measures are outlined in Section 4. These measures, including Reasonable Avoidance Measures (RAMs) for great crested newts, as well as safeguarding protocols for nesting birds and reptiles, will ensure that the conservation value of these species is protected during and after the construction phase. By implementing these precautions, the impact on local wildlife will be minimised, maintaining the ecological integrity of the site throughout the development process.

#### **4. MITIGATION & RECOMMENDATIONS**

##### *Habitats / Biodiversity Net Gain*

In line with local and national policy, the proposed development should seek opportunities to incorporate ecological enhancements. A measurable 10% biodiversity net gain must be achieved as a result of amendments to the Town and Country Planning Act 1990 (Schedule 7A) by the Environment Act (2021).

The development must ensure that best practice measures are effectively implemented to ensure the protection of adjoining habitats. Chemicals must be securely stored on areas of hardstanding / another sealed surface, following COSHH guidelines. All those working on the site should have access to spill kits and appropriate training in their use.

To ensure any proposed enhancements are effectively delivered end to ensure the long-term management for biodiversity, a Landscape and Ecological Management Plan (LEMP) should also be developed and secured as a planning condition.

As far as possible newly proposed trees should be of native species, local provenance and appropriate to the soil/drainage conditions on the Site. Replacement of trees should be designed to maintain connectivity around and/or within the Site, in particular for bats and birds which are likely to be using the area, and as far as possible should be unlit.

### *Foraging and Commuting Bats*

The site is adjacent to some habitats to support commuting / foraging bats. The requirements of any future lighting must be assessed and implemented in line with best practice guidance to inform a sensitive lighting strategy. Such guidance should include construction work being limited between the hours of dawn and dusk, site specific lighting practices (e.g., low-light levels and use of timers) and the avoidance of light spill onto boundaries and adjoining habitats.). These documents contain further information: BCT and ILP (2023) and Matthews et al. (2015).

### *Badgers*

Sett-building opportunities are limited across most of the site as it is flat and lacks cover. Security fencing currently exists surrounding the site, which is likely to reduce movement. No signs of badger activity, such as latrines, tracks, badger highways, or snuffle holes, were present. Foraging and commuting opportunities are likely not possible on the site, and there are better opportunities in the local and wider environment (e.g., within woodland). No evidence of badgers was identified during the survey. However, precautionary working methods should be carried out pre-construction and during construction. Any other impacts to badgers are considered negligible, and no further survey work is required.

During the construction period, precautionary mitigation measures should be implemented to avoid potential harm to badgers. These measures should include:

- Storing oils, fuels, and chemicals in sealed containers and ensuring they are not left out overnight.
- Covering any trenches overnight or providing a means of escape for any animals that may fall in, such as a ramp.
- Capping any open or exposed pipework to prevent animals from gaining access.

These recommendations aim to protect badgers and ensure compliance with legal obligations during the development process.

### *Amphibians and Reptiles*

Given the small-scale nature of the site and the ability to manipulate the site to reduce the likelihood of encountering great crested newts (e.g., through phased clearance and eliminating places of shelters), no further survey work is necessary. The proposed development, including site clearance and construction phases, must proceed under a Reasonable Avoidance Measures Document for great crested newts to avoid a breach in legislation. The site has negligible potential to support rarer reptiles such as adder, smooth snakes and sand lizards. The site only has the ability to support a small number of common and widespread reptiles, and the RAMs will be sufficient for all herptiles as well as small mammals (e.g., hedgehogs). In the event of encountering a great crested newt, then works should cease and the advice of a suitably qualified ecologist should be sought.

### *Breeding Birds*

Any vegetation removal (e.g., hedgerows, ivy, shrubs, trees) and building demolition / conversion must avoid the nesting bird season (typically March to September inclusive) or otherwise be checked by a suitably qualified ecologist immediately prior to clearance / construction to check for nesting birds if undertaken during the nesting season. If any nests or evidence of nesting is found, then suitable buffer zones will have to be implemented until the chicks have fledged or until the nest has been confirmed as redundant. The netting of any suitable bird nesting habitat is prohibited (CIEEM and RSPB, 2019).

A minimum of one box should be erected on or within the buildings post-development or trees within the site. Suggestions for bird boxes include sparrow boxes (e.g., Schwegler 1SP), swift boxes (e.g., Ibstock Eco-Habitat for Swifts), starling boxes (e.g., Woodstone Starling Nest) and generalist boxes (e.g., Woodstone Build-In Box) (see Appendix 5).

### *General Recommendations*

Any hedgerows and trees to be retained must be protected in line with the British Standard: Trees in Relation to Design, Demolition and Construction (BS5837:2012).

These working methods are appropriate for mammal species of principal importance including hedgehogs as well as other species (e.g., herpetofauna):

- Any taller vegetation must be strimmed in a phased manner prior to work commencing. All vegetated areas should be checked as it is cleared to ensure there are no protected / notable species. After the vegetation is cleared, the vegetation must then be kept close to ground level and must be maintained in that condition until the development is complete.
- Prior to works commencing, any log piles, brash piles and stone piles must be removed carefully. If any species are discovered, then an ecologist should be contacted to advise or relocate the animal(s) to a suitable location, where appropriate.
- Work on the site may create rubble piles which may have the potential to be utilised as places of rest or shelter. Such debris must be removed from the site immediately or placed into skips prior to removal, or on pallets if to be reused.
- Escape routes must be provided within any pits dug for the foundations. Such ramps must be no steeper than 45 degrees in angle and must be constructed using rough wooden planks. Any excavations left open overnight must be checked first thing in the morning prior to works recommencing.
- Any exposed open pits should be capped to prevent hedgehogs and other small mammals from gaining access.
- Undertake clearance and construction work between dawn and dusk in daylight hours.

- All vegetation and piles (e.g., brash, wood and deadwood) should be checked by hand prior to clearance / removal.
- If burning any cleared vegetation, carry this out immediately after piling to prevent hedgehogs from moving in prior to burning.
- If protected species are unexpectedly discovered, works must cease immediately, and a suitably qualified ecologist must be contacted. An appropriate protection / mitigation strategy will need to be designed and submitted to the local planning authority. A European Protected Species Mitigation (EPSM) licence application may also be required.

Hedgehog highways are recommended to be incorporated into fences, along with the installation of hedgehog shelters, to facilitate safe movement and provide suitable habitats for hedgehogs within the site.

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## **Caveat**

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## Appendix 1 – Relevant Legislation

*Please note, the below legislation and planning policy is not exhaustive, and this does not constitute legal advice.*

### ***Bats***

Bats are a European Protected Species. Individual bats and their roosts have strict protection and are listed in Annex IV of the EC Habitats Directive 1992 (transposed into law through the Conservation of Habitats and Species Regulations 2017). Some bats have a higher conservation concern in Europe. The habitats supporting these species can be designated as Special Areas of Conservation and the bat species concerned are then listed under Annex II of the Habitats Directive. Species listed on Annex II include the barbastelle, Bechstein's bat, greater horseshoe and lesser horseshoe.

Substantial penalties, which include fines and custodial sentences, are now in place for offenders under the Conservation of Habitats and Species Regulations 2017. The actions and activities that are prohibited are:

- Deliberate capture, injury or killing of a bat,
- Damage or destruct a breeding site or resting place (even if currently vacant),
- Possess, control, transport, sell or exchange, or offer for sale or exchange, of any bat or any part of a bat or anything derived from one, and
- Deliberate disturbance of a bat, in particular disturbance which is likely to impair their ability to: survive, breed or reproduce; rear or nurture their young; hibernate; migrate; or affect the local distribution or abundance of the species.

The Wildlife and Countryside Act 1981 (as amended), which is the primary legislative Act covering wildlife in the UK, affords protection to all the species of bats in the UK. Various amendments have been made to the Act and recent changes include an offence for the reckless damage of roosts or disturbance of bats. Legal precedence also ensures that roost sites are protected on a regular basis year on year regardless of whether bats are present at the time of inspection.

Many bats are described as being of principal importance for the purpose of conserving biological diversity under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. The NERC Act places a biodiversity duty upon local and national government departments to ensure the conservation of biodiversity. The National Planning Policy Framework (NPPF) also sets out the government's planning policies within England and this aims to promote and ensure sustainable development.

An assessment of any structures and trees within the site was also conducted. The assessment of the structures and trees follows best practice guidelines and techniques and the report has been written in line with recommendations within the new bat survey guidelines (Collins, 2023).

Any structures are initially assessed to have either high, moderate, low, negligible or no suitability to support roosting bats. This is based on the presence of suitable roosting features and also includes an assessment for bat evidence (e.g., feeding remains, staining, bat droppings and individual bats). The categories are allocated irrespective of the presence of a roost. For example, if a bat roost is confirmed to be present then the categorisation still stands but confirmed roost should be added (e.g., high suitability – confirmed roost). Structures assessed to have none or negligible roosting potential do not usually need further surveys. However, those with Low, Moderate or High potential or Confirmed will require additional surveys to confirm if bats are present and to characterise the roost. Buildings are categorised as follows:

- No ('none') suitability – no habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels). No further surveys necessary.
- Negligible suitability – no obvious features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use and apparently unsuitable features on occasion. No further surveys necessary.
- Low suitability - a structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide appropriate conditions (i.e., space, protection, shelter) and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e., unlikely to be used as a maternity roost and not a classic cool/stable hibernation site

but could be used by individual hibernating bats). One presence / absence survey between May and August.

- Moderate suitability - a structure with one or more potential roost sites that could be used by bats due to their appropriate condition (i.e., size, shelter, protection) and surrounding habitat. However, it is unlikely to support a roost of high conservation value (with respect to roost type only such as maternity or hibernation). Two presence / absence surveys, which have to be three weeks apart, between May and September with at least one surveys between May and August
- High suitability - a structure 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 conditions (i.e., size, protection, shelter) and surrounding habitat. These structures have the potential to support high conservation roosts e.g., maternity or classic hibernation site. Three presence / absence surveys (including for confirmed roosts), which have to be three weeks apart, between May and September with at least two surveys between May and August.

A Ground Level Tree Assessment (GLTA) for bats was also conducted which searches for potential roosting features within trees from the ground. This is a baseline survey only that determines whether there is an available roosting resource (e.g., woodpecker holes, natural holes, knotholes loose bark, cracks and splits) and the need for further survey and/or mitigation. Any Potential Roosting Features (PRFs) are then categorised as either negligible (no noteworthy potential roosting features) or:

- PRF-I - PRF suitable for individual bats or very small numbers of bats either due to the size or lack of suitable surrounding habitats (not a confirmed bat roost). No further surveys are necessary but precautionary method of works for removal and provision of roosting compensation is necessary.
- PRF-M - PRF suitable for multiple bats and may therefore be used by a maternity colony or known roost i.e., known roost present for example, through local records, evidence and sightings. Three climbing inspection surveys, at minimum three week intervals), are required for PRF-M features which should be undertaken May to September with at least two surveys between May and August. If climbing and inspection if not possible,

then three dusk emergence surveys with night-vision aids will be required between May and September, with three-week minimum intervals), with at least two surveys between May and August. If a maternity colony is identified, then less invasive methods, such as dusk emergence surveys with night-vision aids should be employed.

The assessment of the site to support commuting and foraging bats follows best practice guidelines and techniques and the report has been written in line with recommendations within the new bat survey guidelines (Collins, 2023). The site is categorised as follows:

- Negligible suitability – no habitat features on site likely to be used by commuting or foraging bats. No survey effort required to establish the habitat value.
- Low suitability – habitats that could be used by low numbers of commuting bats such as an isolated gappy hedgerow or suitable, yet isolated, habitat that could be used by foraging bats such as individual trees. Survey efforts includes one Night-time Nat Walkover survey per active season (Spring – April/May, Summer – June/July/August and Autumn – September/October) and static automated surveys which include data collected over a five-night period in each aforementioned season.
- Moderate suitability – habitats that are well connected to the wider landscape that could be used by commuting bats such as tree lines and hedgerows or by foraging bats such as open water and scrub. Survey efforts includes one Night-time Nat Walkover survey per active season (Spring – April/May, Summer – June/July/August and Autumn – September/October) and static automated surveys which include data collected over a five-night period in each month from April to October.
- High suitability – habitats that are well connected to the wider landscape that are highly conducive to commuting bats such as river valleys and woodland edge or by foraging bats such as broadleaved woodland and grazed parkland. Survey efforts includes one Night-time Nat Walkover survey per active season (Spring – April/May, Summer – June/July/August and Autumn – September/October) and static automated surveys which include data collected over a five-night period in each month from April to October.

### *Badgers*

Badgers and their setts are afforded strict protection under the Protection of Badgers Act 1992. This Act consolidates past badger legislation and, in addition to protecting the badger itself, makes it an offence to damage, destroy or obstruct badger setts. Badgers are also protected under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), and listed under Appendix III of the Bern Convention, as a species that is in need of protection but may be hunted in exceptional instances. Only badger setts that are currently in use are covered by wildlife legislation.

Surveys are undertaken in line with guidance in *Surveying Badgers* by Harris *et al.* (1989). A 30-metre zone of influence is considered appropriate for this species based on their known tolerance for disturbance. Any evidence (e.g., badger setts, latrines and snuffle holes) and suitability is noted by the surveyor as well as any disused holes.

### *Birds*

All wild birds in the UK are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy the nest or its eggs.

Some bird species, such as the barn owl, are listed in Schedule 1 of the 1981 Act and receive further protection, making it an offence to intentionally or recklessly disturb these birds whilst building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

The NERC Act (2006) inserts a new schedule into the Wildlife and Countryside Act (1981) to protect the nests of some bird species that regularly re-use their nests, even when the nests are not in use. This protection currently applies to golden eagle, white-tailed eagle and osprey.

Bird surveys are carried out in accordance with *Bird Monitoring Methods (RSPB)* (Gilbert *et al.*, 1998).

## *Reptiles*

All British reptiles are listed under schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are therefore protected from intentional killing or injury. This is largely as a consequence of a national decline in numbers associated with habitat loss.

Two scarcer native British reptiles (smooth snake and sand lizard), are afforded 'full' protection. This legislation makes it an offence to intentionally or recklessly kill, injure, disturb, take, possess or sell these species (in all life stages). It is also illegal to damage, destroy or obstruct access to places they use for breeding, resting, shelter and protection.

All species of reptile are priority species in the UKBAP and have been adopted as Species of Principal Importance under Section 41 of the NERC Act (2006) in England (Section 42 in Wales).

Assessments consider information and methodology provided within the Reptile Habitat Management Handbook (Edgar *et al.*, 2010) and the Herpetofauna Workers Manual (Gent and Gibson, 2003).

## *Amphibians*

Great crested newts and their habitats are fully protected by the Conservation of Habitats and Species Regulations (2017) and partially protected under the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to kill, injure or capture great crested newts, their young or eggs, or destroy / damage their ponds or places of shelter used for breeding or protection. The great crested newt is also a Priority species in the UK Biodiversity Action Plan (UKBAP) and had been adopted as a Species of Principle Importance in England under Section 41 of the NERC Act 2006.

The natterjack toad is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats and Species Regulations 2017 making it a European Protected Species. The natterjack toad is also a priority species under the UK Biodiversity Action Plan.

The pool frog is protected under the Conservation (Natural Habitats &C.) Regulations 1994 (as amended). As a European protected species, the deliberate capturing, disturbing, injuring or killing of this species is prohibited, as is damage or destruction of its breeding sites or resting

places. The pool frog is also a priority species under the UK Biodiversity Action Plan due to a 100% decline over 25 years (1980-2005).

Common toads are also designated UKBAP species due to a serious decline of populations across large areas of southern, eastern and central England, thought to be mainly due to changes in habitat management, mortalities on the roads, and climate change.

Great crested newt site assessments are undertaken in accordance with English Nature (2001) and Langton *et al.* (2001). Any aquatic and terrestrial habitats on the site and in the immediate vicinity were assessed for their suitability for use by great crested newts. Great crested newts have been known to travel up to 500m between breeding ponds and suitable habitats. However, they are more likely to remain between the breeding pond and up to 250m away if there are suitable terrestrial habitats. Therefore, a desk-based search was undertaken prior to the ecological survey for ponds up to 250m from the site using aerial imagery and OS mapping. The terrestrial habitat between the site and these ponds, and therefore connectivity to the site, was also considered (if applicable). Major barriers such as major roads or fast-flowing watercourses are likely to prevent dispersal of great crested newts to the wider environment.

Habitat Suitability Index (HSI) assessments provide a mechanism by which the suitability of a pond to support great crested newts can be objectively assessed in order to assist the identification of ponds potentially supporting this species (Oldham *et al.*, 2000). For the HSI assessment, the locations of waterbodies within a 250m radius of the site were identified from online aerial photographs and a 1:10,000 scale OS map. A HSI assessment was undertaken on each waterbody with ecological connectivity. To make the HSI assessment, the standing waterbody is scored in relation to 10 suitability indices: location, waterbody area, pond drying, water quality, shade, waterfowl presence, fish presence, number of standing waterbodies in the local area, terrestrial habitat, and macrophyte cover. Each of these features is awarded a score between 0 and 1, and a final score is calculated, also between 0 and 1. This final score enables the standing waterbody to be ranked in terms of its suitability (poor <0.5, below average 0.5 - 0.59, average 0.6 - 0.69, good 0.7 - 0.79 or excellent > 0.8) and an estimate made of the predicted presence of great crested newts within the standing waterbody. The presence of any great crested newt eggs or individual great crested newts were also recorded if applicable as well as the descriptions of the aquatic and surrounding terrestrial habitats. Further surveys, in the form of eDNA surveys or traditional methods (e.g., bottle trapping) may be required, if presence /

absence and a population assessment is required. A general assessment for other amphibians was also undertaken.

### *Dormice*

Common dormice and their habitats are fully protected by both the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations (2017). This legislation makes it an offence to kill, injure, disturb or capture dormice, or destroy or obstruct their resting or breeding places.

The dormouse is also a priority species under the UK Biodiversity Action Plan and has been adopted as a species of Principal Importance in England under Section 41 of the NERC Act 2006 (section 42 in Wales) and so is protected from any adverse effects as a result of development.

### *Hedgehogs*

Hedgehogs are UK Biodiversity Action Plan (BAP) species, and therefore must be taken into consideration as part of development planning.

### *All Mammals*

The Wild Mammals (Protection) Act 1996 offers protection to all wild species of mammal, irrespective of other legislation, and focuses on animal welfare, rather than conservation. Unless covered by one of the exceptions, one is guilty of an offence if they mutilate, kick, beat, nail or otherwise impale, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering. Its application is typically restricted to preventing deliberate harm to wildlife in general during construction works and similar.

### *The Wildlife and Countryside Act 1981 (as amended)*

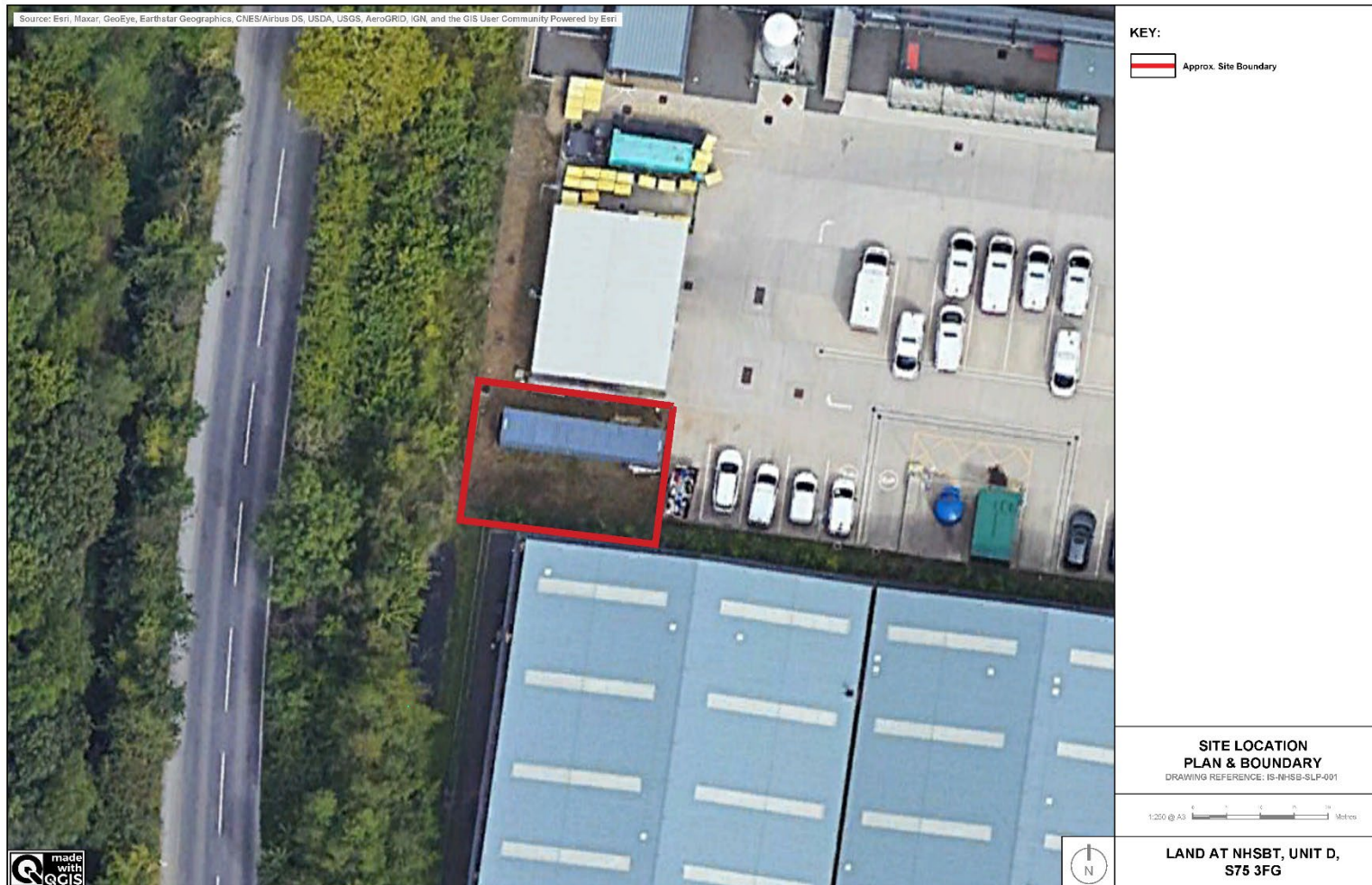
The Act and its various amendments have been created from pre-existing legislation and support the Conservation of Habitat and Species Regulations (2017, as amended) in implementing the Berne Convention (1979) and Directive 2009/147/EC on the conservation of wild birds. The schedules within this Act provide a list of protected species and habitats as well as prohibited actions. The Act also contains measures for controlling invasive non-native species under Schedule 9 and amendments to a number of laws including public rights of way. Further details have been provided above for specific species.

## *The Conservation of Habitats and Species Regulations 2017*

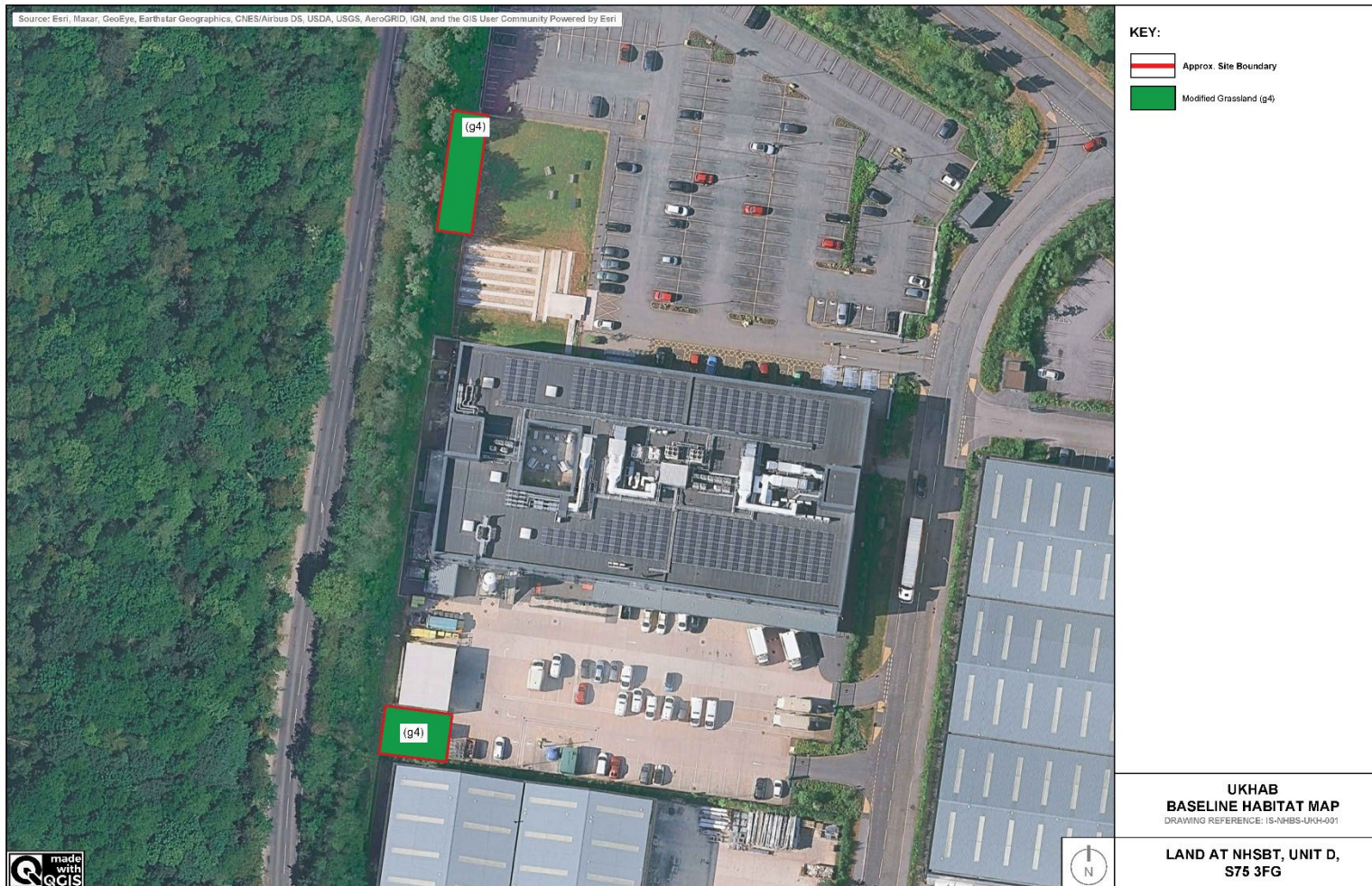
*(as amended)*

These Regulations are the primary method by which the Council Directive 92/43/EEC under Conservation of Natural Habitats and of Wild Fauna and Flora (the 'Habitats Directive') is transposed for England and Wales and their territorial seas. These Regulations form the basis for implementation of Europe's nature conservation policy through habitat and species level protection. It also requires the designation of European sites known as Special Areas of Conservation (SAC). Taken collectively with the Special Protection Areas (SPAs), which are underpinned by the Birds Directive, these form the Natura 2000 Network of protected sites. Public bodies must exercise their nature conservation responsibilities in order to ensure compliance with these Regulations. These Regulations also require conservation of natural habitats and habitats of species through selection process which are afforded protection under the Habitats Directive. The Regulations contain provision for the appropriate management of sites such as the control of damaging operations special nature conservation orders and restoration orders. The Regulations offer strict protection to European Protected Species under Schedule 2 and plants under Schedule 5. Such offences may include the deliberate capture, killing, disturbance or trade of these animals. Similarly, plants listed under schedule five are typically protected from picking, collection, cutting destruction or trade.

### Appendix 2 – Site Location Plan (Building Location)



Appendix 3 – UKHAB Baseline Survey



## Appendix 4 – Site Photographs



*View from the east facing west*



*View from the south facing north*



*View of habitat enhancements area*



*View from the west facing east*

## Appendix 5 – Recommended enhancement specifications



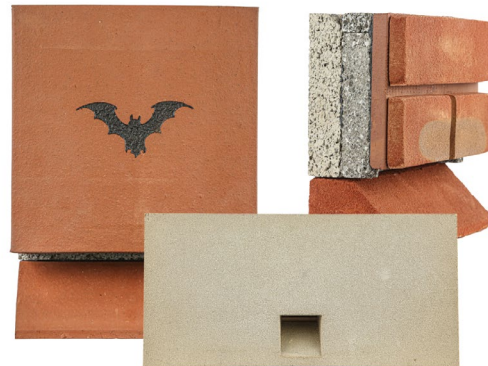
WoodStone Build-In Open Nest Box



Schwegler 1SP Sparrow Terrace



Ibstock Eco-Habitat for Swifts



Integrated Eco Bat Box, Crevice



Schwegler 1FR Bat Tube



Invertebrate Tower / Log Pile