

Inglenook Farm, Barwell

**Preliminary Ecological Appraisal
Report (PEAR)**



Client:

OPES MRF 2013 Limited

Report Reference:

RSE_6764_R1_V1_PEAR

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PROJECT

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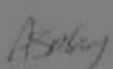
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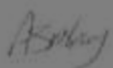
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1 EXECUTIVE SUMMARY

RammSanderson Ecology Ltd were commissioned by OPES MRF 2013 Limited to undertake a Preliminary Ecological Appraisal to assess the potential ecological constraints to the proposed installation of holiday pods and lodges (hereafter referred to as the Scheme), located at Inglenook farm, Barwell, Leicester, LE9 8BD.

- ii The land within the Scheme Boundary (hereafter referred to as the Site) is 1.5 ha in size and comprised of modified grassland, ponds (non-priority), other neutral grassland, mixed scrub, unvegetated unsealed surfaces, and lowland mixed deciduous woodland habitats.

Ecological Feature	Potential to be affected by the Scheme	Further Surveys, Assessment or Mitigation Recommended?
Designated Sites	No	N/A
Habitats	Yes – other neutral grassland and mixed scrub to be removed to facilitate development of the Scheme	Habitats of same distinctiveness to be created to mitigate loss.
Badger	Yes – potential to impact transient badger commuting through site during the construction period.	Precautionary methods of works with regard to badgers detailed within a CEMP/PMW document
Bats	A Ground Level Tree Assessment (GLTA) was beyond the remit of this initial survey, and therefore the potential for trees with bat roost potential cannot be ruled out.	A GLTA will be required should any trees within the Site require removal.
Otter and Water Vole	Yes – ditches on site offer some commuting potential for otters. There is potential impact to ditches on site during construction phase as works commencing within 20m of ditches.	Pollution prevention measures should be followed during works.
Great Crested Newt	Two ponds located within the site. Habitat Suitability Index (HSI) assessment was beyond the remit of the survey. Ponds observed to offer some suitability to GCN during initial survey.	e-DNA surveys of both ponds on site should be conducted between April and June.
Reptiles	Yes – potential to impact commuting and resting reptiles that may be present within the suitable habitats on site.	Clearance of suitable vegetation following precautionary method of works.
Birds	Yes – potential for works to disturb nesting birds in hedgerows or scrub.	Conduct works outside of breeding season (March-September inclusive) or carry out nesting bird check.
Terrestrial Invertebrates	No	N/A
Aquatic Invertebrates	No	N/A
Fish	Yes – ponds offer some suitability for fish however, none were observed during the initial survey	Pollution prevention measures should be followed during works.
Other Notable Species	Yes – brown hare and hedgehog are present locally and may enter the site during the construction period. Suitable habitat on site for other amphibians.	Precautionary methods of works to prevent injury to small mammals and amphibians.

Ecological Feature	Potential to be affected by the Scheme	Further Surveys, Assessment or Mitigation Recommended?
Biodiversity	Areas of modified grassland to be impacted to facilitate development.	Net gain of 8.83% habitat units.

- iii A biodiversity impact assessment (BIA) was completed by request for the site and subsequent calculations indicate a net gain of 8.83% area-based habitat units. As hedgerows and ditches on site are being retained, there is no net change in hedgerow and river units. Recommendations have been provided within Section 3 to achieve a >10% net gain for the Site.
- iv Other enhancements for biodiversity that could be delivered as part of the Scheme include the provision of bird nesting boxes, bat boxes, and insect refugia.

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2 INTRODUCTION

2.1 Terms of Reference

RammSanderson Ecology Ltd (RS) were commissioned by OPES MRF 2013 Limited to undertake a Preliminary Ecological Appraisal (PEA) to assess the potential ecological constraints to the proposed installation of holiday pods and lodges (hereafter referred to as the Scheme), located at Inglenook farm, Barwell, Leicester, LE9 8BD. All land situated within the red line of the Scheme is hereafter referred to as the Site and is shown on Figure 1.

- ii The PEA has been undertaken with reference to current good practice¹ and forms part of the technical information commissioned by OPES MRF 2013 Limited in connection with the Scheme. The results of the PEA are presented in this PEA report (PEAR), which addresses relevant wildlife legislation and planning policy as summarised in Appendix 1. The PEAR is consistent with the requirements of British Standard 42020:2013 *Biodiversity. Code of Practice for Planning and Development*.
- iii This PEAR is intended for advice in respect of Scheme design, site layout and / or site investigation. Further ecological surveys and / or ecological impact assessment (including detailed mitigation measures) may be required in connection with a planning application or to contribute to an Environmental Impact Assessment once the Scheme proposals have been finalised and any required surveys have been completed.

2.2 The Scheme

The Scheme currently includes the proposed installation of holiday pods and lodges within the site boundaries provided. There are to be 20 holiday pods and 11 holiday lodges installed on the site. One of the lodges is to be used for holiday site management purposes.

2.3 The Site

The Site is located at Inglenook farm, west of Leicester Road, Barwell, Leicester LE9 8BD at Ordnance Survey national grid reference SP 45320 96623 and is approximately 1.5 ha in size.

- ii The Site comprises modified grassland, ponds, other neutral grassland, mixed scrub, unvegetated unsealed surface, and lowland mixed deciduous woodland habitats. The Site is bounded by residential dwellings and rural habitat, and the wider area consists of the villages of Barwell and Elmesthorpe.

2.4 Scope of the Preliminary Ecological Appraisal

This PEAR presents ecological information obtained during the following:

- A desk-study undertaken on the 16th of March 2023 to obtain records of designated sites, notable habitats² and protected and notable species³ up to 1 km of the Site (the area covered by the desk study is hereafter referred to as the Study Area); and,
- A walkover survey of accessible land within the Site (the area covered by the survey is hereafter referred to as the Survey Area) on the 23rd of March 2023.

¹ CIEEM (2017). Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

² Notable habitats are taken as principal habitats for the conservation of biodiversity listed under Section 41 of the Natural Environment and Rural Communities Act 2006; habitats listed under the Leicestershire Biodiversity Action Plan (BAP); hedgerows identified as being 'important' under the wildlife criteria of the Hedgerow Regulations 1997, ancient woodlands and veteran trees.

³ Notable species are taken as principal species for the conservation of biodiversity listed under Section 41 of the Natural Environment and Rural Communities Act 2006; any species listed in an IUCN Red Data Book; and any other species listed under the Leicestershire BAP.

- ii The Study Area and Survey Area are shown on Figure(s) 1 and 2.
- iii The purpose of the PEAR is to provide a high-level ecological appraisal of the Site, specifically to:
 - establish baseline conditions and determine the presence of Important Ecological Features (IEF)⁴ (or those that could be present), as far as is possible;
 - to identify potential ecological constraints to the Scheme and make initial recommendations to avoid impacts on IEFs, where possible;
 - to identify requirements for mitigation, where possible, including mitigation measures that will be required and those that may be required (depending on results of further surveys or final scheme design);
 - to establish any requirements for more detailed surveys; and,
 - to identify any opportunities offered by the Scheme to deliver biodiversity enhancements.
- iv The methodology followed for undertaking the desk study and field surveys is detailed in Appendix 2.

⁴Important Ecological Features are habitats, species, ecosystems and their functions and processes that are of conservation importance and could potentially be affected by the Scheme.

3 BASELINE CONDITIONS, CONSTRAINTS AND RECOMMENDATIONS

3.1 Surveyor Competence

The walkover survey was led by Katie Sykes, whom has been a professional ecologist for 7 years and has the required competencies (Chartered Institute of Ecology and Environmental Management) to undertake this type of survey. Additionally, she holds a class 1 survey licence for great crested newts (2018-33884-CLS-CLS) and bats (2021-51640-CLS-CLS).

3.2 Limitations to the Assessment

General limitations to undertaking desk and field-based assessments are provided in Appendix 2. Specific limitations to the assessment are detailed below:

- The survey was completed during the period of October to April, which is generally less efficient than the survey being completed during the spring or summer, and it is possible that some plant species have been missed during the initial field survey. However, in view of the ecological character of the habitats recorded it is considered that the survey is adequate to make a robust assessment of habitats present and the sites likely nature conservation significance.

3.3 Designated Sites

3.3.1 Desk Study

No designated sites were situated within the study area.

3.3.2 Constraints and Recommendations

- ii There are no constraints to the future development of the site from this feature.

3.4 Habitats

3.4.1 Desk Study

There are 10 records of notable habitats and protected or notable flora⁵ (including veteran trees⁶) within the Study Area.

Habitat/ Flora Feature	Reason for Conservation Interest	Location ⁷
Japanese Knotweed (<i>Fallopia japonica</i>)	WCA 1981 Schedule 9 Invasive plant species	2 records; closest record 360m NW
Bluebells (<i>Hyacinthoides non-scripta</i>)	WCA 1981 Schedule 8 Protected Plant species	8 records; closest record 465m E

⁵ For this assessment 'flora' includes vascular and non-vascular plants, fungi and lichens.

⁶ For this assessment the definition of a veteran tree is taken from Annex 2 of the National Planning Policy Framework (glossary): "A tree which, because of its great age, size or condition is of exceptional value for wildlife, in the landscape, or culturally."

⁷ Where features are situated outside of the Site boundary, the distance and direction is given at the closest point of the designated site from the Site

3.4.2 Field Survey

- ii Summary descriptions of the habitats within the Survey Area are provided below in Table 1 and shown on Figure 2, with specific features highlighted by TNs.
- iii Habitat types detailed are listed in order of the UK Habitat classification system (UKHABS Ltd, 2018). The species list provided in this report reflect only those taxa observed during the survey and are not an exhaustive list of all species that may be present, as the survey only provides a snapshot of the Site.

Table 1: Habitats within Survey Area

Habitat	Description	Area (m ²)	Proportion of site (%)	Ecological Importance & Outcome of Proposal	Photograph
g3c, secondary code 17 Other neutral grassland	A small area of other neutral grassland was located along the eastern border of the site. This was abundant with cleavers (<i>Galium aparine</i>) and common nettle (<i>Urtica dioica</i>) with occasional cow parsley (<i>Anthriscus sylvestris</i>) and common nipplewort (<i>Lapsana communis</i>) and rare instances of spear thistle (<i>Cirsium vulgare</i>) and common ragwort (<i>Senecio jacobaea</i>). Piles of debris and logs are situated in and around this habitat.	533	3.5	Some ecological value. Anticipated to be lost within current proposals.	
g4, secondary codes 10,73 Modified grassland	Large areas of modified grassland were observed during the field survey of the site. This was dominated with cock's-foot (<i>Dactylus glomerata</i>) in the southeast corner and locally dominated by broadleaved dock (<i>Rumex obtusifolius</i>) along the southeast boundary. Yorkshire-fog (<i>Holcus lanatus</i>) and perennial rye-grass (<i>Lolium perenne</i>) were abundant with occasional red dead-nettle (<i>Lamium purpureum</i>), common nettle, and mouse-ear hawkweed (<i>Pilosella officinarum</i>). Additional species of little botanical interest were noted during the survey. An area of disturbed grassland was situated in the west of the site. The area was potentially disturbed by heavy machinery, resulting in a lack of vegetation in this area.	10218	67	Limited ecological value. Anticipated to be retained within the scheme.	

Habitat	Description	Area (m ²)	Proportion of site (%)	Ecological Importance & Outcome of Proposal	Photograph
w1f7 Other lowland mixed deciduous woodland	A small block of semi-natural broadleaved woodland was located adjacent to a pond in the northeast corner of the site. Canopy species comprised of goat willow (<i>Salix caprea</i>), sycamore (<i>Acer pseudoplatanus</i>), hazel (<i>Corylus avellana</i>), and rare instances of ash (<i>Fraxinus excelsior</i>). The shrubs of the woodland were noted to include blackthorn (<i>Prunus spinosa</i>), rose sp. (<i>Rosa</i> sp.), and occasional hawthorn (<i>Crataegus monogyna</i>). The understorey layer was dominated by ivy (<i>Hedera helix</i>) and occasional bluebells (<i>Hyacinthoides</i> sp.). The specific species of bluebell could not be identified due to the survey commencing outside of the optimum survey time period. The native species of bluebell (<i>Hyacinthoides non-scripta</i>) is assumed present as a precaution due to its protected status in the UK.	455	3	Ecologically valuable, anticipated to be retained within the scheme.	
h2a, secondary codes 69, 80, 191 Hedgerow (Priority habitat)	There were four hedgerows on site located along the borders of the site. Hedgerow 1 was situated along the southwest border of the site. A ditch was adjacent to the west of H1. H1 was noted to be dominated by blackthorn with frequent holly (<i>Ilex aquifolium</i>) and occasional elder (<i>Sambucus nigra</i>). Six trees were noted within the hedgerow: four field maple (<i>Acer campestre</i>) and two holly. Bramble, ivy, lords-and-ladies, spear thistle, and cow parsley were observed in the hedgerow understory. The ditch was observed to be a shallow, narrow, flowing watercourse. Vegetation was lacking in the watercourse, apart from at the southeast extent, where water figwort (<i>Scrophularia auriculata</i>), brooklime (<i>Veronica beccabunga</i>), and willowherb sp. (<i>Epilobium</i> sp.), were seen. Scallop remains were found in the watercourse and on the banks.			High ecological value. All hedgerows anticipated to be retained within the scheme.	

Habitat	Description	Area (m ²)	Proportion of site (%)	Ecological Importance & Outcome of Proposal	Photograph
	Hedgerow 2 was situated along the eastern boundary of the site. H2 was described as native species rich with trees. Blackthorn was abundant within the hedge with frequent wild privet and hazel, occasional hawthorn, and rare instances of oak sp., elder and rose sp. Two wild cherry (<i>Prunus avium</i>) and 11 ash trees were noted within the hedgerow. Understorey species comprised common nettle, cleavers, cow parsley, lords-and-ladies, white dead nettle (<i>Lamium album</i>), broad-leaved dock (<i>Rumex obtusifolius</i>), perennial rye grass, and common hogweed. Hedgerow 3 was located along the northern boundary of the site with ponds located in close proximity. H3 is described as native species rich with trees. The hedgerow was abundant with hawthorn and blackthorn with frequent hazel, elder and ash. There was occasional oak sp. and rare instances of willow sp. and holly. The understorey comprised of bramble, ivy, lords-and-ladies, and cleavers. A very shallow ditch runs adjacent to the hedge on the southern aspect. The western extent of the ditch is dry. Hedgerow 4 was situated along the northwest boundary of the site. The hedgerow was described as native species rich with trees. H4 was dominated in blackthorn with frequent hazel and hawthorn. There was occasional holly present with rare instances of alder and rose sp. Additionally the hedgerow contained three ash trees. Waste materials were found within the hedgerow. A shallow ditch runs adjacent to the hedge on the eastern aspect. Ivy was present on the banks with no vegetation within the watercourse.				 

Habitat	Description	Area (m ²)	Proportion of site (%)	Ecological Importance & Outcome of Proposal	Photograph
h3h, secondary code 69 Mixed Scrub	A patch of mixed scrub was situated along the southeast boundary of the site. Some scattered trees were present; however, scrub dominated the area. Species present in the scrub comprised of bramble (<i>Rubus fruticosus</i>), wild privet (<i>Ligustrum vulgare</i>), blackthorn, ash, elder, oak sp. (<i>Quercus sp.</i>), common nettle, common hogweed (<i>Heracleum sphondylium</i>), cleavers, lords-and-ladies (<i>Arum maculatum</i>), cow parsley and red dead nettle. The scrub was noted to contain piles of waste debris.	1276	8	Some ecological value, largely to protected or notable species such as birds, reptiles, and amphibians. Anticipated to be retained within the scheme.	
u1c Artificial, unvegetated, unsealed surface	Two sections of artificial, unvegetated, unsealed surfaces were present within the site. The sections were observed to be mainly of stoney substrate with some ruderal and grass species present, however, largely unvegetated. A pile of wood chippings were present on the east section of artificial, unvegetated, unsealed surfaces.	1238	8	No ecological value. Anticipated to be lost within the scheme.	

Habitat	Description	Area (m ²)	Proportion of site (%)	Ecological Importance & Outcome of Proposal	Photograph
r1a6 Ponds (non-priority habitat)	Two ponds were present in the northern region of the site. Pond 1 was fenced off and observed to be turbid. P1 contained very limited vegetation with some bulrush identified. The time of the survey could have affected species presence. The pond appeared to be artificially created with the banks reinforced by wood. Pond 2 was partially fenced off and also observed to be turbid. P2 showed limited emergent vegetation but may be an affect of the season. Water lilies (<i>Nymphaea sp.</i>) and bankside rushes were present.	1532	10	Ecologically valuable as freshwater habitat that may support amphibians potentially including GCN. Anticipated to be retained within the scheme.	 

3.4.1 Constraints and Recommendations

- iv The majority of habitats on site were generally of limited botanical interest and poor species diversity. The value of habitats such as other neutral grassland, ponds, and mixed scrub were largely noted in their potential to support a low number of protected/ priority faunal species rather than for their botanical value. The hedgerows were assessed as being in moderate condition and are of ecological value locally, as well as important ecological corridors for the dispersal of fauna and flora into the wider countryside. All hedgerows formed of >80% native woody species are a Habitat of Principal Importance under the NERC Act (2006). As such they are a material consideration during planning. Hedgerows should be retained where possible with a 1m root protection buffer. Where removal is required, these should be replaced with native species rich hedgerows on a 2:1 basis.
- v The lowland mixed deciduous woodland was noted for its ecological value. Lowland mixed deciduous woodland was assessed to be in moderate condition and is an important ecological corridor for the dispersal of fauna and flora into the wider countryside. It is listed as a UK BAP priority habitat and as such, should be retained where possible or replaced on a like for like basis if removal unavoidable. .

3.5 Badger

3.5.1 Desk Study

There are 17 recent records of badger within the Study Area.

3.5.2 Field Survey

- ii No evidence of badgers were observed during the field survey, however habitats on site were suitable for foraging and commuting badgers due to the short grassland, and presence of lowland mixed deciduous woodland.

3.5.3 Constraints and Recommendations

- iii Due to the suitable habitat and local records, it is likely that badgers are entering the site to forage and traverse and may be impacted during the construction period. As such, precautionary measures are recommended with regard to badgers, which will be detailed in a Precautionary Method of Works (PMW) and/or Construction and Ecology Management Plan (CEMP). This will include the covering of excavation, capping off open pipes and storing hazardous materials safely.

3.6 Bats

3.6.1 Desk Study

There are 53 recent records of bats within the Study Area. The closest/ most relevant of these records is associated with soprano pipistrelles (*Pipistrellus pygmaeus*) which is approximately 255m from the Site boundary.

3.6.2 Field Survey

- ii A detailed assessment bat potential on site was beyond the scope of the survey, however, no prominent features were observed during initial viewing. Due to the site location and context and to the presence of suitable habitat on site (woodland, ponds, and hedgerows) for roosting, commuting, and foraging bats, their presence on site is considered likely.

3.6.3 Constraints and Recommendations

- iii A ground level tree assessment (GLTA) will be required to assess bat roosting potential of the woodland and hedgerow trees. Additionally, the proposals would increase levels of ambient lighting which would affect bats locally, therefore, no night works should be undertaken, and a bat sensitive lighting strategy should be adhered to. If any woodland or hedgerow trees are to be removed, then further surveys will be needed to assess potential roost sites and activity across the site.

3.7 Otter and Water Vole

3.7.1 Desk Study

There are no recent records of otter or water vole within the Study Area.

3.7.2 Field Survey

- ii There were no suitable habitat for water voles on site as the waterbodies lacked suitable vegetation (such as tall grasses and emergent rushes) required for foraging water voles, and for the provision of cover from predators. The ponds were not suitable for otters as they prefer occupying clean, running water habitats. As the ditches on site lacked vegetation for cover of holts and suitable prey, it is unlikely otters utilise this for foraging and breeding purposes. It could offer potential otter commuting routes, however, the ditches have limited connectivity to the wider environment.

3.7.3 Constraints and Recommendations

- iii Due to the lack of suitable habitats within the zone of influence and local records, no further surveys are currently recommended. Strict pollution prevention guidelines should be followed to mitigate impact on any potential commuting otters.

3.8 Great Crested Newt

3.8.1 Desk Study

- There are 3 recent records of great crested newts within the Study Area. The closest / most relevant of these records is approximately 0.7km from the Site boundary.
- ii A total of five ponds and six ditches are present within 500m of the Site. Two ditches (D1 and D2) on site have been screened out of further assessment because they contain very shallow water, likely to dry out over different seasons, which is unsuitable for great crested newts⁸. A total of three ponds (P3, P4, P5) and three ditches (D4, D5, D6) are screened out of requiring further assessment as the A47 acts as a major dispersal barrier⁹ to great crested newt movement between the water bodies and the Site. However, P1 and P2 were not screened out as discussed below.

⁸ Great crested newts do not generally like running water, though they will inhabit very slow-flowing watercourses such as backwaters, ditches and canals.

⁹ The following constitute major barriers to dispersal and are unlikely to be traversed by great crested newts: rivers and larger brooks; main roads such as A-roads, motorways or any other road with high traffic volume (i.e. high traffic volume during the night when great crested newts are more likely to be dispersing/commuting); and major urban infrastructure including extensive areas of hardstanding and buildings and dense networks of minor roads with little green space.

3.8.2 Field Survey

- iii A habitat suitability index (HSI) was beyond the remit of the initial survey and were not conducted. Two ponds were located on site. Initial observations identified the ponds as having potential to support great crested newts. Habitats on site, such as other neutral grassland and mixed scrub offer refugia and commuting habitats for great crested newts.

3.8.3 Constraints and Recommendations

- iv Due to suitable habitats present on site and local records of great crested newts, it is recommended to conduct e-DNA surveys of the ponds (P1 and P2) on site to confirm presence or absence before works commence.

3.9 Common Species of Reptile

'Common species of reptile' refers to common lizard, slow worm, adder and grass snake. The Site is located outside of the known range of smooth snake and sand lizard and these species are not considered in this report.

3.9.2 Desk Study

- ii There are 5 recent records of grass snake within the Study Area. The closest / most relevant of these records is approximately 0.6km from the Site boundary.

3.9.3 Field Survey

- iii The habitats present on site were largely sub-optimal comprising managed grassland, however there were
- iv areas of suitable habitat where mixed scrub and hedgerows were present. A rock pile was noted within the mixed scrub which could be used as a refugia for reptiles.

3.9.4 Constraints and Recommendations

- v There remains a low residual risk of common reptiles being present within the areas of suitable habitat on site. It is recommended that clearance of suitable vegetation is carried out under a precautionary method of works at temperatures >11°C.

3.10 Birds (including schedule 1 species)

3.10.1 Desk Study

There are recent records for 29 notable¹⁰ bird species within the Study Area. These include seven species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), 16 species on the Conservation Concern 5 (BoCC5) Red list (Stanbury, 2021) and 6 species on the BoCC5 Amber list. The records also include five species of bird that are priority species in Leicestershire listed on the Leicestershire and Rutlands Local Biodiversity Action Plan.

¹⁰ Notable bird species are taken as those listed: on Annex I of the EC Birds Directive (2009/147/EC); on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); as Species of Principal Importance (SPI) for the Conservation of Biodiversity in England listed in Section 4.1 of the Natural Environment and Rural Communities Act 2006; as Red or Amber in the Birds of Conservation Concern (BoCC) 4 (Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015). Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds 108, 708-746); bird species or groups listed under the Leicestershire and Rutlands local BAP.

3.10.2 Field Survey

- ii The hedgerows, woodland and scrub hold the potential to support common and widespread nesting bird species. There are no habitats onsite considered to be suitable in supporting Schedule 1 bird species or notable populations of notable bird species such as those listed under BoCC Amber and BoCC Red.

3.10.3 Constraints and Recommendations

- iii To limit the impacts upon nesting birds, it is recommended to avoid clearance in bird nesting season (March – September). If this is not possible an ecologist should carry out a pre-commencement check for nesting birds prior to removal of suitable habitat.

3.11 Terrestrial Invertebrates

3.11.1 Desk Study

There are no recent records of notable¹¹ terrestrial invertebrates within the Study Area.

3.11.2 Field Survey

- ii The habitats on site offered limited value for notable terrestrial invertebrates, as the site was dominated by managed grassland of low species diversity comprising common and widespread flora. There is also similar habitat available within the local landscape and as such the site is unlikely to support important populations of NERC invertebrate species locally. The woodland, other neutral grassland, and hedgerows onsite offered some value, particularly regarding a food source for pollinators such as bees and butterflies, although this value is limited overall.

3.11.3 Constraints and Recommendations

- iii No recommendations or mitigation is required due to the value of the habitats onsite and the lack of suitable records within the study area. Should any protected or suspected protected invertebrate species be discovered onsite during the works, then works should cease immediately, an ecologist contacted, and the methodology revised.

3.12 Aquatic Invertebrates (including White-clawed Crayfish)

3.12.1 Desk Study

There are no recent records of notable¹² aquatic invertebrates (including white-clawed crayfish) within the Study Area.

¹¹ Notable terrestrial invertebrates are taken as principal species for the conservation of biodiversity listed under Section 41 of the Natural Environment and Rural Communities Act 2006; any invertebrate listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); any invertebrate listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended); any invertebrate listed in the IUCN Invertebrate Red Data Book (1991); and any invertebrate listed under Leicestershire and Rutlands local BAP.

¹² Notable aquatic invertebrates are taken as principal species for the conservation of biodiversity under Section 41 of the Natural Environment and Rural Communities Act 2006; any invertebrate listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); any invertebrate listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended); any invertebrate listed in the IUCN Invertebrate Red Data Book (1991); and any invertebrate listed under a Leicestershire and Rutlands local BAP.

3.12.2 Field Survey

- ii There are no habitats onsite or within 100m of the site that are of value to these species. The ponds on site were deemed too turbid to be suitable for white-clawed crayfish.

3.12.3 Constraints and Recommendations

- iii There are no recommendations or mitigation measures needed with regards to this species group. No further surveys will therefore be required.

3.13 Fish

3.13.1 Desk Study

There are no recent records of fish within the Study Area.

3.13.2 Field Survey

- ii The site contains two ponds which offer suitability for fish. No fish were observed during the initial survey, however, both ponds were turbid, reducing visibility within the pond.

3.13.3 Constraints and Recommendations

- iii Both ponds are to be retained within the proposals. Therefore, pollution prevention techniques will be appropriate mitigation for works, in order to minimise the impacts upon any fish present within the pond.

3.14 Other Notable Species

3.14.1 Desk Study

There are 19 recent records of other notable species¹³ within the Study Area. The closest / most relevant of these records is associated with brown hare which is approximately 205m from the Site boundary.

3.14.2 Field Survey

- ii The grassland and woodland on site presents suitability for brown hare, and the hedgerows present suitability for hedgehog. As such, these species are likely to be present on site. The ponds and scrub offer some suitable habitat for common frogs, smooth newts, and common toads. The presence of these amphibians on site cannot be ruled out.

3.14.3 Constraints and Recommendations

- iii There is a risk that hedgehog and brown hare may traverse the site during the construction period. It is recommended that best practice measures with regard to small mammals are adhered to during the construction phase of the scheme. These measures are similar to those used for badgers. A precautionary method of works should be adhered to when conducting any vegetation clearance to minimise impact to commuting amphibians.

¹³ Notable species are taken as principal species for the conservation of biodiversity listed under Section 41 of the Natural Environment and Rural Communities Act 2006; any species listed in an IUCN Red Data Book.

4 BIODIVERSITY IMPACT ASSESSMENT

A high-level¹⁴ biodiversity impact assessment (based on the current Scheme details) has been undertaken for the Scheme. This involves making a comparison between the biodiversity value of habitats present within the Site prior to development (i.e. the 'baseline') and the predicted biodiversity value of habitats following the completion of the Scheme (i.e. 'post development'). The comparison is undertaken in terms of 'biodiversity units', with a 'biodiversity metric' providing the mechanism to allow biodiversity values to be calculated and compared.

The biodiversity value of the Site is as follows:

- 5.17 units of Area based habitats;
- 5.71 units of Linear based habitats; and,
- 0.29 units of River based habitats.

Post development, the Scheme would result in the following:

- A gain of 0.46 units of Area based units. This equates to a 8.83% net gain;

The assessment is based on the proposed Scheme details, as summarised in Section 1 and does not include any additional potential compensation or enhancements, which is detailed in Section 4 of this report below.

The methodology for undertaking the assessment is provided in Appendix 2. Full details on the assessment calculations are provided in Appendix 3.

¹⁴ High level refers to the fact that Scheme proposals including landscaping and any required ecological mitigation are not finalised at this stage of the assessment.

5 OPPORTUNITIES FOR ENHANCEMENTS

This section highlights opportunities for providing ecological enhancements, based on the current Scheme details. These are high level opportunities and would need to be developed in greater detail once further surveys have been completed and the Scheme proposals, such as detailed areas of habitat loss are confirmed.

5.1 Biodiversity Net Gain

The Scheme would result in an approximate gain of 8.83% Area biodiversity units. To offset these losses, and potentially achieve a net gain the following could be delivered as part of the Scheme:

- Given the context of the Site, i.e. its high levels of footfall, good condition wildflower meadows are unfeasible. However, the existing modified grassland to the south and areas around the perimeter in the north of the site could be sown with a species-rich seed mixture that tolerates amenity management. The area would have to be fenced off to ensure moderate condition is gained.
- Incorporating a native species-rich green or brown roof on the new holiday lodges would highly increase the likelihood of securing an on-Site gain in habitat units. This would satisfy trading rules by providing an additional medium distinctiveness habitat.
- Some hedgerows onsite could be enhanced to achieve good condition from moderate condition. A 1m wide strip of ground and perennial vegetation should be left undisturbed. This seems more achievable along the north boundary of the site, where footfall would be less frequent. A hedgerow meadow seed mixture should be used in these strips to ensure undesirable perennial vegetation does not dominate the area.
- A small pond is proposed to be created in the centre of the site. To achieve moderate condition, certain measures can be made. Pond water levels should be allowed to fluctuate naturally throughout the year. Marginal planting should be implemented to allow plant cover for at least 50% of the pond area in depths of 3m. A native species seed mixture that tolerates flooding should be used.

5.2 Other Enhancements

The following enhancements could be delivered for biodiversity as part of the Scheme, that don't contribute towards the calculation of biodiversity net gain but can still deliver significant improvements for biodiversity:

- Provision of bird nest boxes, suitable for a range of smaller common species. These would be best placed on holiday lodges and any suitably sized newly planted trees (when appropriate).
- The Scheme includes the planting of individual trees across the site. Exact species to be planted have not been included within proposals. It is recommended to plant native, locally sourced tree species. Saplings from the woodland onsite could be translocated for the plantation of individual trees. Species such as wild cherry, elder, and rowan would be suitable in this setting and would provide a foraging resource for birds.
- Provision of invertebrate refugia ('hotels') in areas of native species planting, such as alongside grasslands, hedgerow, or amongst any retained areas of scrub.

6 CONCLUSION

This PEAR is based on a desk study and ecological surveys undertaken on the 3rd of April 2023 to assess the ecological constraints to the Scheme and to provide advice in respect of Scheme design, site layout and / or site investigation.

- ii The following further surveys, summarised in Table 2, are recommended to support the planning application for holiday pods and lodges.

Table 2: Summary of Recommendations

Ecological Feature	Recommendation	Timing
Bats	GLTA of woodland and hedgerow trees on site	Anytime of year
Great Crested Newt	e-DNA of the two ponds on site	April – June

- iii The Scheme would result in an approximate gain of 8.83% Area biodiversity units. Recommendations for achieving biodiversity net gain include species-rich grassland creation/enhancement and green/brown roof creation.
- iv Other enhancements for biodiversity that could be delivered as part of the Scheme include bird nest box, bat roost box, and invertebrate 'hotel' provision.

6.2 Re-Survey of Site

Due to the mobility of animals and the potential for colonisation of the Site, it is recommended that an updated ecological survey be undertaken prior to the redevelopment of this Site should this not occur within 12 months of the date of the field survey.

7 FIGURES

Figure 1: Site Location and Context Plan



Figure 2: Phase 1 Habitat Plan



Figure 3: Waterbody Plan



Figure 4: Client proposed plans



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APPENDIX 1: RELEVANT LEGISLATION AND PLANNING POLICY

- xxv The UK is no longer a member of the European Union (EU). EU legislation as it applied to the UK on 31 December 2020 is now a part of UK domestic legislation. EU legislation which applied directly or indirectly to the UK before 11.00 p.m. on 31 December 2020 has been retained in UK law as a form of domestic legislation known as 'retained EU legislation'.
- xxvi The Secretary of State for the Environment, Food and Rural Affairs and Welsh Ministers have made changes to parts of the Conservation of Habitats and Species Regulations 2017 (referred to as the 2017 Regulations) so that they operate effectively. Most of these changes involve transferring functions from the European Commission to the appropriate authorities in England. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant and are now referred to as The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (the 2019 Regulations).

Protected Species

Bats / Otter / Great Crested Newt

- xxvii These species, known as European Protected Species, are protected under Regulation 43 of the 2017 Regulations as amended by the 2019 Regulations. This makes it an offence to deliberately capture, injure or kill an animal; deliberately disturb an animal; or damage or destroy a breeding site or resting place used by an animal.
- xxviii Deliberate capture or killing is taken to include "accepting the possibility" of such capture or killing. Deliberate disturbance of animals includes in particular any disturbance which is likely a) to impair their ability (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of hibernating or migratory species, to hibernate or migrate; or b) to affect significantly the local distribution or abundance of the species to which they belong.
- xxix Where development works are at risk of causing one or more of the offences listed above, a mitigation licence from Natural England can be obtained to facilitate the works that would otherwise be illegal.
- xxx These species are also protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb an animal in such a place.
- xxxi Lower levels of disturbance not covered by the Conservation of Habitats and Species Regulations 2017 remain an offence under the Wildlife and Countryside Act 1981 although a defence is available where such actions are the incidental result of a lawful activity that could not reasonably be avoided.

Water Vole

- xxxii Water voles are protected under the Wildlife and Countryside Act 1981 (as amended). There are no licensing purposes that explicitly cover development or other construction activities which could have an impact on water voles.
- xxxiii When development work is proposed in or near an area which is either known to or likely to contain water voles, then the developer will need to implement suitable mitigation to prevent impacts to water voles. The preferred mitigation option is to leave water voles in situ, with the development works adopting avoidance measures through redesign of the proposals.
- xxxiv Where impacts cannot be avoided, operations aimed at displacing water voles from a development site are now no longer covered by the "incidental result of an otherwise lawful action" defence in the Wildlife and Countryside Act 1981 (as amended). Displacement of water voles now needs to be undertaken under a licence.

xxxv In England, small scale (limited to continuous lengths of bank not exceeding 50 m) displacement of water voles can be carried out at certain times of the year (February to April) for the purposes of conservation under a Class Licence by a registered person. For larger scale displacements or displacements outside of this period, displacement can be undertaken under a site-specific conservation licence.

xxxvi Where it is considered that the best outcome for water voles is capture and translocation to a different location then this action is considered by Natural England to be outside the scope of the defence as the intentional capture of water voles is unlikely to be considered 'incidental'. In these circumstances there may be genuine grounds for issuing a conservation licence for the purpose of translocating the water vole population to suitable alternative habitat.

Nesting Birds

xxxvii All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), with some species afforded greater protection under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). In addition to the protection from killing or taking that all birds receive, Schedule 1 birds and their young must not be disturbed at the nest.

xxxviii There are no licensing purposes that explicitly cover development activities affecting wild birds.

White-clawed Crayfish

xxxix White-clawed crayfish are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is illegal to take or to sell white-clawed crayfish.

xl White-clawed crayfish is a species under major threat of global extinction and is referred to in various biodiversity related policy¹⁵. Several organisations involved in works on rivers or other water bodies have general legal obligations¹⁶ to take the presence of white-clawed crayfish into account when issuing permissions to undertake works.

Common Species of Reptile (common lizard, slow worm, grass snake and adder)

xli Common species of reptile are protected against intentional killing and injury under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). There is no requirement for a licence where development works affect common species of reptiles. Instead, Natural England (English Nature, 2004) advise that where reptiles are present, they should be protected from any harm that might arise during the development works through appropriate mitigation.

Badger

xlii Badgers and their setts are protected under the Protection of Badgers Act 1992 (as amended). This makes it an offence to wilfully kill, injure or take a badger; or intentionally or recklessly damage, destroy or obstruct access to a badger sett or disturb a badger in its sett.

xliii It is not illegal to carry out disturbance activities near setts that are not occupied, i.e. those that do not show signs of current use.

¹⁵White-clawed crayfish is listed under the following: as a "priority" species of conservation importance under Section 41 of the Natural Environment and Rural Communities Act (2000); and listed in Leicestershire and Rutlands LOCAL BIODIVERSITY ACTION PLAN.

¹⁶ Under the Water Resources Act 1991 and the Land Drainage Act 1991 there is a requirement to consider the presence of notable species such as white-clawed crayfish when the Environment Agency, Internal Drainage Board or other statutory agency is considering granting consent for proposed operations to a water course.

- xliv Where required, licences for development activities involving disturbance or sett interference or closure are issued by Natural England. Licences for activities involving watercourse maintenance, drainage works or flood defences are issued under a separate process.
- xlv When assessing the requirement for a licence in respect of development, Natural England (Natural England, 2009) state that badgers are relatively tolerant of moderate levels of noise and activity around their setts, and that a low or moderate level of apparent disturbing activity at or near to badger setts does not necessarily disturb the badgers occupying those setts.
- xlvi Licences are normally not granted from December to June inclusive (the badger breeding season) because dependent cubs may be present within setts.

Species and Habitats of Principal Importance for the Conservation of Biodiversity

- xlvii Section 40 of the Natural Environment & Rural Communities Act (NERC) 2006 sets out the duty for public authorities to conserve biodiversity in England.
- xlviii Habitats and species of principal importance for the conservation of biodiversity are identified by the Secretary of State for England, in consultation with Natural England, are referred to in Section 41 of the NERC Act for England. The list, known as the 'England Biodiversity List', of habitats and species can be found on the Natural England web site.
- xlix The 'England Biodiversity List' is used as a guide for decision makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act 2006 to have regard to the conservation of biodiversity in England when carrying out their normal functions. The habitats and species on the List, are material considerations of planning, where present on an application site.

Hedgerows

Under The Hedgerow Regulations, 1997, it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. In general, permission will be required before removing hedges that are at least 20 metres in length, over 30 years old and contain certain species of plant. The local planning authority will assess the importance of the hedgerow using criteria set out in the regulations.

Non-native Invasive Plant Species

- li Under the Wildlife and Countryside Act, 1981 (as amended), it is an offence to plant or otherwise cause these species to grow in the wild.
- lii Any contaminated soil or plant material is classified as controlled waste and should be disposed of in a suitably licensed landfill site, accompanied by appropriate Waste Transfer documentation, and must comply with section 34 of the Environmental Protection Act 1990.

Planning Policy

National Planning Policy Framework, 2021

- liii The National Planning Policy Framework (NPPF) (Department of Communities & Local Government, 2021) sets out the Governments planning policies for England and how these are expected to be applied by Local Authorities within their Local Development Frameworks (LDF).

Regarding the NPPF, the most pertinent paragraphs are:

8.c) "to protect and enhance our natural, built and historic environment, including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy"

174.d) “minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures”

179.b) “promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”

180.a) “if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.”

180.c) “development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁶³ and a suitable compensation strategy exists.”

8.2 Local Planning Policy

- i. The Hinkley and Bosworth Local Plan Core Strategy includes the following relevant planning policy:
- ii. Policy 21: National Forest - Proposals that contribute to the delivery of the National Forest Strategy (increasing woodland cover; enhancing biodiversity; and tourism developments, especially overnight quality accommodation linked to tourism in the Forest) will be supported.

8.3 Local Biodiversity Action Plans

- iii. The Leicestershire and Rutlands Biodiversity Action Plan raises awareness of biodiversity issues by focussing on species and habitats with local relevance, and is a mechanism to enable national targets to be delivered at a local level. It targets habitats relevant to this site including broad-leaved woodland, eutrophic standing water, hedgerows and drains, and species relevant to this site including bats, farmland birds, and otter.

APPENDIX 2: METHODOLOGY

Desk Study

Background Records Search

The preliminary ecological assessment includes a desk study to obtain background records relevant to a Site and the Scheme. The data obtained provides contextual information for the scope of field surveys, to aid the evaluation of field survey results, and to provide supplementary information where complete field survey coverage is not possible.

The Study Area is dependent upon the nature, timing and scale of the Scheme, as well as the location of the Site and the surrounding landscape. These variables all contribute to what is referred to as the Zone of Influence (Zoi) of the Scheme, which is the area over which ecological features may be affected by biophysical changes because of the works and associated activities.

On 15/03/2023, the Leicestershire and Rutlands Environmental Records Centre was contacted to obtain the following ecological data:

- Records of non-statutory designated sites within 1 km of the Site boundary;
- Records of legally protected and notable species (fauna and flora) within 1 km of the Site boundary, including Species of Principal Importance for the Conservation of Biodiversity listed under Section 41 of the Natural Environment & Rural Communities Act 2006 in the England Biodiversity List¹⁷.

The Multi-Agency Geographic Information for the Countryside (MAGIC) (www.magic.gov.uk) website was reviewed for the following information:

- Designated sites of nature conservation importance (statutory sites only) within 5km of the Site. This was extended to 10km for internationally designated sites: Special Protection Areas (SPAs), Wetlands of International Importance (Ramsar sites) and Special Areas of Conservation (SACs); and,
- Notable habitats within 1 km of the Site, these being areas of ancient woodland and 'Habitats of Principal Importance for the Conservation of Biodiversity' included in the England Biodiversity List.

Great Crested Newt Pond Search

Ordnance Survey maps and the Where's the Path website (<https://wtp2.appspot.com/wheresthepath.htm>) have been used to identify the presence of water bodies within 500 m of the Site boundary, in order to help establish if the land within and immediately surrounding the Site could be used by great crested newts. This species can use suitable terrestrial habitat up to 500 m from a breeding pond (English Nature, 2001), though there is a notable decrease in great crested newt abundance beyond 250 m from a breeding pond (Natural England, 2004).

¹⁷ Section 40 of the Natural Environment & Rural Communities Act 2006 requires that very public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. The Secretary of State has drawn up, in accordance with Section 41 of the Act and in consultation with Natural England, a list of habitats and species of principal importance for the conservation of biodiversity in England that is known as the England Biodiversity List

Field Survey

The preliminary ecological assessment includes a walkover survey of the Survey Area (all land within the Site) broadly following the Phase 1 habitat survey methodology as set out in Joint Nature Conservation Committee guidance (Joint Nature Conservation Committee, 2010). This survey method records information on habitat types and is 'extended' to record any evidence of and potential for protected or notable species to be present. Plant names recorded during the survey follow (Stace, 2019).

During the walkover survey, the following protected or notable species are considered:

- **Badger:** the survey involves searching for signs of badger activity including setts, tracks, snuffle holes and latrines, following the methodology detailed in (Scottish Natural Heritage, 2018) and (Harris, 1989).
- **Bats:** the survey involves searching for potential roosting sites for bats within trees and structures (such as buildings, bridges or underground features such as mines) and categorising the potential of those trees or structures to support roosting bats (negligible to high, or confirmed roost), in accordance with Bat Conservation Trust (BCT) (Collins, J. (Eds.), 2016) guidance.
- **Otter:** the survey involves assessing the potential of watercourses and water bodies, and adjacent terrestrial habitat within the Survey Area to support otter, following RSPB (Ward, 1994) and (Chanin, 2003) guidance;
- **Water vole:** the survey involves assessing the potential of watercourses and water bodies within the Survey Area to support water vole, following The Mammal Society (Dean, 2016) guidance;
- **Birds:** the survey involves assessing the potential of habitats within the Survey Area to support breeding, wintering or migrating birds, either individually notable species or assemblages of both common and rarer species;
- **Great crested newt:** the survey involves assessing the potential of habitats within the Survey Area to support great crested newt, following English Nature (English Nature, 2001) and Froglife (Froglife, 2001) guidance;
- **Reptiles:** the survey involves assessing the potential of habitats within the Survey Area to support reptiles (typically adder, grass snake, common lizard and slow worm only, though in some locations and habitat types (most notably heathland) may also include smooth snake and sand lizard), following Froglife (Froglife, 1999) and JNCC (Joint Nature Conservation Committee, 2003) guidance;
- **Notable species of invertebrate:** the survey involves assessing the potential of habitats within the Survey Area to support notable species of invertebrates, both terrestrial and aquatic (including white-clawed crayfish);
- **Protected or Notable species of plants:** the survey involves recording protected or notable plant species;
- **Other notable species:** the survey involves assessing the potential of habitat within the Survey Area to support other Notable Species, such as hedgehog, brown hare, polecat or common toad;
- **Non-native invasive plant species:** the survey involves recording evidence of the presence of invasive plants listed on (Wildlife and Countryside Act, 1981 (as amended)) and subject to strict legal control.

Biodiversity Accounting

The biodiversity net gains assessment involves making a comparison between the biodiversity value of habitats present within the Site prior to a development (i.e. the 'baseline') and the predicted biodiversity value of habitats following the completion of the Scheme (i.e. 'post development'). The comparison is undertaken in terms of 'biodiversity units', with a 'biodiversity metric' providing the mechanism to allow biodiversity values to be calculated and compared.

The metric assesses and generates separate outputs for area-based habitats and linear based habitats (with rivers reported separately to other habitats like hedgerows). A development cannot claim to achieve net gain until biodiversity net gains are predicted across all area-based, linear based and river based habitats.

The calculation for area-based and linear (non-river) habitats calculates biodiversity units as follows:

- Before Works = Distinctiveness Score x Condition Assessment x Area/Length x connectivity x strategic significance
- After Works = ((Distinctiveness Score x Condition Score x Area/ Length x connectivity x strategic significance) / Time to Target Condition) / Difficulty of Creation/Restoration

The five factors are determined as set out below:

- Distinctiveness Score – High, Medium or Low, based on UK habitat classifications.
- Condition Score – Good, Fairly good, Moderate, Fairly poor or Poor, based on habitat condition assessment.
- Area/Length – hectares (ha)/ length (km) of habitat type.
- Connectivity – High, Medium and Low.
- Strategic significance – High (Within area formally identified in local strategy), Medium (Location ecologically desirable but not in local strategy) and Low (Area/compensation not in local strategy/ no local strategy).
- Time until target condition – time period (in years) until the target condition will be achieved.
- Difficulty of creation/restoration – a score applied to account for risk associated with creating/restoring different types of habitat.

Limitations

The aim of a desk study is to help characterise the baseline context of a proposed development and provide valuable background information that would not be captured by a single site survey alone. Information obtained during the course of a desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular habitats or species does not necessarily mean that the habitats or species do not occur in the study area. Likewise, the presence of records for particular habitats and species does not automatically mean that these still occur within the area of interest or are relevant in the context of the proposed development.

An ecological survey represents a 'snapshot' in time of the ecological condition of a Site. The ecological character of a Site can change substantially throughout both the course of a year, and from year to year impacting on the extent and quality of habitats potential to support protected species.

Appendix 3: Biodiversity Impact Assessment

Table 3: Baseline Habitat Condition Assessment

UK Hab Description	Area (hectares) / Baseline Biodiversity Units	Condition Assessment	Habitat Condition Comments
Modified grassland	1.0565 ha/ 2.43 units	Poor	Grassland distributed across the majority of the site. Condition has been assessed as Poor, as the habitat achieves the following criteria in the conditions assessment: -less than 6-8 species per m² -sward height is not varied (with 20% of sward less than 7cm and 20% sward more than 7cm). There are longer areas in the south corner up to 1.5m high but only account for ~5% of the grassland area. -there is some blackthorn in the southeast and bramble on southern boundary but scrub accounts for less than 20% of total grassland area. -physical damage is evident in more than 5% of the total grassland damage. -cover of bare ground is greater than 10%, including localised areas. ~30% bare ground running through site with large areas along site boundaries from machinery and potential waterlogging. Barer areas to the west look recently disturbed, potentially by machinery driving over in wet weather. -cover of bracken is less than 20% -an absence of invasive non-native species Site is within land designated as a Green Wedge, hence the strategic significance. The majority of the grassland is to be retained within proposals.
Mixed Scrub	0.1148 ha/ 0.53 units	Poor	Mixed scrub along the southeast boundary of the site. Condition has been assessed as Poor, as the habitat achieves the following criteria in the conditions assessment: -there is not a good age range: mostly mature shrubs. -there is a presence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species make up more than 5% of ground cover: common nettle and cleavers in the understorey. -the scrub does not have well-developed edges with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s): there is some tall grass to the south but shorter grassland and mound elsewhere. -there are no clearings, glades or rides present within the scrub, providing sheltered edges. Site is within land designated as a Green Wedge, hence the strategic significance. A small area of mixed scrub is to be lost within the proposals.

UK Hab Description	Area (hectares) / Baseline Biodiversity Units	Condition Assessment	Habitat Condition Comments
Ponds (non-priority habitat)	0.1531 ha / 1.41 units	Moderate	Two ponds in the north of the site. Each has been condition assessed separately as Moderate, as they achieve 6 and 7 criteria in the conditions assessment. Site is within land designated as a Green Wedge, hence the strategic significance. Both ponds are to be retained within the proposals.
Sparsely vegetated land - Ruderal/Ephemeral	0.0496 ha / 0.11 units	Poor	Sparsely vegetated land along the east boundary of the site. Under UKHabs classification, this area more closely falls under other neutral grassland (g3c, secondary code 17). However, as the area was abundant with cleavers and nettles, with occasional cow parsley and common nipplewort, it was determined that assessing it under ruderal/ephemeral would be a better indication of value. Condition has been assessed as Poor, as the habitat achieves the following criteria in the conditions assessment: -there is not a varied vegetation structure that can provide opportunities for insects, birds and bats to live and breed. A single ecotone (herbs) account for more than 80% of the total habitat area. -there is not a diverse range of flowering plant species that can provide nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife. -invasive non-native species (Schedule 9 of WCA) are completely absent. Site is within land designated as a Green Wedge, hence the strategic significance. This area is to be lost within the proposals.
Artificial unvegetated, unsealed surface	0.124 ha / 0 units	N/A - Other	Artificial unvegetated, unsealed surface located in the north east of the site, and as strip of land from the northern boundary across the site to the western boundary. Condition assessment not required. Not counted as strategically significant in terms of biodiversity. These areas are to be lost within current proposals.
Lowland mixed deciduous woodland	0.0461 ha / 0.64	Moderate	Mixed woodlands in the northeast corner of the site. Condition has been assessed as Moderate, as the habitat achieves the following criteria in the conditions assessment: -two age of present: mature and saplings -no significant browsing damage evidence -no invasive species present unless blue bells are not native, passed as a precaution -five or more native trees or shrub across woodland

UK Hab Description	Area (hectares) / Baseline Biodiversity Units	Condition Assessment	Habitat Condition Comments
			-across the woodland, >80% of canopy trees and >80% of understory shrubs are native tree or shrub species. Only sycamore is non-native -10-20% of woodland has areas of temporary open space, unless woodland is <10ha in which lower threshold of 10% does not apply -some areas in the woodland are more open, without shrubs/ trees but still covered by canopy and do not meet 10m wide criteria -tree mortality <10%, no pests or diseases, no crown dieback -ancient woodland flora indicators present -bluebell's present but unsure if native. Given full marks as a precaution -two storey vertical woodland structure across all survey plots -no veteran trees present in woodland -no standing deadwood, large dead branches/ stems and stumps -less than 1 hectare in total of nutrient enrichment across woodland area and/or less than 20% of woodland area has damaged ground. Some litter (chairs) at northern extent Site is within land designated as a Green Wedge, hence the strategic significance. A small section of woodland is to be removed as part of the proposals.
Urban Tree	0.0041 ha / 0.06 units	Good	One urban tree located in the northwest corner of the site. Condition has been assessed as Good, as the habitat achieves 5 out of a possible 6 criteria. Site is within land designated as a Green Wedge, hence the strategic significance. The tree is expected to be retained within proposals.

Figure 5: Biodiversity Impact Assessment Headline Results

Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.46
	Hedgerow units	0.00
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	8.83%
	Hedgerow units	0.00%
	River units	0.00%



Key

Red Line Boundary

Artificial unvegetated, unsealed surface

Lowland mixed deciduous woodland

Mixed scrub

Modified grassland

Ponds (Non- Priority Habitat)

Ruderal/Ephemeral

Ditches

Native Hedgerow with trees (h2NE4)

Native Hedgerow with trees
- Associated with bank or ditch (h2NE8)

Native Species Rich Hedgerow
- Associated with bank or ditch (h2NE7)

Existing Tree

Title: BIA Baseline Habitat Plan (BNG 3.1)

Project: Inglenook Farm, Barwell

Plan Ref: may23tov-Layout1

Client: Opes MRF 2013 Ltd

Date: 31/05/2023

Fig:

Author: YE

A4 Scale: 1:1200

ID: RSE_6764_BIAB_0523_V3R2

EPSG:27700 OSGB36 / British National Grid



Key

Red Line Boundary

Developed land; sealed surface

Lowland mixed deciduous woodland

Mixed scrub

Modified grassland

Ponds (Non- Priority Habitat)

Ditches

Native Hedgerow with trees (h2NE4)

Native Hedgerow with trees
- Associated with bank or ditch (h2NE8)

Native Species Rich Hedgerow
- Associated with bank or ditch (h2NE7)

Proposed Small



Title: BIA Proposed Habitat Plan (BNG 3.1)

Project: Inglenook Farm, Barwell

Plan Ref: may23tov-Layout1

Client: Opes MRF 2013 Ltd

Date: 31/05/2023

Fig:

Author: YE

A4 Scale: 1:1200

ID: RSE_6764_BIAP_0523_V3R2

EPSG:27700 OSGB36 / British National Grid