



**Brindle
&Green**

Ecological Impact Assessment

Land to the North of Leicester Road, Markfield,
Leicestershire

Report Reference: BG22.188.4 REV1

November 2023



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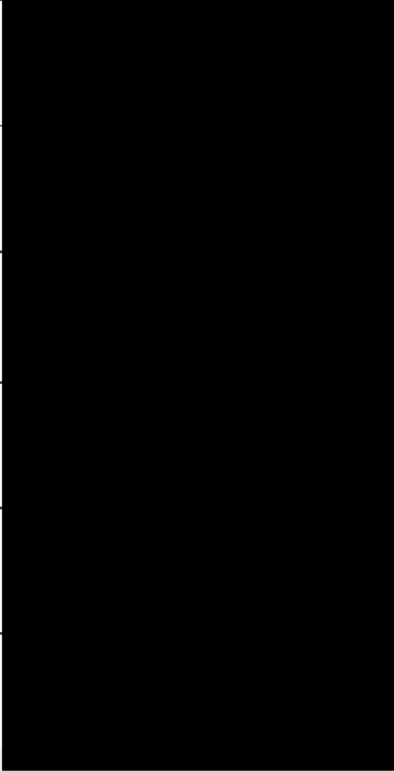
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1 Summary

- 1.1.1 The production of an Ecological Impact Assessment (EcIA) is considered the best practice methodology (by the Chartered Institute of Ecology and Environmental Management (CIEEM)) for documenting all ecological issues associated with proposed development and supersedes the more out of date method of preparing individual reports for differing species and habitats. The aim is to consider any impacts alongside each other, to provide a coordinated solution when considering mitigation, and to set out clear and well-defined enhancement prescriptions that work in line with the plans for development. Through assessing the scale of impact (Page 18) the aim is to result in a scheme that is assessed as making a positive contribution to biodiversity at a local level at the very least.
- 1.1.2 This EcIA draws on the results of the Preliminary Ecological Appraisal (PEA) undertaken and reported upon previously (BG22.188 June 2023) and adds the results of additional protected species and habitat surveys that have been completed since. In the case of this site, the PEA identified habitats suitable for supporting grassland communities of Local Wildlife Site (LWS) status, foraging and commuting bats, roosting bats, badgers, and reptiles, as well as considering the usual impacts associated with other species of principle importance listed under section 41 of The Natural Environment and Rural Communities (NERC) Act 2006.
- 1.1.3 Further protected species surveys undertaken during the active season of 2023 failed to identify the presence of reptiles or badgers within the application boundary.
- 1.1.4 A moderate level of bat activity was recorded within the site, with activity predominantly located along the north-western site boundary, and the neutral grassland in the southern extent of the site.
- 1.1.5 The grassland parcel in the southern tip of the site is considered to qualify for LWS status based on the grassland community identified during the further survey work. This area will be retained and suitably protected from disturbance through the implementation of a Biodiversity Protection Zone delineated by fencing and appropriate signage to prevent direct or indirect impacts through construction.
- 1.1.6 This report was compiled following the revised Guidelines for EcIA in the UK and Ireland (CIEEM, 2018) and highlights and addresses the following ecological constraints (Table 1)

Table 1: Summary of ecological constraint assessment for Leicester Road, Markfield and proposed mitigation.

Ecological constraint	Value	Effect	Significance prior to mitigation	Mitigation / precautionary measures	Significance of residual effect	Securing mitigation
Habitat	District	Loss of neutral grassland habitat of moderate ecological value	Certain Negative (Significant)	Retention of species-rich grassland patches managed under a Landscape and Ecological Management Plan (LEMP). Reseeding grassland creation to be managed under LEMP. Construction and Environmental Management Plan (CEMP) to be implemented during construction to safeguard the retained grassland, through the use of fencing and appropriate machinery storage. Offsetting net gain through local grassland bank scheme to deliver no net loss.	Neutral (Not Significant)	Mitigation secured through planning condition for LEMP and CEMP Off-site net gain offsetting of habitat units to be secured via s106 agreement
Designated Sites	Local	Indirect effects of pollution discharge into waterway	Likely Negative (Significant)	Buffer zone of a minimum 10m from the onsite ditch LEMP and CEMP	Neutral (Not Significant)	Mitigation secured through planning condition
Breeding Birds	Local	Disturbance / Injury to individuals Loss of breeding habitat	Likely Negative (Not Significant)	Pre works check. Demolition of buildings and clearance of vegetation outside of breeding season.	Neutral (Not Significant)	Mitigation / precautionary measures secured through planning condition
Roosting Bats	Site	Disturbance to individuals through increased artificial lighting post construction	Likely Negative (Not Significant)	Retention of important foraging areas (southern grassland parcel and mature boundary features) Sensitive lighting scheme	Neutral (Not Significant)	Mitigation/precautionary measures secured through planning condition

Ecological constraint	Value	Effect	Significance prior to mitigation	Mitigation / precautionary measures	Significance of residual effect	Securing mitigation
Foraging and Commuting Bats	Local	Disturbance / loss of foraging and commuting habitat	Likely Negative (Significant)	Retention of important foraging areas (southern grassland parcel and mature boundary features) Sensitive lighting scheme	Neutral (Not Significant)	Mitigation/precautionary measures secured through planning condition
Badger	Local	Injury to individual	Negative (Not Significant)	Pre-works walkover assessment Reasonable Avoidance Measures (RAMs)	Neutral (Not Significant)	Mitigation/precautionary measures secured through planning condition
Reptile	Local	Injury to individual, Loss of foraging habitat	Unlikely Negative (Not Significant)	Reasonable Avoidance Measures (RAMs) during site clearance phase	Neutral (Not Significant)	Mitigation/precautionary measures secured through planning condition
MSPI Hedgehog	Local	Disturbance / injury to individuals	Likely Negative (Not Significant)	Reasonable Avoidance Measures (RAMs) during site clearance phase Maintenance of connective habitat	Neutral (Not Significant)	Mitigation secured through planning condition

2 Introduction

2.1 Context

2.1.1 Brindle and Green Ltd were commissioned by Charterpoint (LE67) Ltd. to provide an Ecological Impact Assessment (EcIA) at Land to the north of Leicester Road, Markfield (Figure 1). This EcIA report documents the constraints identified within the Preliminary Ecological Appraisal undertaken by Brindle and Green Ltd (BG22.188, June 2023) and adds the results of additional protected species and habitat surveys undertaken during 2023. The EcIA includes the following sections:

- Baseline Ecological Conditions
- Assessment of effects and mitigation measures
- Enhancement strategy
- Summary of residual effects

2.1.2 The application site is approximately 1.1ha in extent and is situated in a suburban area on the western extent of the village of Markfield, north-west Leicestershire. The site is dominated by semi-improved grassland bordered by species rich native hedgerows and broadleaved woodland. The gently sloping semi-improved grassland in the centre of the site falls away to an offsite belt of broadleaved woodland bounding the A50 beyond. A mature common oak (*Quercus robur*) lies centrally within the southern extent of the site, beneath which flows a wet ditch that runs north-east to the offsite woodland. A smaller parcel of semi-improved grassland lies within the south-east corner of the site.

2.1.3 The site is the subject of a full planning application for site clearance to facilitate the development of a 72 bed care home, car park, access and associated soft landscaping. Design plans are provided within Appendix 4 of this report.

2.1.4 This report prescribes additional mitigation measures during construction and post-construction phases to avoid, reduce or reverse adverse impacts and prevent biodiversity loss.

2.1.5 Results presented within this report have been prepared by an experienced ecologist and are therefore the view of Brindle and Green Limited. The survey is based on information provided by our client, the development proposals, and the results of the desk study and our survey of the site.

3 Methodology

3.1 Desk Study

- 3.1.1 Table 2 below lists organisations and resources used as part of the desk study process. Data regarding any known statutory or non-statutory sites in addition to any records for protected species were requested from the following sources:

Table 2: Ecological Data Resources

Consultant	Requested Data	Search Radius	Date Requested
Local Ecological Records Centre <i>Leicestershire and Rutland Environmental Record Centre (LRERC)</i>	Protected and notable species records Local, National and International Site Designations	2km	26/04/2023
MAGIC Maps <i>(Multi-Agency Geographic Information for the Countryside)</i>	National and International Site Designations Granted EPS Development Licences Priority Habitat Inventory	2km	24/04/2023
Brindle & Green Ltd.	Preliminary Ecological Appraisal (BG23.188 June 2023)	2km	June 2023

3.2 Extended Phase 1 Habitat Survey

- 3.2.1 A Phase 1 habitat survey was undertaken following survey guidance (JNCC 2007) to establish the presence and distribution of habitat types within the site and potential ecological constraints to development. A Phase 1 Habitat Map was produced (Appendix 1) and where additional details were required Target Notes have been provided (Appendix 2). A plant species list (Appendix 2) summarising all plants identified on site was produced during the survey and all scientific nomenclature was produced according to Stace (2010).
- 3.2.2 This survey was extended to note the potential for habitats on-site to support protected and/or notable species and for evidence of any such species. The habitats on site were assessed for their suitability to support protected species in relation to the habitat types found at the site. Any incidental sightings of field signs were noted at the time of survey. Where evidence of, or the confirmed presence of a protected species was identified, further, species specific surveys are recommended to ensure that the presence or otherwise of a legally protected species is fully

considered prior to the determination of any planning approval or to guide an EPS development licence.

3.2.3 Legislation, guidance and methodology for species relevant to this site are presented in full within Appendix 3 of this report.

3.2.4 The survey was carried out by Victoria Halford BSc (Hons), Natural England Great Crested Newt Licence (2022-10210-CL08-GCN), Consultant Ecologist and Jade Bateman MSc (Hons), QCIEEM, Natural England Bat Licence Class 1 (2023-11128-CL17-BAT), Natural England Great Crested Newt Licence (2022-10204-CL08-GCN), Assistant Ecologist.

3.2.5 The survey was overseen by Lucinda Sweet PhD, MCIEEM, Natural England Bat Licence Class 2 (2019-39122-CLS-CLS), Great Crested Newt licence (2016-22852-CLS-CLS), Technical Director.

3.3 Phase 2 Surveys

3.3.1 Within the Preliminary Ecological Appraisal (PEA), The following ecological phase 2 surveys have been recommended to allow a full impact assessment on the ecological value of the application site.

- Botanical Survey
- Bat Activity Survey
- Reptile Survey
- Badger Survey

Botanical Survey

3.3.2 The habitat survey was conducted following the National Vegetation Classification (NVC) system; a method for classifying natural habitat types according to the vegetation the community supports.

3.3.3 The NVC provides a standardised system that ecologists can use to describe plant communities allowing national comparisons and discussions. NVC can also evaluate the sites potential value for nature conservation as well as being a guide for future management.

3.3.4 All habitat types are described at length within the five volumes of British Plant communities (Rodwell, 1991a, b, 1992), therefore only a summary of the specific findings on site have been included within the report.

- 3.3.5 The surveys were undertaken during the accepted optimal season for vegetation survey in lowland grassland habitats (April – August). The site was visited on two occasions, 27/06/2023 and 15/08/2023 by Kinzie Watts MSc (Hons), Botanist and Ecology Team Leader and Victoria Consultant Ecologist.
- 3.3.6 Full species lists and the DAFOR Scale of species encountered on site can be found within Appendix 8A.

Bat Activity Survey

- 3.3.7 Bat activity surveys were carried out following the guidelines outlined within Natural England's Bat Mitigation Guidelines (Mitchell-Jones, 2004) and the Bat Conservation Trust Good Practice Guidelines (Colins, 2016). Three dusk transect surveys were undertaken, one per season, June and September 2023. A single transect route was walked per survey.
- 3.3.8 Two surveyors walked a pre-planned route at a constant speed along the linear features of the application site, in order to collect bat activity data. Surveyors stopped at predetermined point count locations along the transect where activity was recorded for a 5-minute period. If a bat crossed during the transect, it was recorded, and the direction of activity recorded before continuing the transect. Surveyors were equipped an Echo Meter Touch detector connected to an iPad. Where possible, species were identified using information from visual and audio cues, all sonograms were recorded on to the iPad and were analysed using Analook software to confirm species identification.
- 3.3.9 A single remote bat detector (SM4) was positioned in within the short section of hedgerow along the site frontage that will be removed as part of the scheme to facilitate site access. The static was deployed in order to collect bat activity data while unattended, over a prolonged period of time. The detector was set to activate 15 minutes prior to sunset and de-activate 15 minutes following sunrise. An automated survey was carried out for a 5-day period on two occasions (May and June). The SM4 data aims to provide context to the transect surveys carried out each month. To this purpose, five consecutive nights worth of SM4 data were collected and analysed, where possible including each of the nights on which transect surveys were undertaken.
- 3.3.10 The dusk transects surveys began at sunset and lasted for up to two hours following sunset. Three surveys were conducted on 20/06/2023, 07/08/2023 and 19/09/2023 by Kerry Baker MSc, Senior Ecologist; Holly Fowler BSc (Hons), Consultant Ecologist; Matthew Norris BSc (Hons.)

MRSB, Consultant Ecologist; Kinzie Watts MSc (Hons) Ecology Team Leader; Emily Murchison MSc, Graduate Ecologist; and Rebecca Wilson, Trained Seasonal Ecologist.

3.3.11 Survey conditions, and results can be found within Appendix 8.

Reptile Survey

3.3.12 A seven-visit, presence or likely absence survey was undertaken during suitable conditions between May – July 2023. Reptiles are active between March and October with optimal survey conditions during April and May or September. Surveys were undertaken during suitable weather conditions when the air temperature was between 9 - 18°C (Froglife, 1999).

3.3.13 Reptile refugia (0.5m x 0.5m) constructed from roofing felt were used to observe basking and sheltering reptiles. Refugia were laid at a density exceeding the recommended 5 - 10 per hectare of suitable habitat (Froglife, 1999).

3.3.14 Fifty mats were laid on 22/03/2019 and were left to embed for a minimum period of two weeks, with a series of seven visits undertaken on: 05/05/2023, 16/05/2023, 24/05/2023, 26/05/2023, 30/05/2023, 01/06/2023 and 06/07/2023 by Holly Fowler BSc (Hons), Consultant Ecologist; Laura Saunders MSc (Hons.), Assistant Ecologist; Jade Bateman MSc (Hons), QCIEEM, Natural England Bat Licence Class 1 (2023-11128-CL17-BAT), Natural England Great Crested Newt Licence (2022-10204-CL08-GCN), Assistant Ecologist; Lloyd Wyatt QualCIEEM, Assistant Ecologist; and Sarah Jennison BSc (Hons), Graduate Ecologist.

3.3.15 Survey conditions, and a refugia map can be found within Appendix 8.

Badger Survey

3.3.16 The badger survey was carried out in accordance with guidelines approved by the Chartered Institute of Ecology and Environmental Management, including: Best Practice Guidance - Badger Surveys, Scottish Natural Heritage (2003), Inverness Badger Survey 2003. Commissioned Report No. 096. and Surveying Badgers, The Mammal Society, Harris S, Cresswell P and Jefferies D (1989).

3.3.17 Legislation relating to Badgers can be found in Appendix 5 of this report.

3.3.18 Evidence of badger activity, including faeces, paths, scratching, snuffle holes, hair or footprints, was searched for along all the boundary features within the application site, within the woodland and along the banks of Cauldwell Brook situated along the western boundary of the application site.

Identification of Setts

3.3.19 Any holes discovered were categorised into sett types using the following criteria, quoted from Natural England guidance (NE, 2007):

- Main Setts usually appear well-used, well established and have a large number of holes. Big spoil heaps, often with piles of old bedding are located outside. Main setts tend to have well-worn paths between the sett and foraging areas, and between sett holes. They are generally considered to be breeding setts and are often in use all year round. A social group of badgers will only have one main sett within their territory.
- Annexe Setts are always close to a main sett and are usually connected by one or more obvious well-worn paths. They consist of several holes but are not necessarily in use the whole time, even if the main sett is very active. Should a second litter of cubs be born within the social group, they are likely to be raised within an annexe sett.
- Subsidiary Setts often these setts have very few holes, are usually at least 50m from a main sett and do not have an obvious path connecting them with another sett. Subsidiary setts are not continuously active.
- Outlying Setts usually comprising one or two holes with very little spoil outside (thus indicating that the tunnel system underground is not extensive), outlying setts have no obvious path connecting them with another sett and are used only sporadically.

3.3.20 Indication of the Level of Activity at each Sett:

- Well used sett entrances contain no debris or vegetation, are obviously regularly used and often show signs of having been recently excavated.
- Partially used setts are those with entrances not in regular use and which may have debris (twigs, leaves, moss etc) around the entrance. However, they could potentially be used regularly in the future with minimal clearance necessary.

- Disused setts show signs of not having been in use for a considerable period of time and would not be used again without extensive clearance by a badger.

3.3.21 A single day-time walkover survey was undertaken on 26/07/2023 by Joe Hall BSc (Hons), Assistant Ecologist.

3.4 Limitations

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

3.4.2 The initial assessment was undertaken outside of the optimal survey period for phase 1 survey. Certain habitat types such as improved grassland can be surveyed at any time of the year where the species that they comprise vary very little. The grassland composition recorded during the PEA was indicative of elevated ecological value and was subject to a National Vegetation Classification (NVC) survey, carried out within peak season (April – August) in order to accurately assess the community value of the grassland on site. It is therefore considered that the limitation of carrying out the PEA during the sub-optimal season is overcome, and an accurate assessment of the botanical value of the site has been made.

3.4.3 Static detector deployment was carried out in June, August and October, with a single remote bat detector (SM4) positioned within the short section of hedgerow along the site frontage that will be removed as part of the scheme to facilitate site access. The static was to collect bat activity data while unattended, over a prolonged period. The static detector for the summer deployment during August 2023 failed and no data was recorded. However, the activity from the other two deployments, in addition to the information gathered during the walked transect surveys, are considered to provide a robust conclusion for the value of the site for local bats. The failure of the summer static deployment is not considered to negatively affect the conclusions drawn.

3.5 Report Lifespan

3.5.1 Given the transient nature of the subject we would consider the survey results contained to be accurate for 1 year.

3.6 Evaluation Methodology

- 3.6.1 The site and protected and notable species within the zone of influence were classified into one of the following 6 groups (Table 2) following the Guidelines for Ecological Impact Assessment (CIEEM, 2016), depending on the size, rarity, diversity and fragility for a species population. The evaluation also considers County and nationally prepared documents such as LBAP and Red Data books.

Ecological Impact Assessment

- 3.6.2 The Ecological impacts of a development were assessed using data collected from historic records and current field surveys to and were categorised following EcIA guidelines (CIEEM, 2016) as follows:

- Highlight Protected or notable species which could be impacted as part of the development (Section 5).
- Determine the severity of the impact and effect without specific mitigation measures (Section 6).
- Outline a mitigation strategy highlighting areas of potential environmental improvement, which upon implementation aims to avoid or reduce negative impacts and effects (Section 6).
- Assess the feasibility and likelihood of success of the mitigation strategy (Section 7).
- Assess the residual impact of the development assessing that the mitigation has been successfully implemented and all prescriptions have been implemented (Section 7).

Classifying the extent of impacts and effects

- 3.6.3 The extent of impacts and effects need to be described in an unambiguous, consistent manner. The direction of change 'Positive' or 'Negative' should be assessed in relation to the overall biodiversity outcome, and should consider the duration, timing and reversibility of the constraint and be classified into one of the following five categories:

- | | |
|----------------------------------|--|
| i) Positive (Significant) | Activity will create a beneficial effect over a long term, created a valued ecological feature |
|----------------------------------|--|

- ii) **Positive (Not Significant)** Activity will create a beneficial effect without markedly improving the conservation status
- iii) **Neutral (Not Significant)** Effects or neutral or no net change will occur
- iv) **Negative (Not Significant)** Negative effect without causing long-term irreversible damage
- v) **Negative (Significant)** Significant Negative effect including loss or long-term irreversible damage to integrity or status of a valued ecological feature

Table 3: Definitions of each of the six evaluation brackets, indicating the importance of each habitat type and an example of their possible habitat status

Evaluation Value	Example of habitat or species
International	An internationally designated site or candidate site, including habitat or species included within Special Protection Areas (SPA) / Special Areas of Conservation (SAC), Ramsar Sites, listed under Annex 1 of the Habitats Directive.
National	Sites designated at UK level, e.g. Sites of Special Scientific Interest (SSSI), supporting species considered nationally threatened or rare. A regularly occurring regionally or county significant population/number of any nationally important species A feature identified as of critical importance within Section 41 of the NERC Act (2006).
Regional	Key Habitat type included within BAP. A regularly occurring, locally significant number of a regionally important species.
County	Designated sites, such as Sites of Biological Importance (SBIs) or viable habitat / species populations of value at a county level (LBAP).
District	District level designated sites, such as Local Wildlife Sites (LWS) or habitats / species populations of value at a district (Which have features qualifying for LWS status). Sites/features that are scarce within the district or which appreciably enrich the district habitat resource.
Local / Site	Habitats or species populations of value in a local (i.e. within ~ 5km of the site) context. Habitats of poor to moderate biological diversity e.g. established conifer plantations, species poor hedgerows and un-intensively managed grassland which supports species which are common to the local area and whose loss can be easily mitigated.

4 Site Context

4.1 Site Description

- 4.1.1 The application site can be found at SK 49472 10272, positioned to the north of Markfield village, Leicestershire. The site comprises a large field supporting semi-improved grassland and two disused stable buildings, bound by species rich native hedgerows and broadleaved deciduous woodland on the northern boundary. Beyond the belt of woodland lies the A50, which forms a barrier to terrestrial species dispersal between the wider landscape, supporting arable land, mature hedgerows and parcels of woodland, and the onsite habitats.
- 4.1.2 Using OS Mapping, a single pond was identified within the application site (Figure 1). However, during the site visit this was confirmed as a wet ditch, which contained water flowing slowly north-east. The stream flows off-site, beneath the A50, which is considered to restrict connectivity for species dispersal.
- 4.1.3 The north-western site boundary abuts pastoral grazing land bound by mature hedgerows and treelines, considered to have good connectivity to the onsite habitats. Markfield Cemetery lies approx. 30m south of the site, beyond Leicester Road, supporting large mature trees and grassland habitats, considered to have good connectivity to the on-site habitats.

4.2 Zone of Influence

- 4.2.1 The zone of influence is used to describe the geographic extent of potential impacts of a proposed development. This is determined by the type of development proposed in relation to individual species and described within each of the species assessments within section 5 of this report. Maps, aerial photographs, historic data records and field survey results were examined to assess the relationship of the location and its connection to the surrounding environment and habitats beyond the site boundaries.



Figure 1: OS map of the project site and surrounding area. Red line boundary depicts application site.

5 Baseline Ecological Conditions

5.1 Desk Study

Designated Sites

- 5.1.1 The site was subjected to a search for designated sites within a 2km radius of the site using data supplied by the Local Records Centre (Leicestershire and Rutland Environmental Records Centre (LRERC)) and the online desk-based resource MAGIC.
- 5.1.2 The data supplied by NBGRC was received on the 05/05/2023 and is summarised within Table 4. The search revealed 2 Statutory and 50 Non-statutory sites within a 2km radius of the site. The site also lies within the Impact Risk Zone (IRZ) for Ulverscroft Valley SSSI. The five closest non-statutory sites are detailed below in Table 4.
- 5.1.3 A search of the online resource Magic Maps found no additional sites with Statutory designations within the 2km radius search.

Table 4: Summary of Designated Sites within a 2km radius of the application site

Site Name	Grid Ref	Status	Reason for Designation	Distance from site
Ulverscroft Valley	SK 497 123	Site of Special Scientific Interest (SSSI)	Designated for its grasslands, heath, woodland and wetlands.	0.88km NE
Cliffe Hill Quarry	SK 474 107	SSSI	Designated for its geological features.	1.6km W
Cover Cloud Field	SK497104	Local Wildlife Site (LWS)	Designated for its grasslands.	0.09km NE
Home Farm	SK496110	LWS	Designated for its grasslands.	0.11km N
Cover Cloud Wood	SK498102	LWS	Designated for its ancient semi-natural woodland.	0.16km E
Field north of Leicester Road	SK491104	LWS	Designated for its wet grasslands.	0.29km W
Field south of Ulverscroft Wood	SK490108	LWS	Designated for its mesotrophic grassland with spring-fed flush.	0.53km NW

Evaluation

- 5.1.4 Nearby statutory designated sites are considered to have 'National value' following evaluation (
- 5.1.5 Table 3), with two SSSI's identified within 2km of the application site. Non-statutory designated sites are considered to have 'County' value following evaluation (Table 3).
- 5.1.6 Direct impacts on nearby designated sites as a result of the proposed development are considered unlikely. However, the application site falls within an Impact Risk Zone (IRZ) for Ulverscroft Valley SSSI, located approx. 0.9km north-east of the site. The IRZ pertains to residential developments. As such, the Local Planning Authority must consult Natural England to determine whether mitigation measures pertaining to the SSSI are required.
- 5.1.7 Whilst the extent of the development proposals is contained within the application boundary, the wet ditch onsite flows north-east, below the A50, providing connectivity to Cover Cloud Field LWS and Cover Cloud Wood LWS which support high quality neutral grassland and ancient woodland respectively. Consequently, nearby designated sites could be indirectly impacted as a result of water pollution, silting and leaching as a result of the proposed ground clearance and development.

Protected Species Assessment

- 5.1.8 Data supplied by LRERC also included records of protected species. Full datasets are available upon request. A summary of the closest or most relevant records can be seen in Table 5 below.

Table 5: Summary of relevant protected and priority species records within the past 10 years

Species	Grid ref.	Date	Description
Birds			
Fieldfare (<i>Turdus pilaris</i>)	SK493101	2020	Four records, the closest 0.17km from the site.
Red kite (<i>Milvus milvus</i>)	SK489100	2021	Four records, the closest 0.57km from the site.
Redwing (<i>Turdus iliacus</i>)	SK490113	2020	Seven records, the closest 1.16km from the site.
Bats			
Brown long-eared bat (<i>Plecotus auritus</i>)	SK4992510380	2019	48 records, the closest 0.47km from the site.
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	SK4978710111	2018	667 records, the closest 0.35km from the site.
Daubenton's bat	SK480101	2019	Eight records, the closest 1.43km from the site.

Species	Grid ref.	Date	Description
<i>(Myotis daubentonii)</i>			
Leisler's bat <i>(Nyctalus leisleri)</i>	SK5022310940	2019	24 records, the closest 1.01km from the site.
Nathusius's pipistrelle <i>(Pipistrellus nathusii)</i>	SK5024810964	2020	Seven records, the closest 1.04km from the site.
Natterer's bat <i>(Myotis nattereri)</i>	SK496117	2019	Two records, the closest 1.49km from the site.
Noctule <i>(Nyctalus noctula)</i>	SK49951026	2019	55 records, the closest 0.48km from the site.
Serotine <i>(Eptesicus serotinus)</i>	SK479103	2020	Three records, the closest 1.53km from the site.
Soprano pipistrelle <i>(Pipistrellus pygmaeus)</i>	SK4992510380	2020	99 records, the closest 0.47km from the site.
Whiskered bat <i>(Myotis mystacinus)</i>	SK480101	2019	Three records, the closest 1.43km from the site.
Other Mammals			
Badger <i>(Meles meles)</i>	Confidential		
Otter <i>(Lutra lutra)</i>	SK491113	2020	Three records, the closest 1.13km from the site.
Reptiles			
Common lizard <i>(Zootoca vivipara)</i>	SK496117	2022	Four records, the closest 1.49km from the site.
Slow worm <i>(Anguis fragilis)</i>	SK497117	2017	Seven records, the closest 1.51km from the site.
Amphibians			
Great crested newt <i>(Triturus cristatus)</i>	SK496092	2015	20 records, the closest 1.04km from the site.
Palmate newt <i>(Lissotriton helveticus)</i>	SK499108	2015	Four records, the closest 0.75km from the site.
Crustacean			
White-clawed crayfish <i>(Austropotamobius pallipes)</i>	SK4853310297	2021	Six records, the closest 0.94km from the site.

5.1.9 Magic maps revealed five granted EPS licences within 2km of the site for the roosts of common pipistrelle (*Pipistrellus pipistrellus*), brown long-eared bat (*Plecotus auritus*), whiskered bat (*Myotis mystacinus*), and Natterer's bat (*Myotis nattereri*). Licence 2015-15751-EPS-MIT had an additional four extensions. Further details of these licences can be found in Table 6.

Table 6: Summary of granted EPS Development Licences within 2km of the application site

Species	Licence number & Description	Approx. distance from site	Licence start/finish date
Common pipistrelle	2015-7909-EPS-MIT – Allows the destruction of a resting place.	0.85km NE	2015 - 2020
Common pipistrelle, Brown long-eared bat	2014-4859-EPS-MIT – Allows the damage and destruction of both a breeding site and a resting place.	1.34km N	2014 - 2016
Common pipistrelle, Brown long-eared bat, Whiskered bat	EPSM2012-5160 – Allows the destruction of a breeding site and the destruction of a resting place.	1.34km N	2013 - 2018
Common pipistrelle, Brown long-eared bat, Natterer's bat	2015-14867-EPS-MIT – Specific details not provided.	1.74km NE	2015 - 2016
Common pipistrelle, Brown long-eared bat, Natterer's bat	2015-15751-EPS-MIT – Allows the damage and destruction of a resting place and the destruction of a breeding site.	1.94km N	2015 - 2020
Common pipistrelle, Brown long-eared bat, Natterer's bat	2015-15751-EPS-MIT-1 – Allows the damage and destruction of a resting place and the destruction of a breeding site.	1.94km N	2016 - 2020
Common pipistrelle, Brown long-eared bat, Natterer's bat	2015-15751-EPS-MIT-2 – Allows the damage and destruction of a resting place and the destruction of a breeding site.	1.94km N	2017 - 2020
Common pipistrelle, Brown long-eared bat, Natterer's bat	2015-15751-EPS-MIT-3 – Allows the damage and destruction of a resting place and the destruction of a breeding site.	1.94km N	2018 - 2020
Common pipistrelle, Brown long-eared bat, Natterer's bat	2015-15751-EPS-MIT-4 – Allows the damage and destruction of a resting place and the destruction of a breeding site.	1.94km N	2019 - 2021

5.2 Extended Phase One Habitat Survey

- 5.2.1 A Phase 1 Habitat Survey Map is presented in Appendix 1 of this report. The habitat descriptions below should be read in conjunction with the Phase 1 plan and the Target Notes in Appendix 2.
- 5.2.2 A plant species list for those plants identified during the field survey is provided in the Target notes within Appendix 2.
- 5.2.3 Table 7 below provides a list of habitat types present on site along with their inclusion (or otherwise) as a National and / or Local Habitat of Principle Importance (HPI) (Previously referred to as Biodiversity Action Plan (BAP)).

Table 7: JNCC Habitat Types found on site and inclusion within UK BAP / HPI

Habitat Type	N HPI	L HPI	N/A
Neutral grassland	✓	✓	
Native species-rich hedgerows	✓	✓	
Broad-leaved woodland		✓	
Dense scrub			✓
Scattered trees			✓
Wet ditch		✓	
Bare ground			✓
Buildings			✓

Neutral Grassland

- 5.2.4 The site was dominated by grassland covering 1.05ha of the redline boundary (Figure 2). The grassland had been intensely grazed by horses until 2021 when grazing ceased. The sward height was approx. 50cm on average and was dominated by Yorkshire fog (*Holcus lanatus*), Cock's foot (*Dactylus glomerata*), and perennial rye (*Lolium perenne*). Abundant grassland species included Fescue sp. (*Festuca sp.*), crested dog's tail (*Cynosurus cristatus*), occasional species recorded included timothy (*Phleum pratense*), false oat grass (*Arrhenatherum elatius*), and sweet vernal (*Arrhenatherum odoratum*). Abundant herb species including white clover (*Trifolium repens*), broad-leaved plantain (*Plantago major*), creeping buttercup (*Ranunculus repens*), meadow buttercup (*Ranunculus acris*), occasional sorrel (*Rumex acetosa*), knapweed (*Centaurea nigra*), soft rush (*Juncus effusus*), bird's-foot trefoil (*Lotus corniculatus*), silverweed (*Potentilla anserina*), creeping cinquefoil (*Potentilla reptans*), burnet (*Sanguisorba sp.*) and hawkweed sp. (*Hieracium sp.*). There was an average of nine species per m². Ruderal species were also recorded within the sward, including abundant dandelion (*Taraxacum officinale*), common nettle (*Urtica dioica*), and cow parsley (*Anthriscus sylvestris*), however these were recorded in lower densities.
- 5.2.5 The National Vegetation Classification (NVC) surveys highlighted that the quality of the grassland varied across the site. The southern tip of the site was considered to qualify as a potential Local Wildlife Site (pLWS), based on the number and abundance of indicator species highlighted within the Leicestershire and Rutland Selection Criteria Document, outlined in Appendix 8A.



Figure 2: Semi-improved neutral grassland that dominates the site

Native Species-Rich Hedgerows

- 5.2.6 The southern and north-western boundaries of the site were denoted by mature hedgerows (Figure 3). Both hedgerows were of similar species composition, with species present including hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), hazel (*Corylus avellana*), field maple (*Acer campestre*), ash (*Fraxinus excelsior*), holly (*Ilex aquifolium*), rose (*Rosa sp.*), oak (*Quercus sp.*). Ground flora recorded include common nettle (*Urtica dioica*), broad leaved dock (*Rumex obtusifolius*), cow parsley, cleavers (*Galium aparine*), lords and ladies (*Arum maculatum*), creeping thistle (*Cirsium arvense*), and ribwort plantain (*Plantago lanceolata*). The hedgerows had no signs of recent management and were approx. 4-6m tall x 2-3m wide. The hedgerow on the southern boundary was situated above a drainage ditch that ran along the length of the boundary. The ditch was less than 1m deep and approx. 1m wide and contained water at the time of survey, approx. 10cm deep. The ditch was supported vegetation identified as part of the ground flora associated with the hedgerow.



Figure 3: Native species-rich hedgerow on the southern boundary of the site

Broad-leaved woodland

- 5.2.7 The north-eastern boundary of the site, approx. 0.05ha, supported a woodland belt as the vegetation cover was approx. 10m in width (Figure 4). Species composition included hawthorn, rose sp., ash, oak, holly and field maple. Ground flora species included species from the neighbouring grassland, as well as broad leaved dock (*Rumex obtusifolius*) and bramble (*Rubus fruticosus*).



Figure 4: Area of broadleaved woodland on the northern boundary of the site

Dense Scrub

- 5.2.8 Areas of dense scrub were recorded within the site, largely in the corners of the site, adjacent to the hedgerows. An area of scrub was also recorded in the centre of the site, approx. 0.08ha, surrounding the stream (Figure 5). The scrub was dominated by bramble, common nettle, and broad-leaved dock, with occasional blackthorn and elder.

Scattered Trees

- 5.2.9 A single mature oak tree was present adjacent to the stream (Figure 6). The tree was multi-stemmed and the canopy over shaded the wet ditch.

Buildings

- 5.2.10 The site supported two buildings, both disused stables (Figures 7 & 8). Building 1 was a timber stable supporting a pitched corrugated asbestos sheet roof. Building 2 was a single skin timber stable, supporting a mono-pitched roof covered in a vinyl-roofing membrane, lined with woodchip panels.



Figure 5: Area of dense scrub surrounding the ditch



Figure 6: Mature oak tree adjacent to the wet ditch



Figure 7: Building B1 on site



Figure 8: Building B2 on site

Wet Ditch

- 5.2.11 A wet ditch holding flowing water was recorded by the mature oak tree in the centre of the site. The ditch flowed north through the site and out of the site via a culvert under the A50 (Figure 9). The stream was approximately 20cm deep with a sand/silt substrate, it did not support submerged vegetation and the banks were colonised by scrub.



Figure 9: Wet ditch holding water flowing north

Invasive Weeds Assessment

- 5.2.12 An assessment of the site was made to establish the presence of invasive weeds included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). No recordings of invasive weed species were found within, or adjacent to the application area.

Site Evaluation

- 5.2.13 The semi-improved grassland on site was assessed as neutral and can be broadly categorised as MG4 *Alopecurus pratensis* – *Sanguisorba officinalis*. Species list and DAFOR Scale of species for the site can be found in Appendix 1. The southern grassland field returned a 56.37 MAVIS

score for MG4 grassland, with the northern extent of the site returning a 55.17 score for MG4 grassland.

- 5.2.14 The grassland quality varied across the site, with the highest value area located in the southern extent of the site, which displayed the greatest species diversity and richness. The northern extent of the site, despite matching the MG4 classification, had a greater grass species dominance, with forbs recorded in lower abundance comparably. The species composition in the southern extent of the site is representative of LBAP neutral grassland habitat. The primary criteria for mesotrophic grassland states that they *"should be at least 2500m² or 200m of linear habitat in extent in which at least 7 species from list F should be Occasional, Frequent, Abundant or Dominant, or at least 10 species from grassland list F should be present."* Appendix 8A outlines the species identified per area of the site during the botanical survey work.
- 5.2.15 The grassland in the southern extent of the site supports ten of the possible twenty-seven listed indicator species, and therefore considered to qualify for LWS status. However, the extent of the grassland does not reach the threshold of 2500m². Consequently, it is considered that the grassland in the southern extent of the site should be classified as potential LWS (pLWS), based on species diversity and the number of indicator species present, despite the area being limited in extent.
- 5.2.16 The northern extent of the site was only recorded to support six indicator species, failing to qualify for LWS status on species diversity. In addition, the indicator species identified were not in sufficient abundance for the area to be eligible for selection, being recorded as rare or occasional within the sward. Given the grassland community present, the northern extent of the site is considered to qualify as neutral grassland, however, is not considered to be of elevated ecological value to the status of LWS.
- 5.2.17 The hedgerows on site provided value to terrestrial species and are considered to be native species rich hedgerows. As such, are considered to qualify as UK Biodiversity Action Plan (BAP) priority habitat and are Habitats of Principle Importance under the provisions of the NERC Act 2006.
- 5.2.18 The habitats on site have been evaluated as being of elevated ecological value in relation to the local surroundings and assessed to have 'County' value in a regional context (Table 2).

5.3 Protected and Notable Species

Notable Plants

- 5.3.1 The zone of influence for botanical species was determined to include habitat parcels within or adjacent to the application boundary of the site. During the Phase 1 habitat survey, semi-improved neutral grassland was recorded across the site. The PEA survey was undertaken outside of the botanical survey period; however, meadow indicator species were recorded, highlighting the potential for a botanically rich sward. As such, further surveys were undertaken to determine the type and botanical value of the grassland on site.
- 5.3.2 The desk study and two further site visits (undertaken May and August 2023) identified indicator species for mesotrophic grassland included within the Leicestershire and Rutland Biodiversity Action Plan. However, the botanical survey work carried out at the site did not highlight any notable plant species.

Evaluation

- 5.3.3 Owing to the identification of pLWS neutral grassland, it is considered that the site holds 'County' level value for habitats, however no notable plants were recorded.

Bats

- 5.3.4 Habitats within the application boundary were considered suitable for roosting, foraging and commuting bats. The zone of influence for bats is within the redline boundary and connective adjacent habitats. The data search highlighted over 900 records of bats within a 2km radius of the application site. The closest record pertained to a common pipistrelle bat located 0.35km from the site. Other species within the local area include brown long eared, Daubenton's, Leisler's, Nathusius's pipistrelle, natterer's, noctule, serotine, whiskered, and soprano pipistrelle. The data pertains to records returned within the last 10 years.
- 5.3.5 Following BCT guidance (Appendix 5), the site was assessed as providing 'Moderate' suitability habitat for commuting and foraging bats with areas of woodland and mature hedgerows, located along the boundaries of the application site, offering optimal connectivity with the wider landscape.
- 5.3.6 Furthermore, scattered trees were recorded both along the boundaries of the application site and within the residential gardens surrounding Building 1 as well as within the woodland adjacent

to the western boundary. Visible trees were assessed and categorised based upon Bat Conservation Trust guidance (Appendix 5). All the assessed trees within the application site or adjacent to its boundary were considered to offer negligible suitability for roosting bats, with the exception of the following (further details can be found in Appendix 8B):

- T1: Mature oak tree within the southern extend of the site, associated with the wet ditch, which was awarded 'Low' suitability;
- T2: Mature oak tree within the hedgerow on the north-western site boundary, awarded 'Low' suitability;
- T3: Mature ash tree within the hedgerow on the north-western boundary which was awarded 'Moderate' suitability.

Foraging and Commuting Bats

- 5.3.7 The data search highlighted bat activity within the zone of influence. The site supported features considered suitable for commuting and foraging bats along the mature hedgerows denoting the site boundaries, and scattered trees and grassland present within the site. The habitat features on and adjacent to the site were awarded 'Moderate' potential to support foraging and commuting bat populations. The design proposals seek to limit the impacts to the site boundary vegetation, with only a small section of hedgerow proposed to facilitate site access.
- 5.3.8 The data search highlighted bat activity within the zone of influence. The site supported features considered suitable for commuting and foraging bats along the mature hedgerows denoting the site boundaries, and scattered trees and grassland present within the site. The habitat features on and adjacent to the site were awarded 'Moderate' potential to support foraging and commuting bat populations. The design proposals seek to limit the impacts to the site boundary vegetation, with only a small section of hedgerow proposed to facilitate site access.
- 5.3.9 Bat activity surveys in line with 'Low' suitability habitats were carried out, in order to establish the significance of the hedgerow along the south-western boundary of the site, adjacent to Leicester Road. As a result, three transect surveys were undertaken over three seasons (Spring, Summer and Autumn). A single walked transect was undertaken each time, with a single remote static detector deployed within the 15m of hedgerow proposed for removal to facilitate the new site access (Appendix 8B).

- 5.3.10 Common pipistrelle was the dominant species recorded throughout the suite of surveys, identified foraging and commuting behaviours across the site with peak foraging in the south of the site, associated with the neutral grassland, scrub and mature oak tree (Appendix 8B).
- 5.3.11 The activity levels during the walked transect surveys were low, pertaining to repeated passes of a maximum of two individuals at each survey point, relating to a single species, common pipistrelle, for the majority of the survey. The passes visually observed were dominated by common pipistrelle, with infrequent passes from soprano pipistrelle recorded during the walked transect, associated with the hedgerow along the south-western site boundary, along Leicester Road.
- 5.3.12 Ten nights of SMZC remote bat detector data were assessed in total; five nights from spring, and five from autumn. The detector deployed in summer failed and did not capture an accurate record of bat activity over the five night period in August. The remote detector was positioned in the north-east corner of the site, within the section of H1 that is proposed for removal to facilitate new site access (Appendix 8B). Activity was variable between each night recorded by the remote detectors, but the following trends were observed and described below (Appendix 8B).
- 5.3.13 The activity of all bat species recorded decreased significantly between June to October, however the October deployment recorded a greater species diversity; brown long eared were not recorded during the June deployment, with eighteen registrations detected in October. The most dominant species during each deployment was common pipistrelle, with pipistrelle social calls recorded consistently across the two deployments. Infrequent *Myotis* sp. calls were recorded during both deployments, however, only three calls were recorded in June, and two calls in October.
- 5.3.14 Despite the moderate number of echolocation calls (<800) recorded by the static detector, the dusk walked transect surveys revealed that a maximum of two common pipistrelles and a single soprano pipistrelle appeared to be actively foraging and commuting at any one time, suggesting that the high activity levels recorded by the static relate to foraging activity, where individuals are circling, making repeat passes, particularly along the south-western site boundary. Soprano foraging activity was dominant in the north of the site, adjacent to the mature hedgerow.

5.3.15 The data collected from the SMZC remote detectors supported the findings of the transect surveys, revealing the same moderate feeding levels by a low number of individuals.

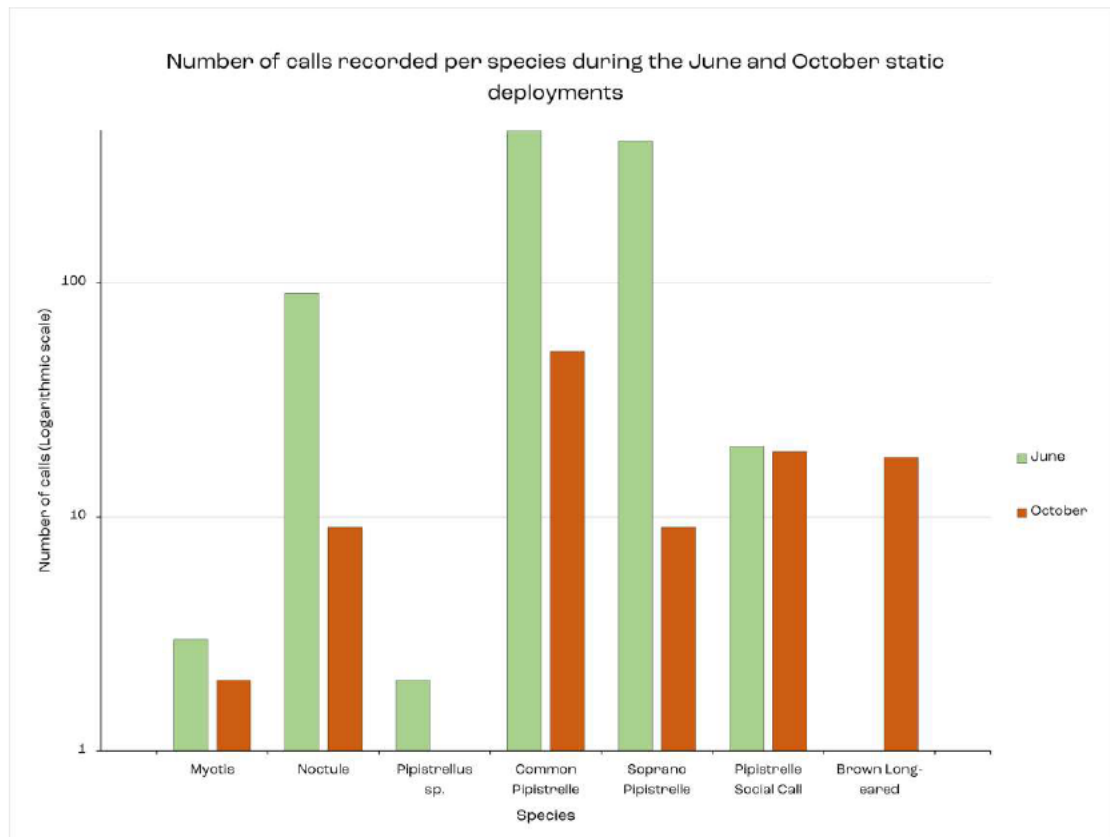


Figure 10: Bat passes recorded by SMZC Remote detector deployed in the northeast corner of the site

Evaluation

5.3.16 The foraging and commuting habitat within the application site was assessed to be of 'Local Value' following assessment (Wray et al 2010). The activity within the application boundary pertained to low numbers of locally frequent bat species, of low conservation concern.

Amphibians

5.3.17 The zone of influence for Great Crested Newt (*Triturus cristatus*) (GCN) and other amphibians was determined following the desk study. A radius of 500m from the application site was searched for the presence of suitable waterbodies to support GCN using four different methods (OS Mapping via Pro Map, Google Earth Pro, Google Maps and an On-Site Walkover).

5.3.18 The desk study returned records of GCN approx. 1km to the south of the application site but did not reveal any records or surveys on ponds within 500m of the site. The pond search identified two ponds within 500m of the site, see Table 8 and Figure 1.1 below.

Table 8: Pond Locations and HSI scores

Pond Number	Grid Reference	Habitat Suitability Index Score	Approx Distance from Site
Onsite Stream	SK 49521 10231	N/A – Flowing water	Within application boundary
1	SK 49518 10598	N/A –Situating on private land. Access not granted	0.26km N
2	SK 49188 10797	N/A –Situating on private land. Access not granted	0.5km NW

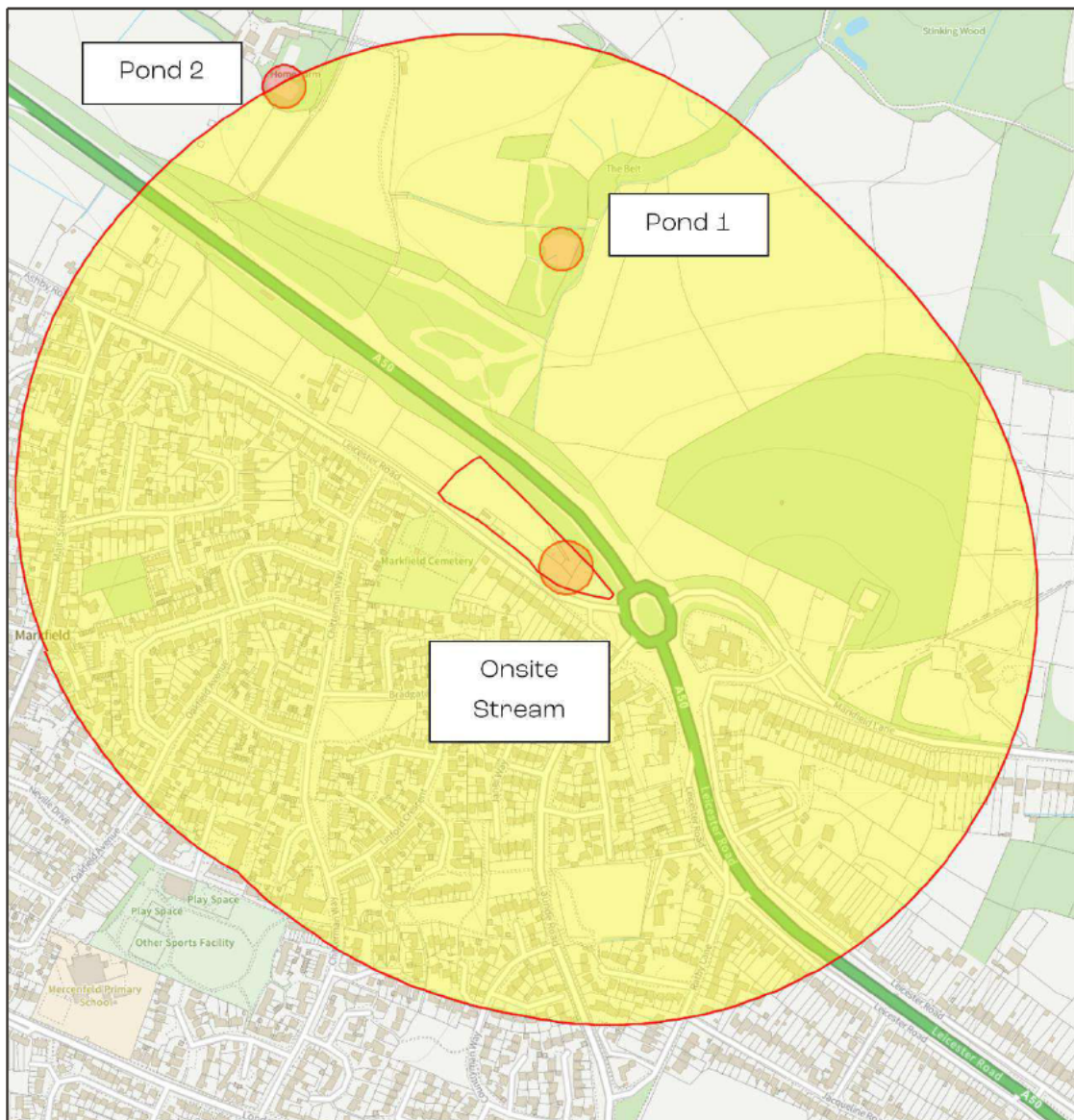


Figure 11: OS Map showing ponds locations within 500m radius of the site

5.3.19 A single pond is shown on Ordnance Survey Maps of the site (Figure 1). However, during the site visit, the area was recorded as an outflow of a northerly flowing stream, and therefore considered to be unsuitable for breeding GCN, as well as being unsuitable connective habitat to the two ponds within the zone of influence. As such, amphibians are considered to be likely absent from the site.

Evaluation

5.3.20 The site was assessed to hold 'Site' value for amphibians, as suitable terrestrial habitat was recorded within the site although the site is not considered to offer opportunities for breeding GCN.

Reptiles

- 5.3.21 The zone of influence for reptiles was within the site and 500 metres of connective habitat. The undulating topography of the grassland in the northern half of the site and the banks of the wet ditch provided ideal basking habitat, whilst the variable sward structure of the grassland, scattered trees, and hedgerows provided shelter to support reptiles. In addition, the site was well connected to the surrounding landscape by hedgerows and ditches, particularly to the north.
- 5.3.22 Although no evidence of reptiles was found onsite at the time of the PEA, the data search returned four records of common lizard (*Zootoca vivipara*) and seven records of slow worm (*Anguis fragilis*) within 2km of the application site. However, none of the records originated within 1.4km of the application site. Despite this, the extensive and variable habitats onsite had the ability to support reptile populations, particularly grass snake (*Natrix helvetica*) and slow-worm. Therefore, the decision was made to carry out reptile surveys to determine the presence or likely absence of these species onsite.
- 5.3.23 The reptile survey showed no evidence to suggest that there was a permanent population of reptiles onsite (Table 9).

Table 9: Results of the seven visits undertaken during May – July 2023 (Refugia Locations can be found within Appendix 8C)

Survey Date / Time	Temp °C	Cloud Cover	Humidity %	Wind Speed	Findings
05/05/2023 14:30	16	7	68	1	No Reptiles; No other species
16/05/2023 15:30	16	3	54	0	No Reptiles; No other species
24/05/2023 11:00	16	0	61	0	No Reptiles; No other species
26/05/2023 09:25	11	0	65	0	No Reptiles; No other species
30/05/2023 17:05	13	6	73	0	No Reptiles; No other species
01/06/2023 10:00	11	8	78	1	No Reptiles; No other species

Survey Date / Time	Temp °C	Cloud Cover	Humidity %	Wind Speed	Findings
06/07/2023 14:30	18	3/8	46	1	No Reptiles; No other species

Evaluation

5.3.24 Following seven survey visits no reptiles were recorded within the suitable habitat onsite, confirming that the optimal habitat on site provides 'Site Value' for this protected species group, following evaluation criteria (Table 2). The lack of survey findings suggests that it is highly unlikely that a population of reptiles exists within the application boundary or within connective habitat adjacent to the site.

Badger

5.3.25 The zone of influence relating to badgers was within the application site and the immediate connective habitat. Records relating to certain protected species including badger sett locations are sensitive in nature, and due to the risk of public interference are kept confidential.

5.3.26 No evidence of badger setts, or activity such as mammal runs, snuffle holes or latrines were found during the ecological appraisal of the site and the zone of influence. The application site supported habitat features such as hedgerows and ditches which provide suitable commuting habitat for this transient species, which are highlighted as present in the wider environment following a review of the data search. As a result of the site extent and the location within a rurally dominated landscape, it is considered that badgers could use the site for foraging and commuting purposes on an episodic basis but are not dependant on the habitats within the site boundary.

Evaluation

5.3.27 The site supports suitable connective and foraging habitat for badgers of 'Site value'. Badgers are considered to be absent from the site, however the transient nature of this species could result in individuals foraging or commuting through the zone of influence of the proposed development.

Mammal Species of Principle Importance

- 5.3.28 The NERC Act 2006, Section 41 highlights 17 species of principle importance within England. Although these species were not surveyed directly as a result of their distribution and habitat preferences, evidence for activity by these species was searched for during the Phase 1 habitat and Phase 2 protected species surveys.
- 5.3.29 The zone of influence was within ecological connective habitat along the boundaries of the site, within 30 metres of the boundary.
- 5.3.30 The site offered habitat capable of supporting foraging and commuting Western European hedgehog, namely areas of woodland adjacent to the eastern boundary, the hedgerows defining the northern and western boundaries, as well as those within the areas of scrub primarily associated with the wet ditch in the southern extent of the site. However, no evidence of activity was found during the initial PEA or the subsequent phase two surveys.

Evaluation

- 5.3.31 An evaluation of common pipistrelle, soprano pipistrelle, Daubenton's and noctule distribution on site can be found within Section 5.3.3. The habitats considered suitable for foraging Western European Hedgehog pertained to areas of woodland edge, hedgerows, and scrub, which were present around the site boundaries and within the semi-improved grassland. Overall, the habitats within the application boundary offered 'Local' value to this species group.

6 Assessment of effects and mitigation measures

6.1 The proposed development

- 6.1.1 The site is the subject of a full planning application for site clearance to facilitate the development of a 72 bed care home, car park, access and associated soft landscaping. It is understood that the proposals will involve significant ground clearance in the north of the site, demolition of the two existing stable buildings onsite (B1 and B2), as well as the removal of a short section of hedgerow along Leicester Road to facilitate new site access.
- 6.1.2 Detailed design proposals are presented within Appendix 6 of this report. The proposed layout shows that the high quality neutral grassland in the southern extent of the site will be retained and remain unaffected by the development. There are opportunities for habitat enhancement within the central extent of the site, associated with the scrub and wet ditch.

6.2 Potential Impacts to habitats and notable species on site

- 6.2.1 Where evaluations within Section 5 have highlighted potential constraints to protected and notable species or habitats further assessment has been made to quantify the effect of the potential constraints.

Designated sites

- 6.2.2 The wet ditch within the site flows north-east, below the A50, from where it flows north, providing connectivity to Cover Cloud Field LWS and Cloud Cover Wood LWS, which support high quality neutral grassland and ancient woodland respectively. The site will be subjected to clearance and construction works which could result in indirect effects to the ditch system and nearby designated sites as a result of water pollution, silting and leaching. Without mitigation, this would present a probable Negative (Significant) effect to designated sites downstream of the application boundary including the Cover Cloud Field LWS and Cloud Cover Wood LWS.

Mitigation Measures

- 6.2.3 The current design plans show that the wet ditch will remain unaffected by the proposal, with surrounding scrub habitat to be enhanced from a biodiversity net gain perspective (section 6.5). A Landscape Ecological Management Plan (LEMP) and Construction Ecological Management Plan

(CEMP) must be produced as a result of a suitably worded condition to safeguard these habitats from indirect impacts, detailing specific construction method statements and planting scheme and management which will be secured long term. To mitigate the effect of the development on the ditch a Construction Ecological Management Plan will be compiled which will incorporate the following aspects:

– **Buffer Zone**

A buffer zone of at least 10m between the development and the wet ditch will be established to prevent direct impacts during construction works and reduce disturbance post development. The current illustrative masterplan appears to achieve this owing to the area of development being contained within the northern extent of the site. An exclusion zone will be maintained in this area during development works and enhanced, post construction, following the recommendations detailed within the CEMP. The exclusion zone will be clearly defined using Heras fencing or similar and must not be used as public open space or a construction materials storage area. No site personnel will enter the exclusion zone and no waste or rubble will be deposited in this area. Warning signs will be erected.

– **Run-off prevention**

In order to prevent harmful run off associated with the construction and development works, a water collection scheme will be incorporated. Refer to planning guidance PPG 5 Pollution Prevention Guidelines for works and maintenance in or near to water (January 2017), and PPG6: Construction and demolition sites (2012). Also refer to NPPF Guidance relating to Flood Risk and coastal change (March 2014). If the proper drainage systems are not put in place, then surface run-off and leaching could have negative impacts upon the wet ditch and downstream designations, and the species which inhabit them. Construction Machinery will also be checked regularly for oil-leaks etc.

- 6.2.4 The application site falls within an Impact Risk Zone (IRZ) for Ulverscroft Valley SSSI, located approx. 0.9km north-east of the site. The IRZ pertains to residential developments. As such, the Local Planning Authority must consult Natural England to determine whether mitigation measures pertaining to the SSSI are required.

Habitats

- 6.2.5 Ground clearance will be required within the application boundary to facilitate the new development, which will result in the permanent loss of 0.5ha of 'moderate' condition neutral grassland within the northern extent of the site. Given the scale of the proposed ground clearance within the application boundary, in the absence of mitigation, a Certain Negative (Significant) effect on habitat quality within the site is anticipated. The neutral grassland in the northern extent of the site, as well as the two stable buildings (B1 and B2) are to be lost to facilitate the new care home. In addition, a small parcel of scrub in the north-western corner of the site will be cleared to facilitate the new site access and construction activities.
- 6.2.6 The hedgerows around the periphery of the site are to be retained as part of the development, with the exception of a small section of H1 along Leicester Road proposed for removal to facilitate access into the scheme.
- 6.2.7 The area of higher quality grassland in the southern extent of the site, is to be retained as part of the scheme, situated outside of the development footprint, as detailed in section 6.5. This area is considered to be of elevated ecological importance due to the habitat type present, and holds intrinsic value to local biodiversity. The grassland qualifies as MG4 neutral grassland and is considered to support indicator species for mesotrophic grassland following Local Wildlife Selection Criteria.
- 6.2.8 The majority of habitats across the site were considered to be of 'local' ecological value. However, the area of neutral grassland in the south of the site is considered to be of elevated ecological significance, with the potential to qualify as potential Local Wildlife Site (pLWS). As such, the site is considered to have 'County' level importance and mitigation measures will be implemented in order to ensure the preservation of this habitat.

Mitigation Measures

- 6.2.9 To mitigate for the loss of a significant area of neutral grassland, the scheme seeks to retain and preserve the higher quality, more species diverse areas of grassland, namely in the southern extent of the site, as well as areas adjacent to the north-eastern site boundary and offsite woodland belt. The areas of retained grassland will be fenced off and contained within a Biodiversity Protection Zone (BPZ) during the construction phase of the development, in order

to prevent plant access or material storage. Suitable signage will be erected on the fencing, informing site users of the exclusion zone.

- 6.2.10 To mitigate for the loss of neutral grassland in the northern extent of the site, areas of neutral grassland in the south of the application site must be retained and maintained in good condition.
- 6.2.11 To quantify the loss of habitats on site, a Biodiversity Impact Assessment has been carried out, using the DEFRA metric tool to quantify the value of the habitats within the site, as well as those to be created by the scheme (Section 6.5). The scheme sits at a net loss, and the short fall will be minimised through the purchase of off-site grassland credits. This strategy will ensure that the residual effects of the proposals will be reduced to Neutral (Not Significant).
- 6.2.12 Additionally, in order to minimise the residual effects of the development, the grassland will be managed following a strategy outlined in a supporting Landscape and Ecological Management Plan (LEMP). The LEMP will maintain and enhance the grassland areas and prevent degradation over time from inappropriate management and prevent the encroachment of pernicious species. These actions will ensure that the residual effect on habitats as a result of ground clearance is resolved with Neutral (Not Significant) results.
- 6.2.13 A Construction and Environmental Management Plan (CEMP) is required, in order to ensure that species-specific Reasonable Avoidance Measures (RAMs) are detailed in full so that negative impacts can be avoided during site clearance and construction. This document will also detail safe working practices around retained vegetation, detailing the location of root protection fencing according to those prescribed in the Arboricultural Method Statement.

Breeding Birds

- 6.2.14 The areas of neutral grassland, hedgerows, scattered trees, native scrub, and buildings both within the application boundary have been identified as being suitable for use by breeding birds. A Likely Negative (Not Significant) effect is anticipated as a result of the development through the loss of suitable nesting habitat across the site. This impact is considered to be short term and reversible with the following mitigation in place.

Mitigation Measures

- 6.2.15 Given their protection, development must be sympathetic to the value of this habitat and potential impacts on breeding birds, their eggs, nests and young. The breeding bird season is

generally accepted as being between March and September, works will be avoided during this period where possible, and developers will consider and implement the options (below) appropriate to their scheme to reduce the effect to Neutral (Not significant):

- Undertake demolition works to the buildings and any vegetation clearance between the months of October and February where possible (outside of the breeding season);
- Any vegetation proposed for removal between the months of March and September will be subjected to a search for active birds' nests 24 hours prior to commencement of works. This will confirm whether all or some clearance is achievable.
- If the demolition of Building 1 or Building 2 is to be undertaken between the months of March and September, the building will be subjected to a search for active birds' nests 24 hours prior to commencement of works. If birds are found to be nesting, works will need to be delayed in those areas until it is confirmed that nesting has been completed. This will confirm whether all or some clearance is achievable.
- In addition to a pre-works check the clearance of vegetation between the months of March and September will be supervised by a suitably qualified ecologist;
- Should bird nesting activity occur within the application site during any works then activity in that area will cease until the bird(s) have vacated the site (a minimum of 4 weeks). Such measures will be adhered to so as to prevent unnecessary disturbance to breeding birds or their young.

Roosting Bats

- 6.2.16 None of the buildings within the site were considered to offer suitability to support roosting bats. The design proposals indicate that both buildings (B1 and B2) are to be demolished to facilitate the development of the new care home. Three trees within the site were considered to offer opportunities for roosting bats. The proposals indicate that trees T1, T2 and T3 are to be retained and incorporated into the landscaping of the scheme.
- 6.2.17 The behaviours of local roosting bats could be adversely affected by disturbance as a result of artificial lighting used during the construction phase as well as post construction lighting schemes. The potential indirect disturbance by light pollution is considered a Likely Negative (Not significant) effect.

Mitigation Measures

- 6.2.18 It is currently understood that the trees identified with suitability to support roosting bats are to be retained as part of the scheme. Nevertheless, should design proposals change and any of the trees, including the two assessed as 'Low' suitability (T1 and T2), be recommended to facilitate the development, the trees must be soft felled or undergo further survey work according to best practice guidance.
- 6.2.19 'Soft felling' involves removing the limbs of the tree and carefully lowering them to the ground. Limbs will be left undisturbed for at least 24 hours to allow any bats to disperse. Wherever possible, sections of the tree holding potential roosting features will be secured to suitable host trees, as close as possible to where the original tree stood. This ensures that potential roosting sites are retained. Should the removal of the 'moderate' suitability tree (T3) be required to facilitate the development, and more than 12 months have lapsed since the issue of this document, further survey work in the form of nocturnal survey or climbing and endoscopy will be carried out to confirm absence of bats within the trees. Following confirmation of absence, the trees can be soft-felled. If bats are identified roosting within the trees during the update surveys, the trees must remain undisturbed until a Natural England licence is issued, including mitigation strategy.
- 6.2.20 Bats are highly mobile and can change roost sites throughout the year and from season to season. If the development of the site does not begin within twelve months of this initial survey it will be necessary to reassess the trees within the site to see whether their suitability to supporting roosting individuals has changed. As part of this update survey work, it is recommended that an update roost assessment is undertaken on all buildings within the application site, in order to confirm whether the suitability of these structures to support roosting bats has changed.
- 6.2.21 Post construction, artificial security lighting will adhere to a sensitive lighting strategy, which will minimise light pollution and overspill onto retained habitats. Lighting will not be installed on the elevations of buildings in close proximity to hedgerows and woodland, preventing long-term disturbance to commuting lines. If flood lighting is required, this will be directed away from notable habitat for bats and overspill into dark corridors and woodland will not exceed 1lux.

Foraging and Commuting Bats

- 6.2.22 The bat activity on site was low, pertaining to a low number of common species, repeatedly using similar areas and features recorded on site. While the detailed development plans suggest that the linear features located along the site boundaries are to be retained following the development, the area of grassland dominating the northern extent of the site will be lost, along with a small section (approx. 15m) of hedgerow in the north-west of the site, adjacent to Leicester Road, required for site access. The clearance of the grassland habitat and section of hedgerow, along with the significant levels of disturbance likely to occur both during and post construction, constitute a Likely Negative (Not Significant) impact upon foraging and commuting bats. However, post construction landscape treatments can provide improved foraging habitat for locally frequent species.
- 6.2.23 In the absence of appropriate mitigation, a net loss of suitable foraging habitat is anticipated. Furthermore, the behaviours of foraging and commuting bats could be adversely affected by disturbance as a result of artificial lighting used during the construction phase as well as post construction security lighting schemes. The potential indirect disturbance by light pollution is considered a Likely Negative (Not significant) effect. The retention of existing foraging sites and commuting pathways on site and within the local area would be desirable. Given the high mobility of bat species the impacts associated with the development are not considered to be long-term.

Mitigation Measures

- 6.2.24 To mitigate effects to commuting and foraging bats to Neutral (Not significant), the physical characteristics and current management of the boundary features will be maintained and where possible enhanced.
- 6.2.25 Where vegetation has been proposed for removal, compensatory planting will be undertaken. The existing site access from Leicester Road will be infilled with native species, thereby enhancing the hedgerow along the site frontage. A new native hedgerow is proposed in the northwest corner of the site, surrounding the area of neutral grassland creation adjacent to the site boundary (Appendix 9). Additionally, six medium and three small trees are proposed as part of the landscaping scheme within the footprint of the development. The details of planting and enhancements will be secured within a Landscape Ecological Management Plan (LEMP) which seeks retention and enhancement of locally prevalent features within areas of open space and retain linear features.

6.2.26 The extent of disturbance to bat commuting lines will be reduced where possible by removing vegetation outside of the bat activity season and employing a sensitive lighting scheme during construction works. Post construction, artificial security lighting will not be installed on the elevations of buildings in close proximity to hedgerows and woodland, preventing long-term disturbance to commuting lines. If flood lighting is required, this will be directed away from notable habitat for bats and overspill into dark corridors and woodland will not exceed 1lux.

Badgers

6.2.27 The presence of suitable habitat on site and within the zone of influence could result in an Unlikely Negative (Not Significant) effect such as injury or death to individual badgers during the construction phase on site. The recommended mitigation measures will reduce the effects to Neutral (Not Significant) and primarily involve adhering to safe working practices and reasonable avoidance measures during the construction phase.

Mitigation Measures

6.2.28 A walkover survey will be conducted within the zone of influence (the site and 30 metres perimeter of boundary) prior to the commencement of works to identify if badgers have become active within the proposed development. The following appropriate precautions will be employed during construction works to prevent harm to this protected species.

- Any excavations left overnight are to be covered at the end of each working day, or include a means of escape, such as wood planks. In addition, any temporarily exposed open pipe systems are to be capped in such a way as to prevent badgers gaining access.
- Do not store spoil heaps or brash piles on site. These will be removed to prevent the opportunistic use by badgers
- Should badgers or any evidence of badgers be encountered during the walkover or construction phase, all works must cease, and the advice of an ecologist sought.

Herptiles

6.2.29 Although the survey confirmed the absence of reptiles within the application site, suitable terrestrial habitat onsite and connectivity to more suitable habitat in the wider landscape, suggests that reptiles could access the application site on an episodic basis. In the absence of