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PROFESSIONAL ECOLOGICAL SOLUTIONS



ECOLOGY

TREE PROTECTION FENCING

SITE PREPARATION & CLEARANCE

HABITAT MANAGEMENT & ENHANCEMENT

Report	Preliminary Ecological Appraisal
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Table of Contents

EXECUTIVE SUMMARY	3
1.0 INTRODUCTION	4
1.1 BRIEF	4
1.2 SITE DESCRIPTION & LOCATION	4
1.3 PROPOSED DEVELOPMENT	5
2.0 RELEVANT LEGISLATION AND POLICY	6
2.1 LEGISLATION.....	6
2.1.1 <i>The Conservation of Habitats and Species Regulations (2017)</i>	6
2.1.2 <i>The Wildlife and Countryside Act (1981) (as amended)</i>	6
2.1.3 <i>The Countryside and Rights of Way Act (2000)</i>	6
2.1.4 <i>NERC Act</i>	6
2.1.5 <i>Protection of Badgers Act</i>	6
2.2 POLICY.....	7
2.2.1 <i>National</i>	7
2.2.2 <i>Local – Havant Borough Council</i>	7
3.0 METHODOLOGY.....	9
3.1 DESK STUDY.....	9
3.1.1 <i>Waterbodies</i>	9
3.1.2 <i>Designated sites</i>	9
3.2 FIELD SURVEY	9
3.2.1 <i>Habitats</i>	9
3.2.2 <i>Badger</i>	9
3.3 ASSESSMENT METHODOLOGY	10
3.3.1 <i>Introduction</i>	10
3.3.2 <i>Valuation</i>	10
3.4 LIMITATIONS.....	10
4.0 ECOLOGICAL BASELINE	11
4.1 DESKTOP STUDY	11
4.1.1 <i>Designated sites</i>	11
4.1.2 <i>Waterbodies</i>	11
4.2 VEGETATION SURVEY RESULTS.....	11
4.2.1 <i>Amenity grassland</i>	11
4.2.2 <i>Poor semi-improved grassland</i>	12
4.2.3 <i>Broad Leaved Deciduous Woodland</i>	13
4.2.4 <i>Hard Standing</i>	14
4.3 BAT SURVEY RESULTS.....	15
4.3.1 <i>Trees</i>	15
4.4 REPTILES	16
4.5 BREEDING AND NESTING BIRDS	17
4.6 DORMICE	17
4.7 GCN	17
4.8 BADGERS.....	17
5.0 LIKELY ECOLOGICAL IMPACTS IN ABSENCE OF MITIGATION	18

5.1 INTRODUCTION	18
5.2 SITE PREPARATION AND CONSTRUCTION.....	18
5.2.1 <i>Impacts to habitats</i>	18
5.2.2 <i>Impacts to wildlife</i>	18
6.0 MITIGATION & RECOMMENDATIONS.....	19
6.1 INTRODUCTION	19
6.2 BATS.....	19
6.2.1 <i>Removal of Oak tree</i>	19
6.2.2 <i>Compensation</i>	19
6.3 DORMICE.....	19
6.3.1 <i>Sensitive vegetation clearance</i>	19
6.3.2 <i>Planting</i>	21
6.4 REPTILES	21
6.5 PROTECTION OF HEDGEROWS AND TREES.....	21
6.6 AVOIDANCE OF IMPACTS TO NESTING BIRDS.....	22
6.7 BADGERS	22
6.8 ENHANCEMENTS.....	22
6.8.1 <i>Native species planting</i>	22
7.0 REFERENCES.....	23

Executive Summary

Ecosupport Ltd was instructed by Portsmouth City Council to conduct a Preliminary Ecological Appraisal (PEA) on Hobby Close Field, Weacock, to identify any potentially important ecological features that may be affected by the proposed development. As part of this assessment, the following surveys were undertaken:

- Extended phase I habitat survey (May 2020)
- Preliminary roost assessment (May 2020)
- Endoscopy of PRF on Oak tree (June 2020)

The following important ecological features were identified on site following the conclusion of the above survey work and may be subject to adverse impacts in the absence of suitable mitigation / compensation:

- Low potential for breeding and nesting birds
- Low potential for Reptiles
- Low potential for Dormice
- Potential for foraging and commuting badgers

In the absence of any mitigation measures, the proposed development is anticipated to result in **likely adverse effects** (significance level to be determined following additional survey work). Suitable measures are however outlined within **Section 6.0** of this document to mitigate against this.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was commissioned by Portsmouth City Council to conduct a Preliminary Ecological Appraisal (PEA) on a recreation ground at Hobby Close, Weacock. The purpose of this survey was to assess any ecological impacts that may arise as a result of the proposed works. The objectives of the survey were as follows:

- Assess the ecological value of the site
- Identify any signs of protected species and potential features that may support them
- Make recommendations for further survey work as appropriate.
- Make recommendations for any necessary ecological avoidance, mitigation and compensation measures where possible at a PEA stage
- Make recommendations for site ecological enhancements as per planning policy

NB If the development does not take place within 18¹ months of this report then the findings of this survey will no longer be considered valid and should be repeated.

1.2 Site Description & Location

The site comprises of a parcel of land predominantly comprising of amenity grassland and is surrounded by woodland at Hobby Close, Weacock, PO8 9AY (centered on OS grid reference SU 68353 11936) (**Fig 1**). The north, east and south of the site is bounded by woodland, with the west bounded by residential properties and a carpark. The wider environ is largely urbanised to the south, with small woodland patches and public open spaces, and largely rural to the north dominated by pasture and arable farmland.

¹ <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>

Figure 1. Redline plan of the site (Portsmouth City Council 2020)



1.3 Proposed Development

It is understood that the development will consist of the creation of a new football pitch, play area and skate park, a new permanent footpath within the southern treeline (on an existing hard standing / bare ground pathway). Additionally, a temporary access point created through the wooded area in the north eastern corner of the site will be created using a no dig surface (the area to be impacted here is already a footpath, minimising the impacts).

2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

2.1.1 *The Conservation of Habitats and Species Regulations (2017)*

This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way that is likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

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

This is the primary piece of legislation by which biodiversity is protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost. Similarly, this Act makes it an offence to kill or injure any species of British reptiles and also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built).

2.1.3 *The Countryside and Rights of Way Act (2000)*

This Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.4 *NERC Act*

The Natural Environment and Rural Communities (NERC) Act 2006 requires that public bodies have due regard to the conservation of biodiversity. This means that Planning authorities must consider biodiversity when planning or undertaking activities. Section 41 of the Act lists species found in England which were identified as requiring action under the UK Biodiversity Action Plan and which continue to be regarded as conservation priorities under the *UK Post – 2010 Biodiversity Framework*.

2.1.5 *Protection of Badgers Act*

The Protection of Badgers Act (1992) relates to the welfare of Badgers (*Meles meles*) as opposed to nature conservation considerations. The Act prevents:

- The wilful killing, injury, ill treatment or taking of Badgers and / or
- Interference with a Badger sett
- Damaging or destroying all or part of a sett
- Causing a dog to enter a set and
- Disturbing a Badger while it is occupying a sett

Provisions are included within the Act to allow for the lawful licensing of certain activities that would otherwise constitute an offence under the Act.

2.2 Policy

2.2.1 National

The revised National Planning Policy and Framework (NPPF) (last updated February 2019) replaces the previous NPPF (published 2012, revised July 2018) and sets out the Government's vision for biodiversity in England in line with the country's 25 Year Environment Plan. The revised NPPF is supported by the National Planning Practice Guidance (NPPG) (published January 2016, last updated July 2019). The relevant section of the Guidance concerning biodiversity is 'Natural Environment: Biodiversity, Geodiversity and Ecosystems'. Under this Guidance, Local Authorities' duty to have due regard to the conservation of biodiversity under the NERC Act (2006) is highlighted.

Chapter 15 of the revised NPPF, 'Conserving and Enhancing the Natural Environment', together with associated guidance within the NPPG, outlines key principles related to the natural environment.

Development plans should contribute to and enhance the natural environment. Plans should take both an individual and strategic approach to minimising biodiversity impacts, creating, conserving, restoring and enhancing priority habitats and habitat networks, protecting and aiding in the recovery of priority species and their populations, and providing measurable biodiversity net gains. Individual developments must consider how they can contribute to habitat networks in the wider area (including as part of the Nature Recovery Network), thereby increasing their resilience to current and future pressures.

2.2.2 Local – Havant Borough Council

Local planning policy pertinent to nature conservation for this scheme is outlined within the Havant Borough Core Strategy March 2011. Within this document policy CS11 for protecting and enhancing the special environment and heritage sets out the following:

Planning permission will be granted for development that:

- 1. Ensures the key landscape and built form principles set out in the Havant Borough Townscape, Landscape and Seascape Character Assessment are protected and where possible enhanced by partnership working with developers, groups and the wider community.*
- 2. Protects and where possible enhances the borough's statutory and non-statutory designated landscape, habitats and features of biological, hydrological or geological interest. Protection and enhancement will be achieved by appropriate adaptation and mitigation measures including wardening, education and information and the creation of new habitats, water bodies/courses planting of new trees and woodland.*
- 3. Has particular regard to the following hierarchy of nature conservation designations within the borough (as identified on the Proposals Map):*
 - (i) Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar [International].*
 - (ii) Sites of Special Scientific Interest (SSSI) and National Nature Reserves [National].*
 - (iii) Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR), other*

Ancient Woodland not identified in (ii) above [Local].

- 4. Protects and where appropriate enhances the borough's statutory and non- statutory heritage designations by appropriately managing development in or adjacent to conservation areas, listed buildings, scheduled ancient monuments, historic parks and gardens, archaeological sites, buildings of local historic or architectural interest.*
- 5. Supports an ongoing programme of survey of habitats and species and designation of Sites of Importance for Nature Conservation.*
- 6. Incorporates partnership working with conservation organisations to improve public understanding of biodiversity and to manage public access to designated sites, particularly on the coast, to reduce harm to nature conservation interests.*
- 7. Incorporates partnership working with landowners and developers to ensure land management practices restore, enhance and where appropriate create new valued landscapes, habitats and their soil structure, particularly the ancient woodland remnants of the Forest of Bere and coastal salt marsh.*
- 8. Protects wildlife habitats and wildlife corridors to prevent the fragmentation of existing habitats and to allow species, for example Brent Geese, to respond to the impacts of climate change by making provision for habitat adaptation e.g. coastal managed realignment and species migration.*
- 9. Maintains undeveloped gaps between the settlements of Emsworth/Havant; Havant/Waterlooville; Havant/Portsmouth; Emsworth/Westbourne and Leigh Park/Rowlands Castle as shown on the Proposals Map.*
- 10. Protects the best and most versatile agricultural land that has the greatest potential for local food security.*
- 11. Responds to the emerging evidence from the Solent Disturbance and Mitigation Project, the published recommendations, and future related research.*

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Waterbodies

Any ponds located within 500m of the proposed development were searched for using Ordnance Survey maps and available aerial images.

3.1.2 Designated sites

A search for designated sites that may be impacted by the proposals was conducted using freely available online maps.

3.2 Field Survey

3.2.1 Habitats

The field survey work which forms the basis of the findings of this report was carried out by Aaron Domblides, a Project Ecologist with Ecosupport Ltd (2 years post BSc graduation experience) on the 17th May 2020.

The Phase 1 Habitat survey (JNCC, 2010) methodology was adopted which is a method of classifying and mapping wildlife habitats in Great Britain. It was originally intended to provide “...relatively rapidly, a record of semi-natural vegetation and wildlife habitat over large areas of the countryside”. The standard Phase 1 Habitat survey methodology has been ‘extended’ in this report to include the following:

- Floral species lists for each identified habitat;
- Descriptions of habitat structure, the evidence of management and a broad assessment of habitat condition;
- Mapping of additional habitat types (e.g. hardstanding);
- Identification of Priority Habitats under Section 41 of the NERC Act;
- Evidence of, or potential for, the presence of certain species/groups

3.2.2 Badger

The site was thoroughly searched for evidence of use by Badgers (*Meles meles*), with the specific aim of identifying the presence and location of any setts. In accordance with the *Badgers and Development: A Guide to Best Practice and Licensing* (Natural England, 2011) guidance, the survey accounted for a 30m from the site’s boundary (observed where possible i.e. does not conflict with private dwellings). Evidence of Badgers could include latrines, dung pits, feeding remains and foraging evidence, trails and setts.

3.2.3 Bats

An assessment was made of the suitability of the trees on site to support roosting bats based on the presence of any Potential Roost Features (PRFs) during May 2020. This involved the use of 8 x 42 close focus binoculars and a high-powered torch (where required) for a more detailed inspection of any features. The survey conformed to current best practice guidance as described *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016) and was carried out by Aaron Domblides (as an accredited agent under Adam Jessop 2015-

13366-CLS-CLS).

Following the identification of a PRF on the immature Oak tree to be removed as part of the proposed plans (to facilitate access), this tree was endoscope to establish the trees potential to support roosting bats and identify any evidence of bats within the cavities. This was undertaken by Aaron Domblides (as an accredited agent under Adam Jessop 2015-13366-CLS-CLS) during June 2020.

3.3 Assessment Methodology

3.3.1 Introduction

The methodology for the assessment of the likely ecological effects of the proposed development is based on CIEEM's *Guidelines for Ecological Assessment in the UK* (CIEEM 2018). Although this assessment does not constitute a formal Ecological/ Environmental Impact Assessment, the CIEEM guidelines provide a useful framework for assessing ecological impacts at any level.

3.3.2 Valuation

Features of ecological interest are valued on a geographic scale. Value is assigned on the basis of legal protection, national and local biodiversity policy and cultural and/or social significance.

3.4 Limitations

There were not considered to be any significant limitations on the results of the survey with all areas of the site accessible and the survey undertaken at an appropriate time of year for flowering vascular plants.

4.0 ECOLOGICAL BASELINE

4.1 Desktop Study

4.1.1 Designated sites

Given that there are no designated sites within the immediate vicinity of the site and the nature of the proposed works, it is considered that no designated sites will be negatively impacted upon by the proposed works.

4.1.2 Waterbodies

Only two ponds were identified within 500m of the site. The nearest one is located approximately 130m north west of the site, which is believed to have been retained as part of the development to the north, however it now surrounded by houses and roads. The next nearest pond is located approximately 470m to the west.

4.2 Vegetation Survey Results

The vegetation within the site has been described below using the broad Phase I habitat classification terminology as described with JNCC (2010). The below species noted should not be considered an exhaustive list and instead refer to dominant, characteristic and other noteworthy species associated with each community within the survey area. The habitat types on site comprise:

- Amenity grassland
- Poor semi-improved grassland
- Broadleaved Deciduous Woodland
- Hard Standing

4.2.1 Amenity grassland

The dominant habitat type on site is managed amenity grassland with a short sward height, due to its regular management as a recreation ground. Species noted included; common grass species, Herb Robert (*Geranium robertianum*), Creeping Cinquefoil (*Potentilla reptans*), Yarrow (*Achillea millefolium*), Red Clover (*Trifolium pratense*), Catsear (*Hypochaeris radicata*), Dandelion (*Taraxacum officinale*), Daisy (*Bellis perennis*), Cutleaved Cranesbill (*Geranium dissectum*), Creeping Buttercup (*Ranunculus repens*), Ribwort Plantain (*Plantago lanceolata*), Greater Plantain (*Plantago major*), Hop Trefoil (*Trifolium campestre*), Birdsfoot trefoil (*Lotus conculatus*), Common Vetch (*Vicia sativa*), Cleavers (*Galium aparine*) and Meadow buttercup (*Ranunculus acris*) (**Fig 2**).

Figure 2. Managed amenity grassland



4.2.2 Poor semi-improved grassland

Along the dry ditch that runs parallel to the south eastern boundary of the site and on the mound within the eastern corner, is an area of unmanaged semi-improved grassland (**Fig 3**). Sward height was therefore longer with species noted including those found within the amenity grassland area with the addition of Broad Leaved Dock (*Rumex obtusifolius*), Sow Thistle (*Sonchus spp.*), Nipplewort (*Lapsana communis*), Spear Thistle (*Cirsium vulgare*), Curled Dock (*Rumex crispus*), White Campion (*Silene latifolia*) and Common Fumitory (*Fumaria officinalis*).

Figure 3. Unmanaged Poor semi-improved grassland on eastern mound



4.2.3 Broad Leaved Deciduous Woodland

Although much of the woodland does not lie within the site boundary, there are some small sections of woodland that will be impacted upon for temporary access road and the removal of an area of young Ash trees (in the south, adjacent to the existing children's play area). Species noted within the impacted areas included Oak (*Quercus spp*), Hawthorn (*Crataegus monogyna*), *Salix spp.*, *Prunus spp.*, Blackthorn (*Prunus spinosa*), Holly (*Ilex aquifolium*) and immature Ash (*Fraxinus excelsior*). The understorey comprises of Sycamore (*Acer pseudoplatanus*) saplings, Gorse (*Ulex spp.*), Bramble (*Rubus fruticosus*), Nettles (*Urtica dioica*), Wood Avens (*Geum urbanum*), Dog Rose (*Rosa canina*), Broad Leaved Dock (*Rumex obtusifolius*), Dog Violet (*Viola riviniana*), Cleavers, Herb Robert, Lords and Ladies (*Arum maculatum*), Germander Speedwell (*Veronica chamaedrys*) and Ivy (*Hedera helix*) (**Fig 4 and 5**). The access point has specifically been chosen to minimise ecological impacts due to the existing natural clearing in vegetation and path that lies within this area, meaning that there are large strips of bare ground present already within this area with only young / immature trees to be removed to facilitate access.

Figure 4. Southern area where Ash trees are to be removed and bramble cut back



Figure 5. Area within the northern corner, where access road is to be created.



4.2.4 Hard Standing

There are large areas of hard standing within the western portion of the site due to the presence of a children's play area, skate park and sports court (**Fig 7**).

Figure 7. Area of hard standing



4.3 Bat Survey Results

4.3.1 Trees

An immature oak tree (**Fig 8**) within the north eastern corner of the site requires removal to facilitate access to the site. During the roost assessment a cavity was identified approximately 2m off of the ground (**Fig 9**) which was deemed suitable for roosting bats and therefore required further inspection to assess its potential for roosting bats. As a result the tree was endoscoped by a suitably qualified ecologist to assess the extent of this PRF whilst looking for evidence of bats within the cavity. The cavity was approximately 30cm deep and narrowed to a point with all areas of the cavity visible using the endoscope. No evidence of bats was noted within the tree, with a large number of slugs and woodlice identified within the cavity. There were other small holes below this feature however these were very shallow and did not offer any roosting opportunities for bats. As a result, the tree was assessed as having **Low potential** for bats.

Figure 8. Immature Oak tree to be removed



Figure 9. PRF's identified during the initial walkover of the site



With the exception of the Oak tree, all of the other trees to be removed were in good condition, with no PRF's noted, largely due to the immature age of the majority of these trees. Therefore they are of **Negligible potential** for bats. However a number of PRF's were noted on more mature trees within the wider woodland area, meaning that if the plans are altered or any additional trees are to be impacted upon, then these will require a potential roost assessment for bats.

4.4 Reptiles

The vast majority of the site is considered unsuitable for reptiles due to the short sward height resulting from regular maintenance. However the longer grass strip associated with the ditch on the southern boundary, and the mound in the eastern corner provide suitable habitat for reptiles (however this is considered to be largely sub optimal due to the absence of grass tussocks, likely due to the limited sunlight and recent creation of these areas). It is worth noting that almost the entire section of the ditch will be unimpacted by the proposed plans.

Additionally, some areas of the woodland has dense leaf litter providing suitable cover for reptiles (particularly slow worms). Therefore due to the size and extent of these suitable areas that are to be impacted upon, it is considered that the site is of **Low potential** for reptiles.

4.5 Breeding and Nesting Birds

The woodland areas surrounding the site provide good nesting opportunities for a range of species with a blue tit nest noted within a tree cavity (outside of the red line boundary) and a number of woodpigeon nests. However, given the very small area of suitable nesting habitat to be impacted upon, especially in comparison to the large area of surrounding woodland, the site is considered to be of **Low potential** for nesting birds.

4.6 Dormice

The woodland surrounding the site provides good habitat for dormice, with a range of species noted, good linkages to surrounding habitat and a well-established understory. The nearest dormouse record is approximately 0.9km to the north west, however no dormice were identified during the surveys undertaken for the development to the north and only a very small amount of suitable dormouse habitat will be impacted upon by the proposed plans. Therefore the area to be impacted upon is considered to be **Low potential** due to the small area of suitable habitat.

4.7 GCN

Although there is a pond located approximately 130m north west of the site, this was surveyed during works undertaken for a development to the north and it was found that no GCN were present. Further to this, this pond is now surrounded by new residential properties and roads (in the process of being built) meaning there is now a significant barrier to dispersal in the extremely unlikely case that there are now GCN within this pond. There are no other ponds within 250m, with the closest lying 470m to the east. Given the above and that the vast majority of terrestrial habitat on site is unsuitable for GCN, it is considered that the site is of **Negligible potential** for GCN.

4.8 Badgers

There was no noted evidence of any badgers on site, however a number of mammal trails were noted within the woodland. Additionally, the habitat on site is suitable for foraging and commuting badgers, especially given the surrounding woodland. Therefore the site is considered to be of **Moderate potential** for foraging and commuting badgers.

5.0 LIKELY ECOLOGICAL IMPACTS IN ABSENCE OF MITIGATION

5.1 Introduction

The CIEEM guidelines (CIEEM 2018) require that the potential impacts of the proposals should be considered in absence of mitigation. In order for a significant adverse effect to occur, the feature being affected must be at least of local value. However, in some cases, features of less than local value may be protected by legislation and/or policy and these are also considered within the assessment. Although significant effects may be identified at this stage of the assessment, it is often possible to provide appropriate mitigation.

5.2 Site Preparation and Construction

5.2.1 Impacts to habitats

The proposed plans will largely take place on amenity grassland, hard standing and existing bare ground pathways. As such, the habitats on site are largely only considered to be of value at the **Site level**. There are however small sections of woodland that will be impacted upon, with the removal of some immature trees and understorey vegetation, which is considered to be of value at Local level. Therefore, the development is assessed as having **a minor adverse impact** to habitats of significance at the **site - local level**.

5.2.2 Impacts to wildlife

Although much of the trees are to be retained, a small amount of trees and understorey scrub is to be removed. Within these areas there are potential for nesting birds, with an active Wood Pigeon nest noted. Therefore the removal of vegetation unmitigated, could result in the disturbance, harm or killing of nesting birds. Considering the small area to be impacted upon for breeding/nesting birds, only a **minor adverse impact is likely** at the **local level**.

Given the low potential for dormice on site, in the absence of mitigation, there is a small risk of dormice being disturbed, harmed or even killed during the proposed works. Given the very small area of suitable dormouse habitat to be impacted upon and the absence of dormice during a survey undertaken for the development to the north, it is considered that a **minor adverse impact is possible** at the **local level**.

Given the limited suitability of the site for reptiles on site and the small area of suitable habitat (largely considered sub optimal) there is a chance that low numbers of reptiles may be harmed or killed during the works in the absence of mitigation. Given the small area of suitable reptile habitat to be impacted upon, it is considered that a **minor adverse impact is likely** at the **local level**.

Given the woodland surrounding the site and the short sward height of the majority of the site, the site is considered to be suitable for foraging and commuting badgers. The proposed works may result in the creation of open excavations which could cause badgers to become trapped. Therefore an **adverse impact is possible** at the **Local level**.

In the highly unlikely case that a bat does occasionally roost within the Oak tree on site, in the absence of mitigation, there is a small chance that a bat will be disturbed, injured or even killed during the proposed works. Therefore an **adverse impact is possible** at the **Local level**.

6.0 MITIGATION & RECOMMENDATIONS

6.1 Introduction

The below sections outline a number of recommendations to both mitigate and protect the existing features of value from potential impacts and provide enhancements post development.

6.2 Bats

6.2.1 Removal of Oak tree

The new BCT guidelines (Collins (ed) 2016) suggest the following procedures when dealing with trees that have low suitability for roosting bats (i.e. one or two PRFs):

‘Where there are low suitability PRF’s, precautionary measures may be appropriate during felling / pruning activities’.

To this end, the Oak tree on site (**Fig 8 and 9**) will be endoscoped by a Suitably Qualified Ecologist immediately prior to its removal to ensure there are no bats present. If any bats are encountered, works within this area will stop and Natural England will be consulted.

6.2.2 Compensation

To compensate for the loss of roosting opportunities for bats, prior to any works getting underway one Schwegler 2F bat box with double front panel (or equivalent) will be erected on a retained tree within the boundary woodland. The front panel has a second inner wooden panel fitted to it to create a cavity wall. This provides ideal quarters for bats that inhabit crevices, such as Common Pipistrelle and Soprano Pipistrelle. This bat box will ideally be erected on a tree that is south facing that receives some sunlight during the day. These boxes have been designed as a summer roosting space for bats and is similar in nature to the PRF that is to be lost. The bat box maintains a stable temperature inside the box and is painted black to absorb warmth.

6.3 Dormice

6.3.1 Sensitive vegetation clearance.

Given the small amount of vegetation to be removed (especially in comparison to the surrounding habitat to be retained), the absence of dormice from a survey undertaken on the site to the north and the temporary nature of the habitat loss, it is considered that the most proportionate form of mitigation would be to carry out the works sensitively under a precautionary method statement, rather than carrying out a full suite of dormouse surveys.

The below two stage precautionary method statement will be followed during the removal of all scrubby vegetation on site as well as the small number of trees to be removed along the site boundary. The key aspects of this approach will be:

- Cutting back of the vegetation within the site will be carried out sympathetically and under the supervision of a Suitably Licenced Ecologist (SLE) who will search for nests by hand and capture Dormice (if necessary and considered highly unlikely) before and during clearance works. If any active animals are discovered during the works, works

will cease and Natural England consulted (where an EPS may well be necessary). All arising's / cuttings will also be removed from site each day following a hand search by the licensed Ecologist.

- The licenced Ecologist will deliver a toolbox talk to the vegetation clearance contractors, detailing the sensitive measures required. The ecologist will then supervise all vegetation clearance. No clearance will be undertaken without the supervision of the ecologist.
- To avoid any impacts to Dormice the removal of all vegetation will adopt a two staged approach with the upper sections removed over winter (when Dormice may be hibernating in the lower parts) and the trunk and roots removed during spring. The Dormouse Conservation Handbook (Bright et al., 2006) suggests the following method for the first stage of the removal process:

Winter clearance

'This should remove sufficient vegetation to persuade dormice emerging from hibernation in April or May to move to more appropriate habitat nearby. Once emergence is complete, by the end of May, full clearance of the area can continue. Winter clearance should thus be planned as a two-stage process.

Trees, shrubs and scrub within the area in question should be cut down between November and March inclusive, to avoid both the bird nesting season and the majority of the period when dormice might be found in nests above ground. Clearance should be done by hand and in a sensitive manner, to minimise the likelihood of disturbing or killing hibernating dormice. Similarly, the process of removing the cut material should, as far as possible, be designed to protect dormice hibernating on the ground. This can involve such techniques as:

- *Sacrificing a single 'haul- route', which has first been cleared by hand if necessary;*
- *Using a long-reach mechanical grab and/or limiting the number of 'drag-lines' along which stems are removed; and/or*
- *Directional felling to minimise the ground impact. '*

Vegetation will be cut to a height no lower than 30cm during this winter cut to reduce the disturbance to dormice in the unlikely case that they are present and hibernating on site.

In addition to the above, all vegetation being removed, and the ground beneath, will first be hand searched as far as possible to identify the presence of any hibernation nests. Similarly, any proposed drag/haul routes will first be searched by hand before such usage commences. If any hibernation nests are identified during the works, works will cease and Natural England consulted (where an EPS may well be necessary).

Spring clearance

Once the above works have been completed, the remainder of the vegetation will be removed using hand tools where possible or with a digger using a toothed bucket under the supervision

of the licenced ecologist from mid-April onwards (provided the temperatures have been warm enough for Dormice to emerge from hibernation at the discretion of the Ecologist).

6.3.2 Planting

To ensure that the loss of habitat is only temporary, once the works have been completed and the temporary access road has been removed, planting will take place. All areas where vegetation removal was undertaken will be planted with a range of trees / understory shrubs. This will include species that are known to be beneficial for dormice such as Hawthorn, Blackthorn, Dog rose, Hazel (*Corylus avellane*), Spindle (*Euonymus europaeus*), Honey Suckle (*Lonicera periclymenum*), Holly and Yew (*Taxus baccata*).

6.4 Reptiles

Given the small extent of the suitable reptile habitat on site and the retention of large areas of suitable habitat outside of the red line boundary, the most appropriate mitigation is considered to be passive dispersal into the surrounding retained habitats.

Within the grassland areas this will involve all suitable habitat for reptiles to be strimmed in two phases under the supervision of an Ecological Clerk of Works (ECoW). The first cut will be down to a height no lower than 30 cm with lines cut towards the site boundaries / retained habitat to encourage any reptiles into the understory of the vegetation bordering the site, followed by a second cut taking it down to ground level. These works will be done immediately before any ground works with the grassland area where the grass has a longer sward height and will be undertaken during the active reptile period (typically April – September) when temperatures are above 12 degrees Celsius with sunshine.

Within the woodland area, it is recommended that the first stage of passive dispersal will involve cutting any vegetation to be removed with hand tools to a height no lower than 30 cm (as per the dormouse recommendations). The second stage will involve using a rake to remove all leaf litter from the proposed areas and the removal of any stumps or remaining ground vegetation by hand tools where possible or a digger with a toothed bucket. Any reptiles found will be relocated to suitable areas outside of the work area. This again must be undertaken during the active reptile period (typically April – September), when temperatures are above 12 degrees Celsius with sunshine and in line with the dormouse recommendations as outlined above.

It is recommended that at least 2 new log piles are created using removed trees, one within the southern boundary tree line, the other on the northern boundary tree line.

6.5 Protection of Hedgerows and Trees

All the existing trees that are to be retained should be protected from damage during the works. All the trees / hedges should be fenced using Heras fencing or similar to prevent access by machinery. Where large mature trees are present, they should be protected using standard arboriculturally tree protection measures which include protection of the canopy and prevents root compaction.

6.6 Avoidance of Impacts to Nesting Birds

The methods outlined within the dormouse strategy will ensure that no nesting birds will be impacted upon during the removal of trees. However if any active nests are found during the works, even within adjacent vegetation, they should be left undisturbed with a suitable buffer of undisturbed vegetation (ca. 5m) until nestlings have fledged.

6.7 Badgers

During the construction phase, any open excavations left overnight should either be covered to prevent commuting Badgers falling in or escape ladders should be used to prevent them from becoming trapped. Any open pipework should be checked and then capped nightly.

6.8 Enhancements

6.8.1 Native species planting

As a general enhancement, all new planting should favour native species over non-natives and ornamentals (in line with the CIEEM guidance outlined within Smith & Day (2012). Species that can be considered within any planting include: Rowan (*Sorbus aucuparia*), Alder (*Alnus glutinosa*), Hazel (*Corylus avellana*), Holly (*Illex aquifolium*), Silver Birch (*Betula pendula*), Small-leaved Lime (*Tilia cordata*) and Willow (*Salix* spp.).

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