PROJECT RARE, MANOR PARK, TWYCROSS

ECOLOGICAL APPRAISAL

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EXECUTIVE SUMMARY

- RPS were commissioned by LOM Architecture to undertake an Ecological Appraisal of the RARE facility, Twycross. This comprised a desk study, Phase 1 habitat survey and an ecological scoping survey which assessed the potential of the site to support species of conservation concern or other species which could present a constraint to the development of the site.
- The proposals involve the construction of a new office building.
- The site is approximately 0.4ha in size and comprises amenity grassland, bare ground, woodland and scrub.
- There is one statutory designated site within 2km. Due to the distance of the proposed works from the designated site, negative impacts are considered unlikely.
- The proposed works have some potential to affect amphibians, reptiles, nesting birds, foraging bats, badgers, hedgehogs, and rabbits. Further surveys are not required, but precautionary mitigation measures have been outlined.
- Mitigation measures include timing the works to avoid nesting and hibernation periods, ramping any open excavations and capping open pipework. It has also been recommended that the works are carried out under a Working Method Statement and watching brief by a suitably qualified ecologist, in order to avoid negatively impacting any amphibians that may be present within the nearby pond.
- Possible enhancements for the site include additional tree planting, landscaping proposals, and the incorporation of bat, bird, and hedgehog boxes.

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1 NTRODUCTION

1.1 Purpose and scope of this report

1.1.1 RPS was commissioned by LOM Architecture, on behalf of Microsoft, to undertake an Ecological Appraisal (EA) of land at the Project RARE facility at Manor Park, Twycross.

1.1.2 To undertake an initial assessment of the potential ecological impact of the proposals, a desk study, Phase 1 Habitat Survey, and a protected species assessment were carried out. This is termed as an Ecological Appraisal Report (EAR) in accordance with CIEEM (2017), which supports the planning application.

1.1.3 The EA aims to:

- undertake a desk-based review of designated sites and records of protected species and other species that could present a constraint;
- map and assess the habitats present on site;
- assess the site for potential to support protected species or other species that could present a constraint;
- provide outline options for mitigation measures as appropriate; and
- make recommendations for appropriate biodiversity enhancements in line with national and local planning policy.

1.1.4 This report pertains to these results only; recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of RPS. The surveys and desk-based assessments undertaken as part of this review and subsequent report including the Ecological Appraisal Notes are prepared in accordance with the British Standard for Biodiversity Code of Practice for Planning and Development (BS42020:2013).

1.2 Study area and Zone of Influence

1.2.1 The site is located at Manor Park, Twycross. The site is approximately 0.4 ha in size. The National Grid coordinates for the centre of the site are SK 34315 03649.

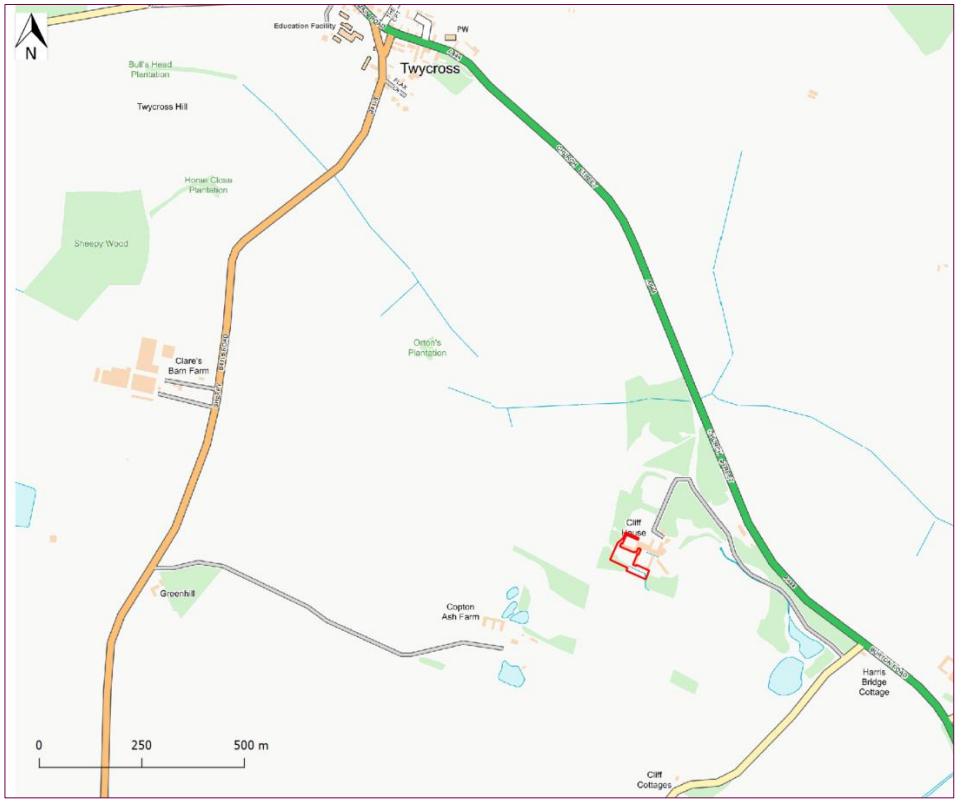
1.2.2 The site comprises amenity grassland, bare ground, woodland, scrub, hardstanding, and scattered trees.

1.2.3 The site location is shown on Figure 1.1. Aerial imaging available via Google Earth Pro was also reviewed to assess the site in relation to its context in the wider landscape. The site has some connectivity to the wider landscape through woodland and hedgerows, but due to the abundance of large agricultural fields surrounding the site, this connectivity is considered limited.

1.2.4 The term Zone of Influence is used to describe the geographic extent of potential impacts of a proposed development. The Zone of Influence is determined by the nature of the development and also in relation to designated sites, habitats or species which might be affected by the proposals.

1.2.5 For this site the Zone of Influence is considered to be land on and immediately adjacent to the site and, with specific reference to great crested newts and badgers, 500m and 30m, respectively.

Figure 1.1: Site location in a wider context



1.3 Development proposals

1.3.1 Current proposals for the site include the construction of a new office building. Grassland and trees will be cleared to facilitate this.

1.4 Legislation and policy

1.4.1 Relevant legislation, policy guidance and both Local and National Biodiversity Action Plans (BAPs) are referred to throughout this report where appropriate. Their context and application is explained in the relevant sections of this report.

1.4.2 The relevant articles of legislation are:

- The National Planning Policy Framework (NPPF, 2019);
- ODPM Circular 06/2005 (retained as Technical Guidance on NPPF 2019);
- Local planning policies (Leicestershire County Council);
- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019;
- The Wildlife and Countryside Act 1981 (as amended);
- The Protection of Badgers Act 1992;
- The Natural Environment and Rural Communities Act 2006;
- Local Biodiversity Action Plan for Leicestershire and Rutland.

1.4.3 A summary of legislation relevant to protected or other species identified as potential constraints in this report is provided in Appendix A.

2 METHODS

2.1 Desk Study

2.1.1 Ecological records within a 2 km radius of the site were requested from Leicestershire and Rutland Environmental Records Centre. Data requests were limited to records for protected species recorded within the last ten years and sites of nature conservation interest within 2 km of the site. This included a review of existing statutory sites of nature conservation interest, such as Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs), Special Area of Conservation (SACs) and National Nature Reserves (NNRs), and non-statutory sites, such as Sites of Importance for Nature Conservation (SINCs) and Local Wildlife Sites (LWSs).

2.1.2 Locations of statutory designated sites were accessed via the government 'MAGIC' website (MagicMap, 2016).

2.1.3 A 1:25,000 OS map was used to identify nearby features such as ponds or green corridors that could provide habitat or connectivity to other areas.

2.2 Ecological Appraisal

2.2.1 The ecological appraisal consisted of two components: a Phase 1 Habitat survey and a scoping survey for protected species and other species of conservation concern which could present a constraint to development.

2.2.2 The survey was carried out on 13th October 2020.

2.2.3 The Phase 1 Habitat surveys followed the standard methodology (JNCC, 2010), and as described in the Guidelines for Preliminary Ecological Assessment (IEEM, 2012). In summary, this comprised walking over the survey area and recording the habitat types and boundary features present.

2.2.4 A protected species scoping survey was carried out in conjunction with the Phase 1 Habitat survey. The site was assessed for its suitability to support protected species, in particular great crested newts *Triturus cristatus*, reptiles, birds, badgers *Meles meles*, bats, and other species of conservation importance that could pose a planning constraint.

2.2.5 The surveyor looked for evidence of use including signs such as burrows, droppings, footprints, paths, hairs, refugia and particular habitat types known to be used by certain groups such as ponds. Any mammal paths were also noted down and where possible followed. Fence boundaries were walked to establish any entry points or animal signs such as latrines. Areas of bare earth were inspected for mammal prints. Areas of habitat considered suitable for protected species or those of conservation interest were recorded. In the case of great crested newts and bats, specific assessment methodologies have been adopted industry wide and details of these are provided below.

Great Crested Newt Habitat Suitability Index (HSI)

2.2.6 All accessible waterbodies on the site and within 500m of connected, suitable habitat were evaluated against the great crested newt (GCN) Habitat Suitability Index (HSI) (Oldham et al, 2000). This comprised a combination of field survey (where access was available) and review of aerial view and Ordnance Survey (OS) maps to identify ponds outside of the site boundary.

2.2.7 The HSI provides a measure of the suitability of a waterbody for supporting great crested newts by assigning an overall score of between 0 and 1, which is based on ten key criteria as follows:

SI_1	Geographic location	SI_6	Presence of water-fowl
SI_2	Pond area	SI_7	Presence of fish
SI_3	Pond drying	SI_8	Number of local ponds
SI_4	Water quality	SI_9	Terrestrial habitat quality
SI_5	Shade	SI_{10}	Plant coverage

In general, ponds with a higher score are more likely to support GCN than those with lower score and suitability for GCN is determined according to the scale outlined in Table 3 below. For reference, each waterbody that was assessed was numbered WB1, WB2, WB3 etc. Values close to 0 indicate unsuitable habitat; 1 represents optimal habitat. Research has shown that there is a positive correlation between HSI scores and the number of GCN observed in a pond.

Table 2.1: HSI scoring criteria

HSI score	Habitat suitability
<0.5	**Poor**
0.5 - 0.59	**Below Average**
0.6 – 0.69	**Average**
0.7 – 0.79	**Good**
>0.8	**Excellent**

2.3 Impact Appraisal

2.3.1 The overall ecological appraisal is based on the standard best practice methodology provided by the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017). The assessment identifies sites, habitats, species and other ecological features that are of value based on factors such as legal protection, statutory or local site designations such as Sites of Special Scientific Interest (SSSI) or Local Wildlife Sites (LWS) or inclusion on Red Data Book Lists or Biodiversity Action Plans.

2.3.2 The assessment also refers to planning policy guidance (e.g. NPPF) where relevant to relate the value of the site and potential impacts of development to the planning process, identifying constraints and opportunities for ecological enhancement in line with both national and local policy.

2.4 Limitations

Desk Based Assessment

2.4.1 The desk study data is third party controlled data, purchased for the purposes of this report only. RPS cannot vouch for its accuracy and cannot be held liable for any error(s) in these data.

Survey

2.4.2 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation and prediction of the natural environment.

2.4.3 The protected / notable species assessment provides a preliminary view of the likelihood of these species occurring on the site, based on the suitability of the habitat, known distribution of the species in the local area provided in response to our enquiries and any direct evidence on the site. It should not be taken as providing a full and definitive survey of any protected / notable species group.

Accurate Lifespan of Ecological Data

2.4.4 The majority of ecological data remain valid for only short periods due to the inherently transient nature of the subject. The survey results contained in this report are considered accurate for two years, assuming no significant considerable changes to the site conditions.

3 RESULTS

3.1 Designated Sites

3.1.1 There is a single statutory designated site for nature conservation value within 2 km of the site. Sheepy Fields SSSI is approximately 1.3 km from the site.

3.1.2 No officially designated non-statutory sites are located within the 2 km search radius of the site, although 19 Potential and Candidate Local Wildlife Sites (pLWS and cLWS)[1] were returned in the data search, with the closest being 0.5 km from site. Full details of these sites can be provided upon request.

3.1.3 A summary of the statutory designated site is provided in Table 3.1 below and the location is detailed in Figure 3.1.

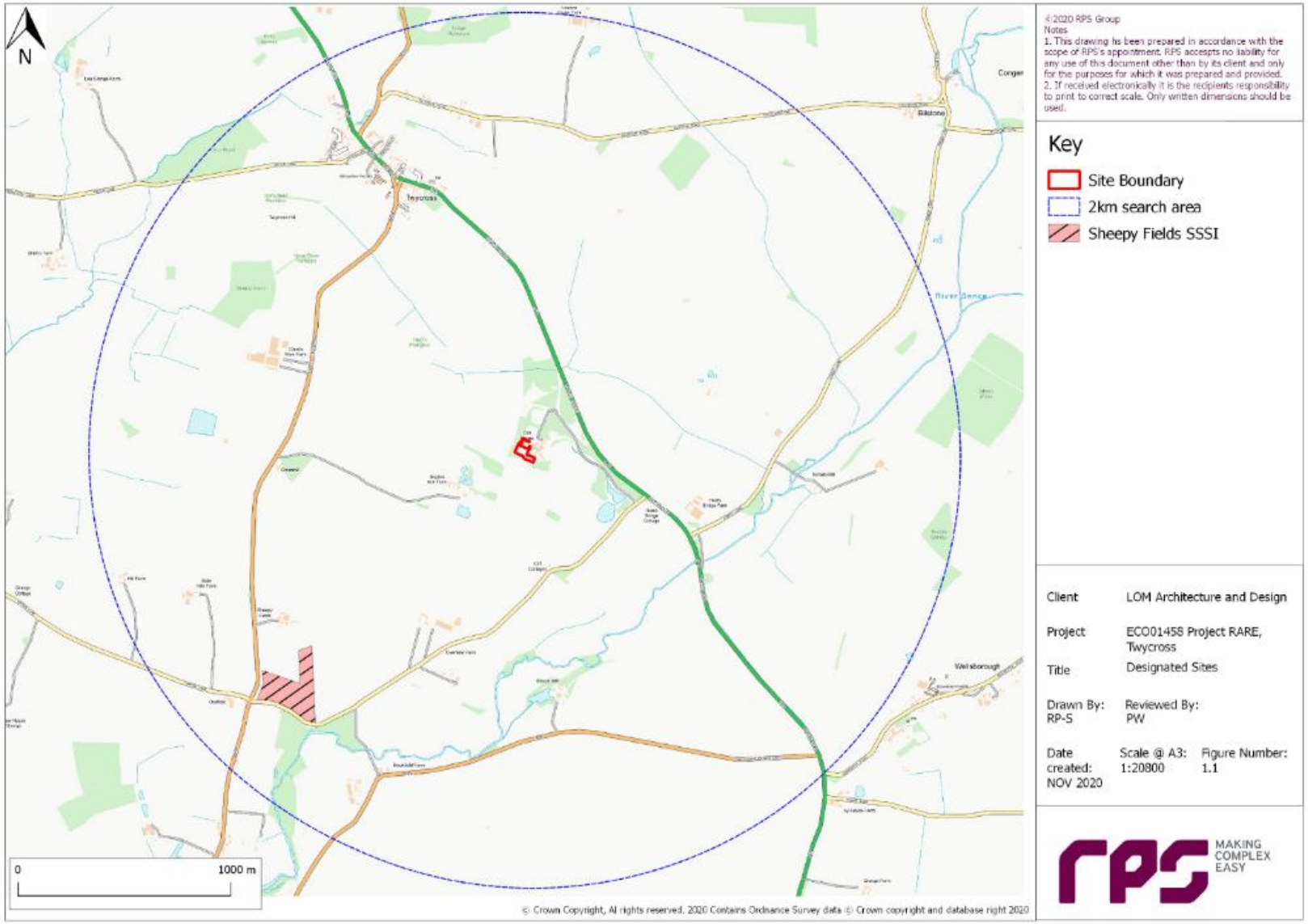
Table 3.1: Designated sites within 2 km of the study area

Site name	Type	Approx. area (ha)	Interest Features	Distance from site (km)
Statutory Sites				
Sheepy Fields	SSSI	4.9	Contains some of the best remaining examples of neutral grassland in Leicestershire and is representative of hay meadow plant communities developed on neutral soils in the Midlands	1.3

Abbreviations used in Table 3.1: SAC: Special Area of Conservation; SPA: Special Protection Area; SSSI: Site of Special Scientific Interest; CWS: County Wildlife Site; NS: Not supplied; ha: hectare.

[1] Candidate Local Wildlife Sites (cLWS) are defined as those which are known through survey data to meet the LWS criteria. Potential Local Wildlife Sites (pLWS) are defined as those that are likely to meet the LWS criteria, but further survey is needed to confirm.

Figure 3.1: Designated sites within 2 km



3.2 Species

3.2.1 Records of protected species were obtained from the Leicestershire and Rutland Environmental Records Centre. A number of species of conservation importance or otherwise notable were recorded within the 2 km search radius of the site. A summary of these records is provided in Table 3.2.

3.2.2 In order to simplify the results, only records of species from the last 10 years are shown. In addition, only data with a 6-figure grid reference resolution or higher are provided, since locations given at a lower resolution do not allow accurate calculation of distance to the site boundary.

Table 3.2: Species records from the last 10 years within 2 km of the site

Common name	Scientific name	Nearest distance from site (km)	Year of most recent record	Conservation Status
Amphibians				
Smooth newt	*Lissotriton vulgaris*	0.02	2019	WCA5
Common toad	*Bufo bufo*	0.42	2010	WCA5
Reptiles				
Grass snake	*Natrix helvetica*	0.36	2010	WCA5
Birds				
Song Thrush	*Turdus philomelos*	0.02	2019	NERC
Hobby	*Falco subbuteo*	0.14	2019	WCA1i
Red Kite	*Milvus milvus*	0.14	2019	WCA1i
Osprey	*Pandion haliaetus*	0.14	2019	WCA1i
Redwing	*Turdus iliacus*	0.14	2019	WCA1i
Fieldfare	*Turdus pilaris*	0.14	2019	WCA1i
Barn Owl	*Tyto alba*	0.04	2019	WCA1i
Hawfinch	*Coccothraustes coccothraustes*	0.14	2018	NERC
Yellowhammer	*Emberiza citrinella*	0.14	2019	NERC
Tree Sparrow	*Passer montanus*	0.14	2019	NERC
Dunnock	*Prunella modularis*	0.14	2019	NERC
Bullfinch	*Pyrrhula pyrrhula*	0.14	2019	NERC
Starling	*Sturnus vulgaris*	0.14	2019	NERC
Ring Ouzel	*Turdus torquatus*	0.14	2012	NERC
Lapwing	*Vanellus vanellus*	0.14	2019	NERC
Linnet	*Linaria cannabina*	0.80	2011	NERC
Yellow wagtail	*Motacilla flava*	0.80	2011	NERC
Spotted Flycatcher	*Muscicapa striata*	0.80	2014	NERC
Mammals				
Hedgehog	*Erinaceus europaeus*	0.02	2019	NERC
Badger	*Meles meles*	Confidential, however closest record was less than 0.5km from site	2018	PBA
Hare	*Lepus europaeus*	1.15	2018	NERC

Abbreviations used in Table 3.2: WCA1i: Wildlife & Countryside Act Schedule 1, part 1; WCA5: Wildlife & Countryside Act Schedule 5; NERC: Natural Environment & Rural Communities Act Species of Principal Importance; PBA: Protection of Badgers Act 1992.

3.3 Phase 1 Habitat Survey

3.3.1 The survey results are presented in the form of a map with the habitat types and boundary features marked (Figure 3.2). Photographs can be found in Appendix B.

3.3.2 Descriptions of the habitat types and boundary features are detailed below. Habitat descriptions are defined by broad habitat types (JNCC, 2010).

Broadleaved Plantation Woodland

3.3.3 This habitat was largely located within the south-western corner of the site, with a small area also present in the south eastern corner. Species included ash *Fraxinus excelsior*, beech *Fagus sylvatica*, silver birch *Betula pendula*, and hawthorn *Crataegus monogyna*. The woodland was considered to be young in age.

Scattered Scrub

3.3.4 A thin strip of scattered bramble *rubus fruticosus* scrub was located along the edge of the woodland, between the woodland and bare ground access track.

Scattered Broadleaved Trees

3.3.5 Five broadleaved trees were recorded within the site boundary. These were of a young age, with species including beech and apple *Malus sp.*

Amenity grassland

3.3.6 The majority of the site comprised closely managed amenity grassland. Species included perennial ryegrass *Lolium perenne*, creeping buttercup *Ranunculus repens*, fescue *Festuca sp*, Yorkshire fog *Holcus lanatus*, white clover *Trifolium repens*, dandelion *Taraxacum* agg, dove's foot cranesbill *Geranium molle*, and broadleaf plantain *Plantago major.*

Introduced Shrub

3.3.7 One small area of introduced shrub was present within the site boundary. This was a 4m wide by 1.5m tall patch of closely managed *Hebe sp.*

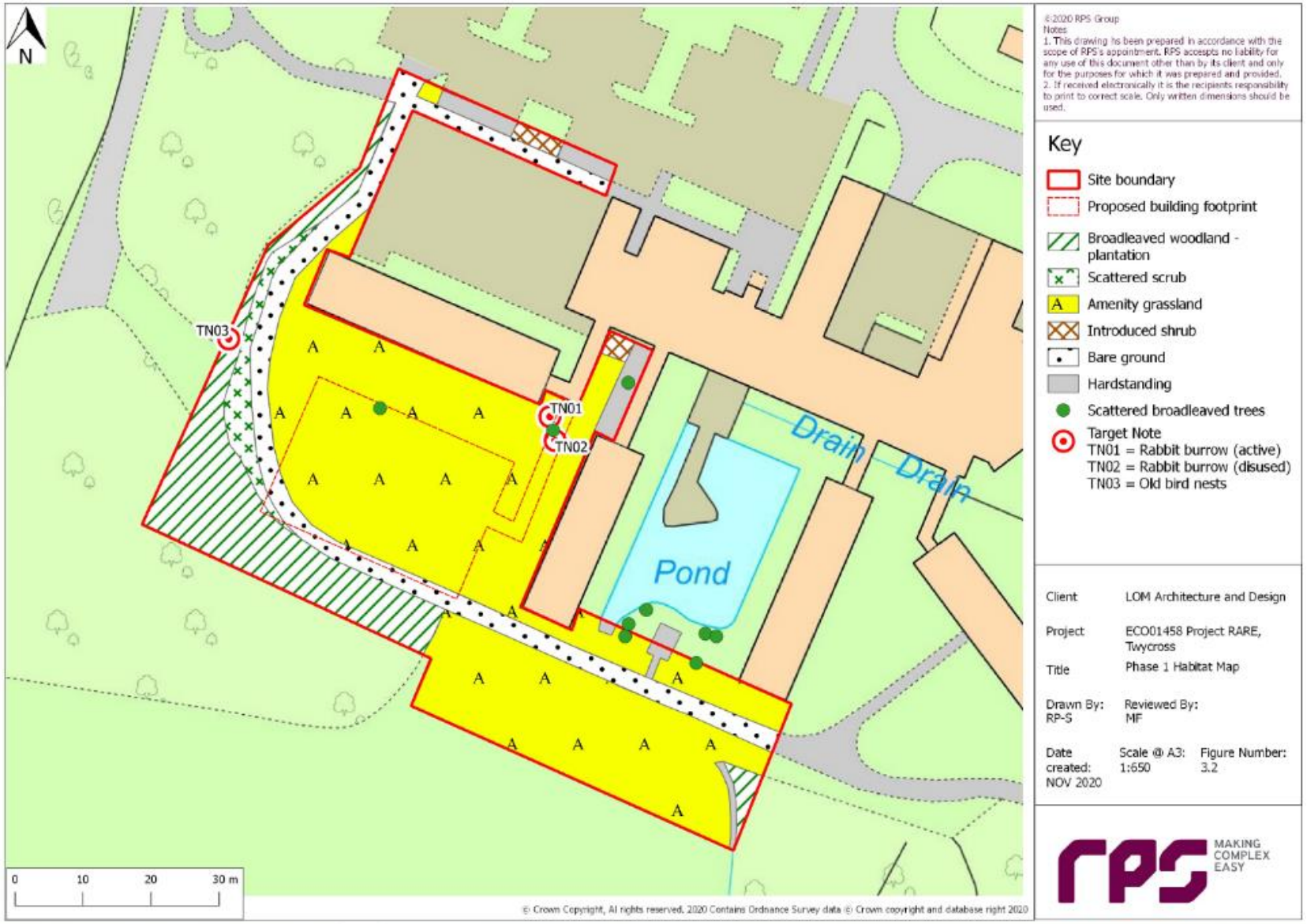
Bare Ground

3.3.8 A bare ground access track was present throughout site, along the woodland edge.

Hardstanding

3.3.9 A hardstanding viewing platform was present next to an offsite pond, connected to the bare ground track on site.

Figure 3.2: Phase 1 habitat map



3.4 Ecological Scoping Survey

Plants

3.4.1 No rare or protected plant species were recorded on site during the survey. The site is unlikely to support protected or notable species given the types of habitat present.

Invertebrates

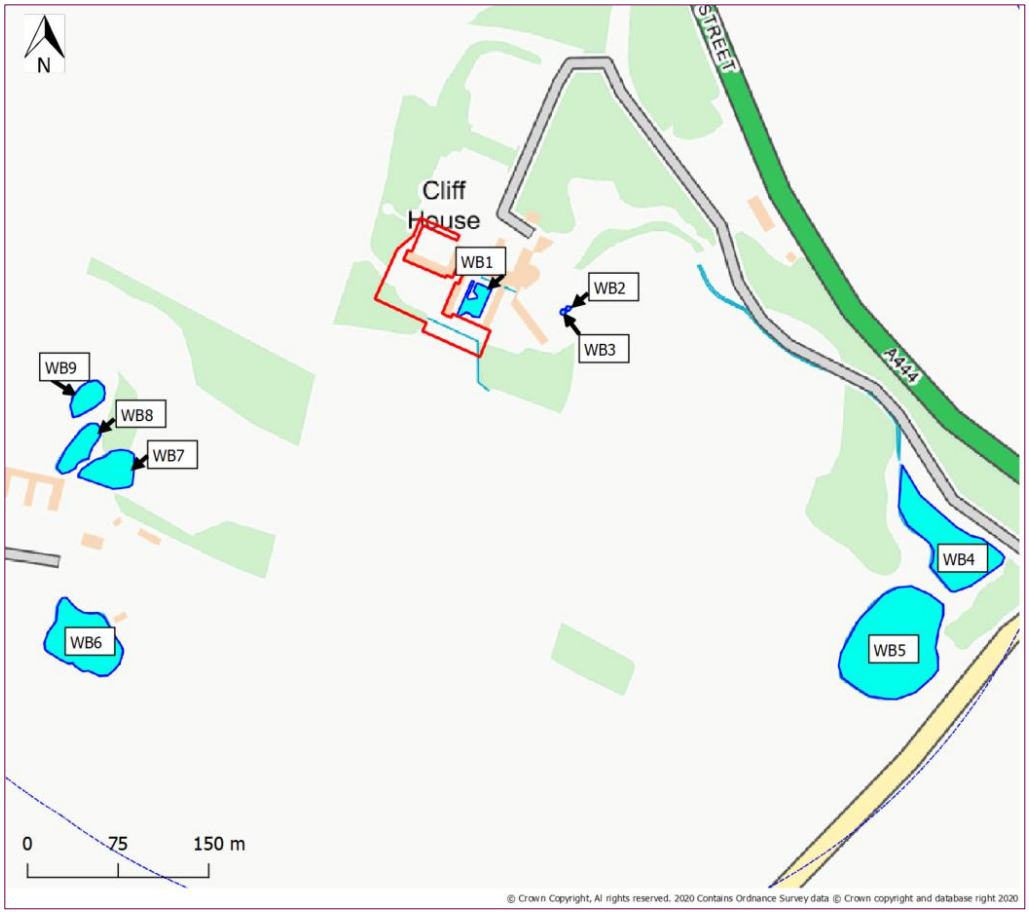
3.4.2 The habitats on site provide limited suitable habitat for invertebrates and it is considered unlikely that any notable species would be present.

Amphibians

3.4.3 No waterbodies were located within the immediate survey area, but a single waterbody (WB1) was present adjacent to site, within the wider survey area. This waterbody was a large, sheer sided ornamental pond, stocked with multiple fish species. The pond was considered largely unsuitable for great crested newts (GCN) and returned a Habitat Suitability Index score of 0.29 “Poor”.

3.4.4 Eight waterbodies were recorded within 500m of the site. Three of these (waterbodies 2-4) were assessed for their suitability to support GCN. Waterbody 2 (WB2) was a concrete overflow container and WB3 was a small ornamental pond. Due to the fact that both of these waterbodies had tall concrete sides which would prevent amphibians entering, they were considered unsuitable for GCN. WB4 was a large pond set next to the access road into the RARE facility and it scored 0.39 “Poor”. The remaining waterbodies were not assessed for their suitability for GCN due to access restrictions, although upon assessment of aerial photographs these were considered to be large fishing waterbodies and likely unsuitable for GCN. Figure 3.3 shows waterbody locations.

Figure 3.3: Waterbody locations



3.4.5 No records of GCN were returned in the desk study. A single record for smooth newt was returned adjacent to site, with the individual newt being recorded within the RARE building and released into the pond adjacent to site.

3.4.6 The majority of the habitat on site was considered unsuitable for amphibians due to the abundance of shortly mown amenity grassland. However, the woodland and scrub offer some suitable terrestrial habitat.

Reptiles

3.4.7 The majority of the site was not considered to be suitable to support reptiles due to the grassland being shortly mown and it is therefore unlikely that they would be present on site. The woodland and scrub had some potential to provide refuge habitat as well as commuting and foraging routes for more mobile species.

3.4.8 Two records of grass snake were returned in the desk study.

Birds

3.4.9 The trees on site provide suitable nesting habitat for a range of bird species, and the grassland habitats provide suitable foraging opportunities. Several disused nests were recorded within the woodland.

3.4.10 Desk study records were returned for a large number of bird species, including Schedule 1 species such as barn owl and hobby. There were no habitats considered suitable for the Schedule 1 species recorded on site, however.

Bats

3.4.11 None of the buildings or trees on site or within the wider survey area were considered to provide suitable roosting habitat for bats due to a lack of suitable features.

3.4.12 The woodland provides suitable habitat or foraging and commuting bats. Several common bat species records were returned in the desk study.

Badgers

3.4.13 No badger setts or other signs of badgers were recorded during the survey, either in the site boundary or within the wider survey area. The majority of the site provided very limited opportunities for sett excavation due to its flat and open nature and being dominated by amenity grassland, although the woodland does provide some habitat for sett excavation. The grassland and woodland provide suitable foraging and commuting habitat.

3.4.14 A single badger record was returned in the desk study, less than 500m from site.

Other Protected or Notable Species

3.4.15 The woodland provides suitable hibernation and foraging habitat for hedgehogs. Hedgehogs have been seen on site by staff, with three records for hedgehog within the woodland returned in the desk study.

3.4.16 Two rabbit burrows were recorded within the amenity grassland, underneath the apple tree within the amenity grassland. One burrow was considered to be disused at the time of the survey, with one in current use.

4 EVALUATION AND POTENTIAL IMPACTS

4.1 Designated sites

4.1.1 There is one statutory site within 2km of the project boundary, located approximately 1.3km from the site and separated from it by large areas of agricultural land. No direct habitat loss at this designated site will result from this planning application and there are no clear pathways for potential contaminants to reach this site. The development is therefore unlikely to have any impact on this statutory site.

4.2 Habitats

4.2.1 The habitats on site were all widespread and common.

4.2.2 Table 4.1 below summarises the habitat types within the site and outlines the potential impacts of the development proposals to each of these habitats.

Table 4.1: Summary of potential habitat impacts

JNCC Code	Habitat Type	Area (m^2)	% of site	Ecological Importance	Potential impact
A1.1.2	Broadleaved plantation woodland	589	15.9	Moderate	Approximately 50 trees from the woodland edge will be removed to facilitate access to the new building
A2.2	Scattered scrub	103	2.8	Low	A small section of scrub may be removed
J1.2	Amenity grassland	2367	64.1	Low	Approximately one third of the grassland will be cleared for the new building
J1.4	Introduced shrub	8	0.2	Low	No impacts anticipated
J4	Bare ground	496	13.5	Negligible	No impacts anticipated
-	Hardstanding	131	3.5	Negligible	No impacts anticipated

4.3 Species

Plants

4.3.1 The habitats present on site were managed, common and widespread and had very limited potential to support any rare or notable plant species, therefore no further botanical surveys or mitigation measures are recommended.

Invertebrates

4.3.2 The habitats on site were managed, common and widespread and had very limited potential to support any rare or notable invertebrate species, therefore no further invertebrate surveys or mitigation measures are recommended.

Amphibians

4.3.3 No ponds were located within the immediate survey area, but a single pond was present adjacent to site, within the wider survey area. This pond was considered unsuitable for GCN due to the sheer sides, lack of breeding material, and abundance of fish. However, a single smooth newt record from the pond was returned in the desk study, as the individual was found inside the building and placed in the pond by a member of staff.

4.3.4 No records of GCN were returned in the desk study.

4.3.5 The majority of the habitat on site was considered unsuitable for amphibians due to the abundance of shortly mown amenity grassland. However, the woodland and scrub offer some suitable terrestrial habitat. The risk of harming amphibians during the work is considered low but precautionary mitigation measures are outlined in Section 5.

Reptiles

4.3.6 The majority of the site was not considered to be suitable to support reptiles due to the grassland being shortly mown and it is therefore unlikely that they would be present on site. The woodland and scrub had some potential to provide refuge habitat as well as commuting and foraging routes for more mobile species. The risk of harming reptiles during the works is considered to be low, therefore further surveys are not required. Precautionary mitigation measures are outlined in Section 5.

Birds

4.3.7 The trees on site provide suitable nesting habitat for a range of bird species, and the grassland habitats provide suitable foraging opportunities. Approximately 50 trees will be removed to facilitate the works, which has the potential to disturb nesting birds. Mitigation measures to prevent harm to birds are outlined in Section 5.

Bats

4.3.8 None of the trees on site were considered to provide suitable roosting habitat for bats due to a lack of suitable features and therefore further surveys are not required.

4.3.9 The woodland provides suitable habitat or foraging and commuting bats. The works has the potential to disturb foraging and commuting bats, and therefore mitigation measures are outlined in Section 5.

Badgers

4.3.10 No badger setts or other signs of badgers were recorded during the survey and the site provided limited opportunities for sett excavation. Therefore, no further badger surveys are recommended. However, the grassland and woodland provide some foraging and commuting habitat and badgers have been recorded within 500m of the site. The presence of foraging or commuting badgers therefore cannot be ruled out entirely, and mitigation measures designed to protect any foraging or commuting badgers are outlined in Section 5.

Other Protected or Notable Species

4.3.11 The works have the potential to cause harm to hedgehogs and rabbits present on site. No further surveys are necessary, but mitigation measures designed to protect both species are outlined in Section 5.

5 MITIGATION AND ENHANCEMENT

5.1 Designated sites

5.1.1 Due to the distance from the works, no impacts on any designated sites are anticipated and therefore no mitigation measures are required.

5.2 Habitats

5.2.1 Approximately a third of the amenity grassland on site will be cleared to facilitate the construction of the proposed office building. Amenity grassland is considered to be of low ecological value and therefore the loss of this habitat will have a negligible impact on the biodiversity of the site.

5.2.2 Approximately 50 trees will be removed from the woodland edge and within the amenity grassland. It is recommended that these trees be replaced on a like-for-like basis, where possible, either within landscaping proposals for the site or within the wider RARE facility land so as to prevent a loss in biodiversity.

5.3 Species

Amphibians

5.3.1 As a single smooth newt record was returned from the pond adjacent to site, it is possible that smooth newts, and potentially GCN, will be present in the pond during the works. However, as the pond was considered unsuitable for GCN and the majority of the works is restricted to amenity grassland, the works are considered low risk to amphibians. It is therefore recommended that the works proceed under a watching brief by a suitably qualified ecologist who will brief all site workers on the risks and how to mitigate them. The works shall be covered under a suitable Working Method Statement to ensure best practice measures are followed to reduce the likelihood of harming any amphibians that may be present.

5.3.2 Alternatively, the pond can be sampled for GCN DNA from mid-April 2021. A negative result would mean that presence of GCN in the pond, and therefore on site, is unlikely and the works can proceed without a watching brief. However, should results come back positive, a suite of six pond surveys will be required between April and June to determine the population size present in the pond. After the population size was determined, a Protected Species Licence from Natural England may be required for the works to proceed lawfully.

Reptiles

5.3.3 In order to protect any reptiles that may be on site during the construction, the following methods should be adhered to during the removal of trees:

- Woody vegetation to be removed should be cut using hand tools to a height of no less than 15cm above ground level. This can be done any time of year.
- Root removal should be undertaken during the reptile active period, i.e. between April and October inclusive, during appropriate weather conditions (temperatures above 9 degrees).

5.3.4 Any reptiles should be left to safely make their escape and RPS should be contacted for further advice.

Birds

5.3.5 A suitably qualified ecologist will need to be on site to check trees for nesting birds prior to any vegetation clearance if this takes place within the breeding bird season (typically March-August inclusive). Any nests found must be left undisturbed until the chicks have fledged.

5.3.6 Should active bird nests be discovered, appropriate measures will be put in place to ensure that any nest remains undisturbed. This will involve placing a buffer around the nest, within which no

works will be undertaken until the nest has been judged, by a suitably qualified ecologist, to no longer be in use (i.e. fledged young have left the nest, or the nesting attempt has failed).

5.3.7 The radius of the protective buffer will be dependent on the species present and stage of breeding (i.e. with eggs, chicks, etc.) and will be determined by an ecologist.

5.3.8 Where no active nests are located, vegetation clearance works will proceed within 2 days of the inspection.

5.3.9 The provision of bird boxes on retained trees around the site would provide replacement habitat for breeding birds.

Bats

5.3.10 Bats are nocturnal and adapted to roost and forage in low light conditions, therefore increases in artificial lighting can cause disturbance or disrupt existing flight paths. To protect foraging and commuting bats throughout construction, night working should be avoided to prevent an increase in light levels across the retained habitats.

5.3.11 It is recommended that where lighting is proposed for the site, these should be designed in such a way as to minimise any light spillage onto the trees which provide suitable foraging and commuting features. The following guidance on design recommendations for bat-friendly lighting included in the Guidance Note on the impact and design of artificial light on bats produced by the Bat Conservation Trust (BCT) in 2018 be considered when designing an appropriate lighting scheme. This includes:

- Do not "over" light. This is a major cause of obtrusive light and is a waste of energy. Use only the minimum amount of light needed for safety. There are published standards for most lighting tasks, adherence to which will help minimise upward reflected light.
- Eliminate any bare bulbs and any light pointing upwards. The spread of light should be kept near to or below the horizontal.
- Use narrow spectrum bulbs to lower the range of species affected by lighting.
- Use light sources that emit minimal ultra-violet light. Insects are attracted to light sources that emit ultra-violet radiation.
- Reduce light-spill so that light reaches only areas needing illumination. Shielding or cutting light can be achieved through the design of the luminaire or with accessories, such hoods, cowls, louvers and shields to direct the light.

Badgers

5.3.12 As foraging and commuting badgers may be present on site and in the surrounding area, it is recommended that the following precautionary mitigation measures are put in place during the works, particularly if excavating using open-trench methods;

- mammal ladders (such as a wooden plank) or earth ramps to be placed in any open excavations at the end of each day;
- should any large pipework be installed, any open pipes should be capped overnight to prevent mammals from becoming stuck;
- night work should be avoided where possible, and any flood lighting should face away from the site boundaries; and
- any chemicals or machinery are to be stored in a secure compound.

Other Protected or Notable Species

Hedgehogs

5.3.13 There is potential to harm hedgehogs through the disturbance of woodland, grassland, and scrub. The above mitigation measures outlined for badger are also recommended for protection of hedgehogs.

5.3.14 In the unlikely event that hedgehogs are found trapped during excavations, RPS should be contacted and an ecologist will supervise the removal and release of the individual. Where hedgehogs are encountered during any vegetation removal, they should be left alone and allowed to make their escape unharmed and advice should be sought from a suitably qualified ecologist.

Rabbits

5.3.15 Rabbits are protected from unnecessary suffering under the Wild Mammals Protection Act 1996 which means it is an offence to cause intentional and unnecessary harm and suffering, including but not limited to crushing, asphyxiation, and impaling. Where works are proposed in areas that require the destruction of rabbit burrows, this should be carried out by a specialist under a watching brief.

5.4 Enhancement opportunities

5.4.1 Planning policy at the national and local level and strategic biodiversity partnerships encourage inclusion of ecological enhancements in development projects so as to provide a net gain in biodiversity. In addition to the above mitigation measures, opportunities to enhance the site in terms of biodiversity include:

5.4.2 New landscape planting could be designed to compensate for the loss of the existing grassland and trees. The grassland is currently of low biodiversity value but a higher value habitat comprising a variety of native wildflower species could be added to compensate for this loss and to enhance the biodiversity of the site.

5.4.3 Additional tree planting, above that which compensates the loss of the 50 trees, could be incorporated into the wider site landscape to enhance biodiversity.

5.4.4 A selection of bat and bird boxes could be added to the buildings or retained trees on site.

5.4.5 The inclusion of hedgehog boxes within the woodland would provide enhanced hibernation opportunities for hedgehogs.

5.4.6 There should be a commitment to retaining all newly created habitats in the long-term.

REFERENCES

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APPENDICES

Appendix A

Relevant Legislation

GREAT CRESTED NEWTS

Great Created Newts Triturus cristatus are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (and as amended), which affords the species protection under Section 9. The species is also listed on Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. In combination, this makes it an offence to:

- intentionally kill, injure or take (capture etc.) a Great Crested Newt;
- possess a Great Crested Newt;
- intentionally or recklessly damage, destroy, obstruct access to any structure or place used by Great Crested Newt for shelter or protection, or disturb any animal occupying such a structure or place; and sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative) or advertise for buying or selling such things.

Great Crested Newts are also listed on the UKBAP as a Priority Species and are listed as a species of principal importance for biodiversity in England & Wales under Section 41 of the Natural Environment & Rural Communities Act (2006).

REPTILES

All common UK reptile species (Adder Vipera berus, Grass Snake Natrix Helvetica, Common Lizard Zootoca vivipara and Slow Worm Anguis fragilis) are protected through part of Section 9(1 and 5) of the Wildlife & Countryside Act 1981 (as amended). This prohibits:

- Intentional or reckless injuring or killing;
- Selling, offering or exposing for sale, or having in possession or transporting for the purpose of sale, any live or dead wild animal or any part of, or anything derived from, such an animal; or
- Publishing or causing to be published any advertisement likely to be understood as conveying buying or selling, or intending to buy or sell, any of those things.

BIRDS

All birds, their nests and eggs are afforded protection under the Wildlife and Countryside Act 1981, as updated by the Countryside and Rights of Way Act 2000. It is an offence to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; and
- intentionally take or destroy the egg of any wild bird.

Schedule 1 birds cannot be intentionally or recklessly disturbed when nesting and there are increased penalties for doing so. Licences can be issued to visit the nests of such birds for conservation, scientific or photographic purposes but not to allow disturbance during a development even in circumstances where that development is fully authorised by consents such as a valid planning permission.

BATS

All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981, as updated by the Countryside and Rights of Way Act 2000. All British bats are also included on Schedule 2 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 as European Protected Species. It is an offence to:

- intentionally or recklessly kill, injure or capture bats;
- deliberately or recklessly disturb bats (whether in a roost or not); and
- damage, destroy or obstruct access to bat roosts

A roost is defined as 'any structure or place which [a bat] uses for shelter or protection'. As bats tend to reuse the same roosts, legal opinion is that a roost is protected whether or not bats are present at the time of survey.

A licence will therefore be required by those who carry out any operation that would otherwise result in offences being committed.

The following bat species are listed as being of principal importance for the conservation of biodiversity in England, (commonly referred to as UKBAP Priority species): Barbastelle, Bechstein's, Noctule, Soprano Pipistrelle, Brown Long-eared, Greater Horseshoe, and Lesser Horseshoe.

BADGER

Badgers are protected under the Protection of Badgers Act 1992. This act is based on the need to protect badgers from baiting and deliberate harm or injury. The act makes it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so;
- Intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access routes.

A sett is defined as "any structure or place that displays signs indicating current use by a badger".

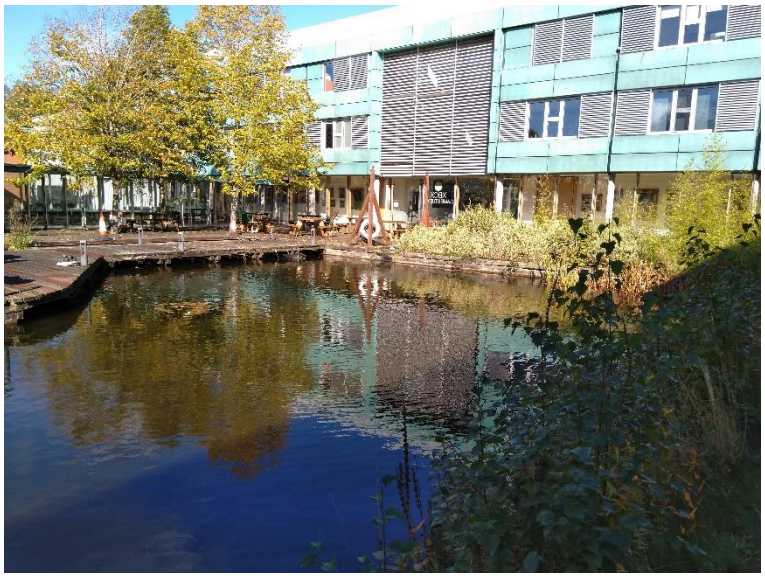
Appendix B

Photographs

Photograph 1: amenity grassland

Photograph 2: woodland edge and bare ground access track

Photograph 3: Waterbody 1 (pond adjacent to site)



Photograph 4: within the woodland

Photograph 5: Waterbody 2

Photograph 6: Waterbody 3