



Preliminary Ecological Appraisal

Land at North Choller Farm

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LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing. Whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date. This report provides a snapshot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited, or the site supports habitats which are densely vegetated, only dominant species may be recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 Introduction

Background

- 1.1 The Ecology Partnership was commissioned by Cordial Investments to undertake a Preliminary Ecological Appraisal (PEA) for North Choller Farm – Holding 1, Choller Estate, Barnham Lane, Walberton, Arundel, hereafter referred to as ‘site’.
- 1.2 The Key objectives of a PEA (CIEEM 2017) are to:
- Identify the likely ecological constraints associated with a project;
 - Identify any mitigation measures likely to be required, following the ‘Mitigation Hierarchy’ (CIEEM 2016; BSI 2013, Clause 5.2);
 - Identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA); and
 - Identify opportunities offered by a project to deliver ecological enhancement.
- 1.3 This report comprises:
- The legislative and planning context (Section 1);
 - Assessment methodologies (Section 2);
 - Results (Section 3);
 - Implication for development (Section 4);
 - An impact assessment (Section 5);
 - Conclusions (Section 6).

Site Context

- 1.4 The site is located to the south-west of Walberton (Central grid reference: SU 95836 05602). The site totalling *c.* 0.94ha, comprises a series of farm buildings, hardstanding, sections of modified grassland and tall forbs. To the east of site was also areas of mixed scrub and a small section of other broadleaved woodland to the south-east. The site is bordered by the wider North Choller Farm site with arable fields in use by cattle to the south and farm buildings to the north, Barnham Lane runs to the east.
- 1.5 The red line boundary of the site and the immediate surroundings are displayed in Figure 1.



Figure 1: The approximate red line boundary for site, and the immediate surroundings

Proposed development

- 1.6 The current proposals for the site involve the creation of a housing development, with associated access, and landscaping.

Relevant Planning Policies and Legislation

- 1.7 The site was surveyed to assess its ecological value and to ensure the proposals were compliant with relevant planning policy and legislation. Policy guidance is provided by the National Planning Policy Framework (NPPF 2024) as well as the Arun Local Plan (Adopted July 2018). These policies included the following which are considered relevant to ecology, biodiversity and nature conservation:

- Policy ENV SP1: Natural Environment
- Policy ENV DM1L Designated Sites of Biodiversity or Geological Importance
- Policy ENV DM2: Pagham Harbour
- Policy ENV DM3: Biodiversity Opportunity Areas
- Policy ENV DM4: Protection of Trees
- Policy ENV DM5: Development and biodiversity

- 1.8 The Environment Bill received Royal Assent on 9th November 2021 and is now enacted as the Environment Act 2021. Part 6 (Nature and Biodiversity) and Schedule 14 of the Environment Act 2021 insert a new section 90A and Schedule 7A into the Town and Country Planning Act 1990

(TCPA), which contain the provisions requiring mandatory biodiversity net gain for development granted planning permission pursuant to the TCPA. These provisions require developments to provide a biodiversity value post-development that exceeds the predevelopment biodiversity value of the onsite habitats by at least 10%. This was adopted in February 2024 although there are a number of exemptions which may mean that biodiversity net gain is not required. These are listed under government guidance and are as follows:

- Development below a de minimis threshold;
- Householder applications;
- Small scale self-build and custom house/building;
- HS2; and
- Biodiversity net gain sites.

1.9 The site has therefore been surveyed to assess its ecological value and to ensure compliance with national and local plan policies and other relevant nature conservation legislation including the Wildlife and Countryside Act 1981, Natural Environment and Rural Communities Act 2006, and the Conservation of Habitats and Species (EU Exit) Regulations 2019.

1.10 The report has been produced with reference to current guidelines for PEA (CIEEM 2017) and in accordance with BS 42020:2013 Biodiversity – Code of Practice for Planning and Development.

2.0 Methodology

Desktop Study

2.1 A desktop study search was completed using an internet-based mapping service (magic.defra.gov.uk) for statutory designated sites and an internet-based aerial mapping service (maps.google.co.uk) was used to understand the habitats present in and around the survey area, including identifying habitat linkages and features (ponds, woodlands, etc.) within the wider landscape. In addition to this, biological records were requested for within 1km of the site boundary, from Sussex Biodiversity Record Centre (SxBRC). This includes protected species and non-statutory sites and habitats.

Preliminary Ecological Appraisal

2.2 A preliminary ecological appraisal was undertaken on the 17th March 2026 by Matt Pendry BSc (Hons) MCIEEM and Sophie Baker BSc (Hons) MSc. The surveyors identified the habitats present, following the UKHab classification system. The site was surveyed on foot, and the

existing habitats and land uses were recorded on an appropriately scaled map. The potential for the site to support protected species was also assessed (CIEEM 2017).

- 2.3 An update walkover to condition assess the habitats identified onsite and inspect for evidence of barn owls was conducted on the 23rd June 2026 by Alice Bailey BSc (Hons) ACIEEM and Sophie Baker BSc (Hons) MSc.
- 2.4 In addition, the abundance of plant species in each habitat were also recorded using the DAFOR scale. This assigns species abundance to one of the following categories: Dominant, Abundant, Frequent, Occasional, or Rare.

Protected Species Assessments

- 2.5 Any evidence of protected species was recorded. Standard methods of search and measures of presence, or likely presence based on habitat suitability, were used for: bats in trees and buildings (Collins 2023), breeding birds (BTO 2020), dormice (Wells, Chanin, and Gubert 2025), great crested newt (ARG 2010), reptiles (Froglife 2015), badgers (Creswell *et al.* 1990) and water voles (Strachan *et al.* 2011).

Limitations

- 2.6 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment. The site was visited over the period of one site visit, as such seasonal variations cannot be observed and potentially only a selection of all species that potentially occur within the site have been recorded. Therefore, the survey provides a general assessment of potential nature conservation value of the site and does not include a definitive plant species list.
- 2.7 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on site, based on the suitability of the habitat and any direct evidence on site. It should not be taken as providing a full and definitive summary of any protected species group. The assessment is only valid for the time when the survey was carried out. Additional surveys may be recommended if, on the basis of this assessment, it is considered reasonably likely that protected species may be present.

3.0 Results

Desktop Study

3.1 There are a number of internationally designated sites located within a 15km radius of the site red line boundary (Figure 2). These are as follows:

- Solent and Dorset Coast Special Protection Area (SPA) c. 6.1km south, designated for supporting breeding populations of Sandwich tern *Sterna sandvicensis*, Common tern *Sterna hirundo*, and little tern *Sternula albifrons*;
- Duncton to Bignor Escarpment Special Area of Conservation (SAC) c. 7.3km north, designated for the *Asperulo-Fagetum* beech forests in mosaic with ash *Fraxinus excelsior* woodland, scrub and grassland;
- Arun Valley SAC, SPA, and Ramsar c. 9.8km north-east designated for supporting Ramshorn snail *Anisus vorticulus*, in addition to internationally important assemblages of waterfowl including Bewick's Swan *Cygnus columbianus bewickii*;
- Pagham Harbour SPA and Ramsar c. 10.4km south-west, designated for regularly supporting breeding populations of little tern and common tern, and wintering populations of brent goose *Branta bernicla bernicla*;
- Chichester and Langstone Harbours SPA and Ramsar c. 11.8km west, designated for supporting more than 10,000 wintering wildfowl and regularly supporting more than 20,000 wintering waders;
- Solent Maritime SAC c. 11.8km west, designated for the estuaries, smooth cord-grass *Spartina* swards, and Atlantic salt meadow habitats;
- Singleton and Cocking Tunnels SAC c. 11.9km north-west, designated for the tunnels supporting populations of Barbastelle *Barbastella barbastellus* and Bechstein's bat *Myotis bechsteinii*;
- Kingley Vale SAC c. 13.8km north-west, designated for the yew *Taxus baccata* woods on chalk.

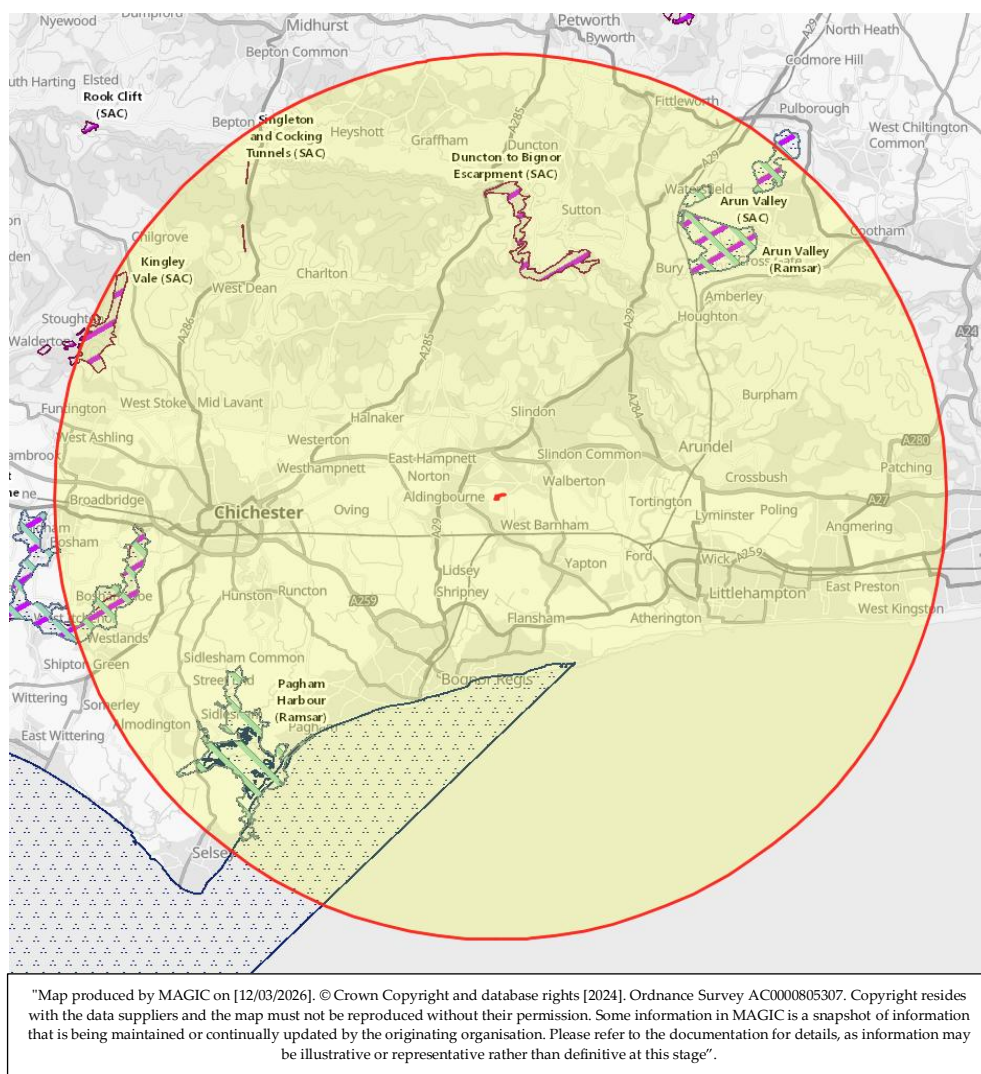


Figure 2: Internationally designated sites within 15km of the approximate red line boundary

- 3.2 There are no nationally designated sites located within 2km of the site boundary. The closest designated site is Fairmile Bottom Site of Special Scientific Interest (SSSI) and Local Nature Reserve (LNR) c. 3.5km north-east of site.
- 3.3 There are no non-statutory designated sites within 1km of the proposed development site.
- 3.4 There are a number of priority and notable habitats within 2km of the red line boundary (Figure 3), the closest of each include:
- Ancient and semi-natural woodland c. 360m south-east;
 - Deciduous woodland c. 360m south-east;
 - Lowland fens c. 480m north-east;
 - Traditional orchards c. 650m west;
 - Woodpasture and Parkland c. 750m east;
 - Lowland meadows c. 1.3km north-west;

- Ancient replanted woodland c. 1.8km north-west
- Coastal and floodplain grazing marsh c. 2km east.

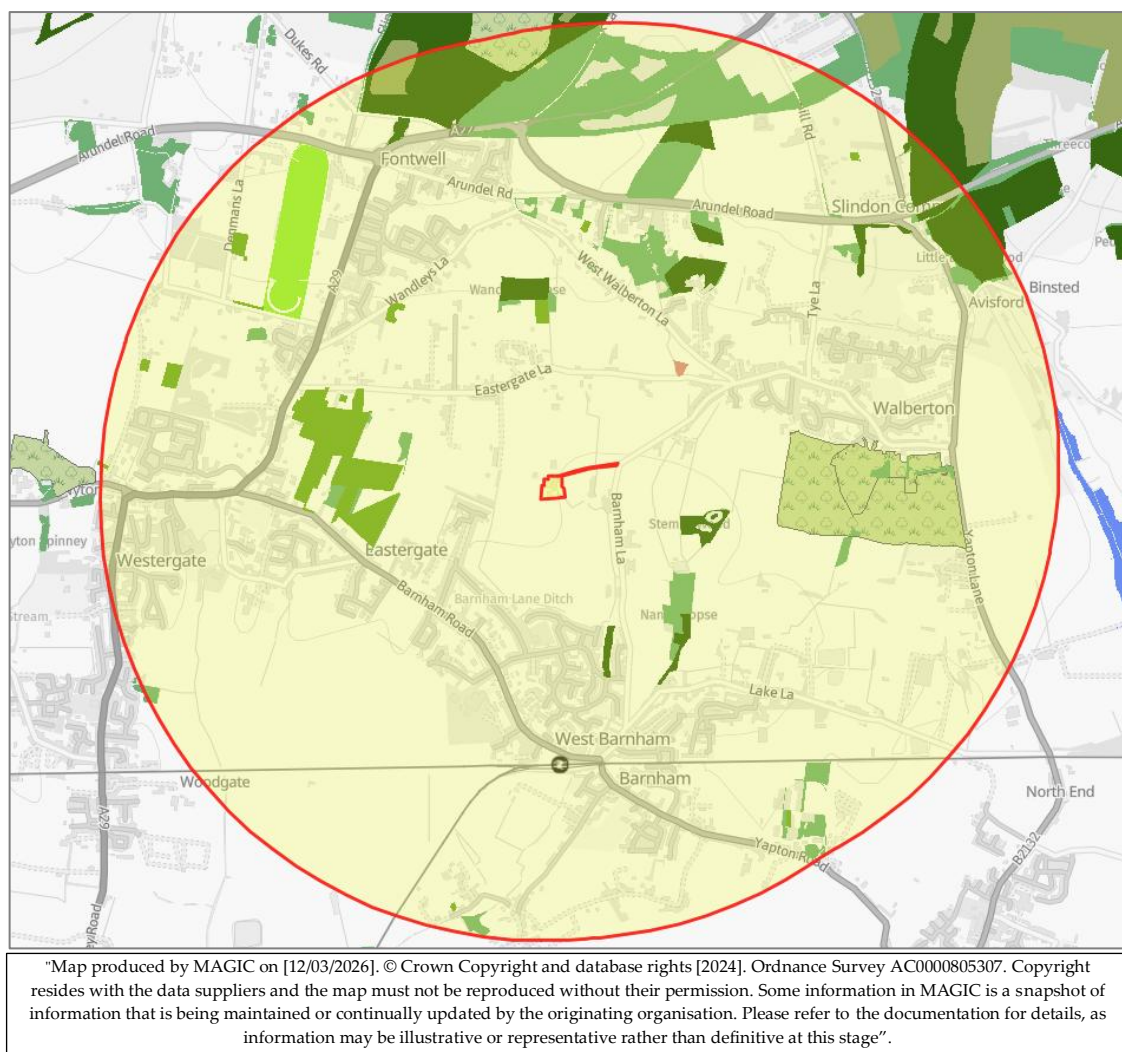


Figure 3: Priority and notable habitats within 2km of the approximate red line boundary, including: coastal and floodplain grazing marsh (blue), ancient and semi-natural woodland (dark green), ancient replanted woodland (khaki green), deciduous woodland (jade green), traditional orchards (pale green), lowland meadows (lime green), lowland fens (peach), woodpasture and parkland (shrub pattern)

- 3.5 OS colour mapping identified three ponds located within 250m of the red line boundary (Figure 4); these were located c. 90m – 100m from site. However, satellite imagery indicated the waterbodies labelled P2 and P3 appeared dry and were not present.

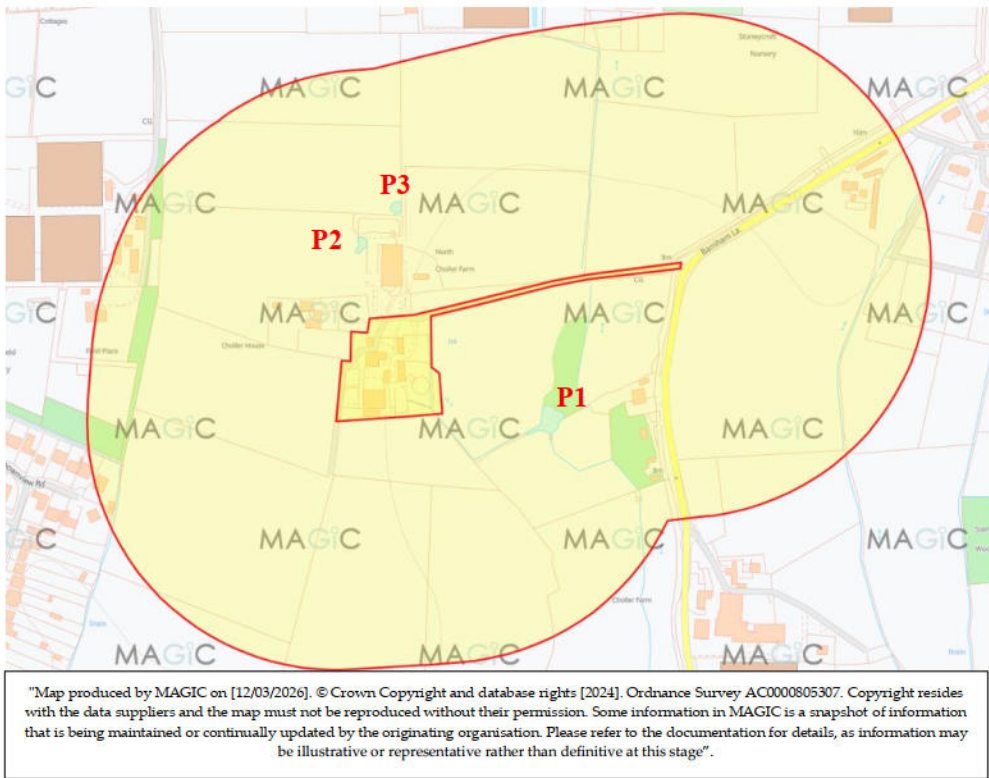


Figure 4: Ponds located within 250m of the approximate site red line boundary

3.6 A search via MAGIC maps found six granted European Protected Species (EPS) mitigation licences within 2km of the red line boundary; these have been detailed within Table 1 and Figure 5.

Table 1: Granted European protected species applications within 2km of the site

Species	Licence involves	Distance from site	Dates
Hazel or common dormouse	Affect and destruction of a breeding site, destruction of a resting site.	c. 720m north-east	05/12/2019 – 30/09/2024
Common pipistrelle	Destruction of a resting site	c. 750m south-west	20/10/2016 – 30/11/2021
Hazel or common dormouse	Affect, damage, and destruction of a breeding site; Damage and destruction of a resting site.	c. 1.1km north	10/02/2020 – 28/02/2030
Hazel or common dormouse	Affect, damage, and destruction of a breeding site; Damage and destruction of a resting site.	c. 1.4km north-west	18/12/2020 – 31/12/2029
Brown long-eared bat	Affect and destruction of a breeding site.	c. 1.7km north-east	25/10/2020 – 21/10/2030
Hazel or common dormouse	Damage and destruction of a resting site.	c. 1.7km west	10/11/2017 – 01/12/2022

3.7

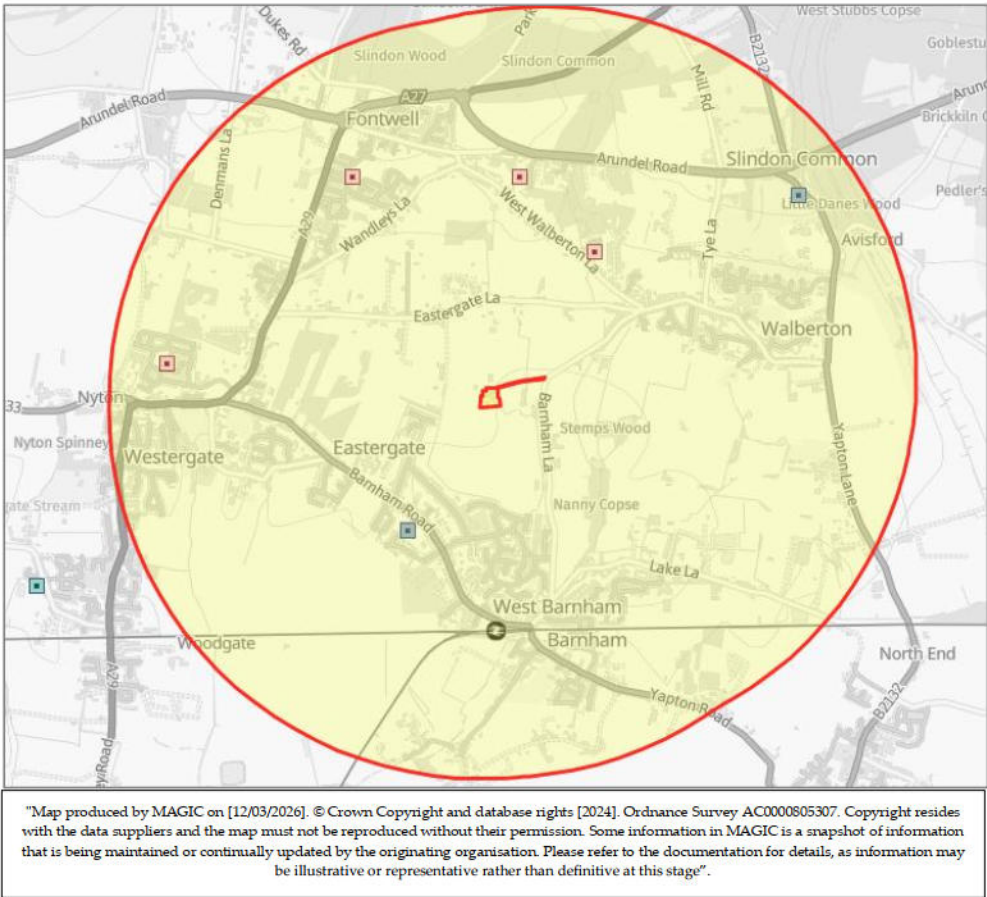


Figure 5: EPS licence returns within 2km of the approximate red line boundary, including: dormouse (pink squares) and bats (blue squares)

3.8 Records of notable and protected species within 1km of the proposed development site were requested from Sussex Biodiversity Record Centre (SxBRC). Selected relevant records from the last 10 years are presented in Table 2 below.

Table 2: Local notable and protected species records within 1km of the proposed development site, within the last 10 years.

Species	Status	Date of most recent local record	Distance of closest record
Common toad <i>Bufo bufo</i>	Wildlife and Countryside Act (1981 as amended) Schedule 5; NERC Act (2006) Section 41	16/04/2017	c. 410m north
Slowworm <i>Anguis fragilis</i>	Wildlife and Countryside Act (1981 as amended) Schedule 5; NERC Act (2006) Section 41	29/08/2019	c. 720m north-east
Grass snake <i>Natrix helvetica</i>	Wildlife and Countryside Act (1981 as amended) Schedule 5; NERC Act (2006) Section 41	02/05/2025	c. 670m north-east
European hedgehog <i>Erinaceus europaeus</i>	NERC Act (2006) Section 41	13/06/2020	c. 770m south-west
Hazel dormouse <i>Muscardinus avellanarius</i>	Wildlife and Countryside Act (1981 as amended) Schedule 5;	12/11/2024	c. 690m west

	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Schedule 2; Habitats and Species Directive (1992) Annex 4; NERC Act (2006) Section 41		
Stag beetle <i>Lucanus cervus</i>	Wildlife and Countryside Act (1981 as amended) Schedule 5; Habitats Directive Annex 2; NERC Act (2006) Section 41	19/06/2023	c. 490m north-east
Common pipistrelle <i>Pipistrellus pipistrellus</i>	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 Schedule 2; Habitat and Species Directive (1992) Annex 4; Wildlife and Countryside Act (1981 as amended) Schedule 5	18/06/2024	c. 310m west
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	As above	18/06/2024	c. 310m west
Nathusius' pipistrelle <i>Pipistrellus nathusii</i>	As above	31/05/2024	c. 310m west
Brown long-eared bat <i>Plecotus auritus</i>	As above	13/07/2022	c. 300m north
Noctule <i>Nyctalus noctula</i>	As above	07/08/2019	c. 990m west
Natterer's Bat <i>Myotis nattereri</i>	As above	2019	c. 850m north
Serotine <i>Cnephaeus serotinus</i>	As above	18/06/2024	c. 300m west
Barbastelle <i>Barbastella barbastellus</i>	As above	20/09/2017	c. 890m north
Red kite <i>Milvus milvus</i>	Birds Directive Annex 1; Wildlife and Countryside Act (1981 as amended) Schedule 1	01/07/2020	c. 570m south
Herring gull <i>Larus argentatus</i>	NERC Act (2006) Section 41; Red List BoCC	11/07/2018	Within 1km
Cuckoo <i>Cuculus canorus</i>	NERC Act (2006) Section 41; Red List BoCC	Summer 2020	c. 590m south
Skylark <i>Alauda arvensis</i>	NERC Act (2006) Section 41; Red List BoCC	10/04/2018	c. 520m south-east
Dunnock <i>Prunella modularis</i>	NERC Act (2006) Section 41; Amber List BoCC	02/05/2020	c. 560m south
Song thrush <i>Turdus philomelos</i>	NERC Act (2006) Section 41; Amber List BoCC	09/06/2020	c. 570m south

- 3.9 The site was characterised by majority developed land in the form of farm buildings associated with North Choller Farm, hardstanding, and artificial unvegetated unsealed surface around site. There were also sections of modified grassland and tall forbs. Parcels of bramble scrub and mixed scrub were also present, with an area of other broadleaved woodland also present to the south-east of site.

- 3.10 A detailed habitat map is attached in Appendix 1, site photos in Appendix 2, and full species list in Appendix 3.

Hardstanding (u1b6)

- 3.11 The site includes site access, the hardstanding that spreads across site and the remnants of the walls surrounding the North Choller Farm site. There were areas wherein rare occurrences of Herb Robert, common mouse-ear, common dandelion, and common groundsel were growing from cracks in the hardstanding or the walls around the complex.

Buildings (u1b5)

- 3.12 There were a number of buildings located on site associated with North Choller Farm, these have been outlined within Figure 6 labelled B1 – B10. Building B1 is a brick building with a pitched roof composed of clay tiles. The building also had ivy growing on the eastern side. A barn owl box was identified on one of the roof joists to the south of the building (Target Note 2, Appendix 1).
- 3.13 Building B2 is a stone and mortar building with a pitched roof composed of slate tiles.
- 3.14 Building B3 is a brick building with a pitched roof composed of slate tiles. There are also several ventilation slits on all aspects of the building. A barn owl box was identified on one of the roof joists to the west of the building (Target Note 2, Appendix 1). B4 has been labelled as a building however this is an open structure associated with B3 composed wholly of corrugated metal.
- 3.15 Building B5 is a mixture of wooden cladding and stone and mortar building with a pitched roof composed of clay tiles. Connected to the south of this building is B6, this was composed of breeze blocks with a corrugated metal roof.
- 3.16 Building B7 is an open-ended barn in active use for cattle. This is composed of breeze blocks and corrugated metal. There was a trough to the north-east of this structure that was identified to have lesser duckweed growing within.
- 3.17 Building B8 is a brick building with a pitched roof composed of slate tiles. B9 was labelled a building, however, the structure is a large water storage tank associated with the farm. Lastly, B10 was a structure associated with the farm with open sides with wooden supports and a corrugated metal roof.

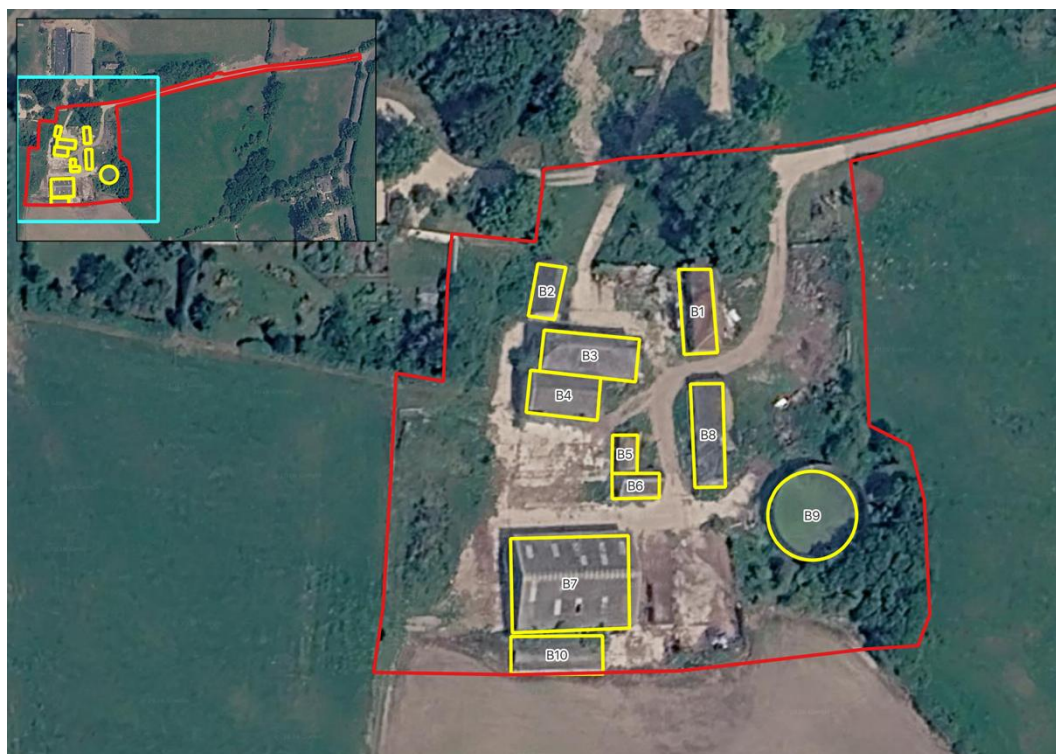


Figure 6: Location of buildings onsite outlined in yellow and labelled B1-B10

Modified grassland (g4) – Scattered trees (32)

- 3.18 Sections of modified grassland was identified across site, located to the north, west, and a small area to the east of site. All areas of modified grassland were of short sward and under a high level of disturbance owing to the active use of the site as a farmyard. This grassland was characterised by grass species including dominant perennial ryegrass and frequently occurring Yorkshire fog. The grassland also had occasional occurrences of creeping buttercup, broadleaved dock, greater plantain, and white clover. There were also rare occurrences of field speedwell and common whitlowgrass, these species are indicative of regular disturbance, with areas of bare ground closely associated with the modified grassland.

- 3.19 To the north of the site, within the modified grassland adjacent to the access road to site, was six trees. These included a poplar tree, a horse chestnut, two willow spp., and two walnut trees.

Tall forbs (g3c,16) – Scattered trees (32)

- 3.20 Tall forbs were present scattered around site to the west, south-west and east of site. The tall forbs located to the west of site were characterised by frequently occurring common nettle, hogweed, false oat-grass, and creeping thistle, and occasionally occurring common ragwort, smooth sowthistle, white dead-nettle, and broad-leaved dock.

3.21 The tall forbs located to the south-west were located on a bund that appeared to previously be aggregate. This parcel consisted of frequently occurring common nettle, broad-leaved dock, and lesser burdock, occasionally occurring white dead-nettle mugwort, and white campion, and rare occurrences of Canadian fleabane, common mallow and spear thistle.

3.22 To the east of site the parcel consisted of abundant common nettle, cleavers and common ivy, and rare occurrences of garlic mustard.

3.23 There were two trees located within the tall forbs located to the east, these were two *Acer* spp. trees.

Mixed scrub (h3h)

3.24 Mixed scrub consisting of frequently occurring elder and rarely occurring dogwood was present to the east of site. This scrub habitat did not have a dense understory habitat, predominantly composed of stands of elder within the area.

Bramble scrub (h3d)

3.25 There were sections of scrub, dominated by bramble, adjacent to the west and east of B2. There was additionally a small area to the north of site.

Other broadleaved woodland (w1g)

3.26 To the south-east of site was a small area of other broadleaved woodland, the ground layer was characterised by abundantly occurring common nettle, frequently occurring cleavers, occasionally occurring lords-and-ladies and ivy, with rare occurrences of creeping buttercup and perennial ryegrass. The shrub was solely comprised of frequently occurring elder scrub. Trees present within this woodland included an abundance of sycamore and rare stands of wild cherry and hazel. Owing to the abundance of sycamore, this has been classified as other broadleaved woodland.

Artificial unvegetated, unsealed surface (u1c)

3.27 There were areas of unsealed surface consisting of loose gravel, owing to the nature of the site as an active farmyard, this was subject to regular disturbance.

Sparsely vegetated urban land (u1f)

3.28 To the south-west of site was an area of sparsely vegetated urban land, this is likely to have been modified grassland previously however due to regular disturbance owing to the nature of the site, this was sparse. This was characterised by abundant goosefoot, knotweed, frequently

occurring scented mayweed, occasionally occurring redshank, and rare occurrences of common mallow, smooth sowthistle, and greater plantain.

Protected Species

Bats

Bat roost potential

- 3.29 There were ten buildings located onsite, each were assessed internally and externally for their bat roost potential. The locations of these buildings are outlined within Figure 6 numbered B1 – B10. The reasons for their bat roost potential classification are displayed in Table 3.

Table 3: Summary of results of bat roost potential building assessment

Building number	Description	Bat roost potential
B1	A brick building with a pitched roof of clay tiles. There were a number of missing roof tiles considered to provide some potential for crevice dwelling bat species. There was no underlay to the roof, with light penetration into the structure evident owing to the larger areas of missing tiles and the open barn doors to the eastern and western aspect of the building. There was light ivy covering on the eastern aspect of the building but this was not considered thick enough to be concealing a potential roosting feature (PRF).	Low
B2	A stone and mortar building with a pitched roof of slate tiles. There were some loose tiles, however, it was considered the slate tiles did not have room for bats within the gaps. The roof had roofing felt internally, this had a few gaps within the felt. In addition to this, the building was missing a door therefore it was considered that bats have access within the structure and may utilize the spaces between the felt and tile.	Moderate
B3	A brick building with a pitched roof of slate tiles. There was no felt underlay on the inside of the roof, therefore, it was considered that there was no potential for roosting bats within the roof owing to the lack of space between	Low

	slate tiles. However, there was a small gap identified within the brick exterior that was considered to provide potential for small crevice dwelling bat species.	
B4	The structure has been labelled as a building; however, this was an open-ended corrugated metal structure. There were no features that had potential for roosting bats within the structure.	Negligible
B5	A mixture of wooden cladding and stone and mortar building with a pitched roof of clay tiles. Externally, there were numerous missing and slipped tiles identified in addition missing mortar in the hip tile to the north-east, additionally, there were gaps identified within the wooden cladding on the eastern aspect of the building. The roof was lined with felt and eaves were well sealed therefore providing greater potential for roosting bats internally.	High
B6	A building composed of breeze blocks with a corrugated metal roof. There was a hole on the southern aspect of the building within the breeze block side. This created access into a cavity within the wall that was considered to provide potential for roosting bats.	Moderate
B7	An open-ended barn in active use for cattle. Breeze block supports, metal beams and corrugated metal roof. Owing to the open structure subject to the elements and diurnal changes it was considered unsuitable for roosting bats.	Negligible
B8	A brick building with a pitched roof of slate tiles. There were some missing roof tiles, however, the inside of the structure had no felt underlay. It was considered that access by bats may be possible through missing tiles.	Low
B9	The structure is a large water storage tank; there was no access within the structure or any features on the exterior of the structure that could provide potential for bats.	Negligible

B10	The structure was a small open ended barn with wood supports and a corrugated metal roof. Owing to the open structure it was considered unsuitable for roosting bats.	Negligible
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- 3.30 The scattered trees located onsite were assessed for their roosting bat potential. One tree, the Willow spp. to the north of site, had a broken limb, however, owing to the angle of this feature, it was expected that water ingress would provide unsuitable conditions for roosting bats within the feature so this was deemed negligible to provide suitable conditions for roosting bats. No PRF's were identified on any of the other trees on site, including those within the south-east woodland.

Foraging and Commuting Habitat

- 3.31 The site was dominated by developed land in the form of buildings and hardstanding, considered to have negligible potential for foraging and commuting bats. However, the boundary features including the woodland to the south-east, mixed scrub, and tall forbs may provide some invertebrate foraging opportunity for bat species. However, the parcel of woodland is small, with a lack of connectivity with woodland in the surrounding landscape. Therefore, it was considered that foraging and commuting bats may utilise the site opportunistically, but it is not considered to be a valuable resource for foraging and commuting bats.

Great crested newts (GCN)

- 3.32 During the survey, access was granted to the waterbodies identified within the desktop study. P2 and P3 within Figure 4 were determined to be absent, discussions with the client determined that P2 was formerly a slurry pit owned by the wider North Choller Farm that has since been filled. P3 appears to be an area of flooding that appears seasonally within the cow grazed fields. Therefore, these were not considered to provide potential for breeding GCN.
- 3.33 The site visit identified P1 was present to the south-east of site (Figure 4), this was considered to provide some potential for breeding GCN owing to the emergent and marginal vegetation suitable for egg laying and did not appear to have any fish within. However, short sward cow grazed fields separate the site from this pond. It was also considered that the habitats present onsite including majority hardstanding was not suitable for GCN in their terrestrial phase. However, the longer sward tall forbs, mixed scrub, and woodland was considered to be more suitable for the species.

Dormice

- 3.34 The majority of site was not considered suitable for dormice given the dominance of developed land. The mixed scrub to the east was considered to provide limited suitability for the species owing to the sparse nature of the scrub, predominantly comprised of stands of elder scrub. Similarly, the shrub layer of the south-eastern woodland was also comprised of stands of elder scrub. However, the site has poor connectivity to the surrounding landscape. As such, the site is considered to have negligible potential to support dormouse.

Reptiles

- 3.35 The site was dominated by developed land in the form of buildings and hardstanding considered unsuitable for foraging, commuting, and basking reptiles. The woodland and scrub habitats were also considered unsuitable for reptiles owing to the shaded nature of the habitats thereby limiting basking opportunities for reptiles.
- 3.36 Additionally, the majority of grassland onsite is subject to regular disturbance owing to active use within the farm; the short sward nature of the modified grassland in addition to areas of sparsely vegetated land were also considered unsuitable for reptiles owing to the lack of cover from potential predators. However, the areas of longer sward grassland and tall forbs were considered to provide some suitability for foraging and refugia seeking reptiles. Overall, it is considered that the site has limited suitability for reptiles mainly around site boundaries.

Nesting and breeding birds

- 3.37 The woodland to the south-east, scattered trees, and parcels of scrub around site were considered to provide suitable opportunities for nesting birds during the appropriate season. Due to the level of disturbance of the grassland onsite, it is considered the site is unsuitable for ground nesting birds.
- 3.38 Two of the buildings onsite, B1 and B3, contained barn owl boxes (Target Note 2, Appendix 1). However, no barn owl pellets were identified within the buildings onsite. Building B3, additionally had ventilation slits on all aspects of the building, a number of these on the southern aspect were closed on the outside thereby providing space for nesting birds. A number of buildings onsite contained suspected swallow nests, this includes buildings B2, B5, and B8. These were empty at the time of the surveys; however, it was considered owing to the open access of the majority of buildings onsite that birds may utilise the structures within the appropriate season.

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- 3.39 An update walkover and barn owl box check was undertaken on the 23rd June. A licenced individual undertook a top-down check of buildings B1 and B3, first checking the barn owl boxes then investigating the ground level for any evidence of barn owls. No evidence of barn owls nesting within the boxes were identified. Within B3, little owl feathers and several kestrel pellets were identified on the floor of the barn.

Badgers

- 3.40 There were a number of mammal holes identified to the east of site, due to the size and shape of the holes these were considered likely to be rabbit holes. These holes were located within the woodland and tall forb habitats, the approximate locations are highlighted within Appendix 1, Target Note 1. No badger hairs were identified near any of the holes, and no badger latrines were identified anywhere onsite.

Other species

- 3.41 Given the open nature of the site, it was considered that hedgehogs may utilise the woodland and scrub habitats for foraging and commuting purposes.
- 3.42 The site was not considered to provide suitable habitat for other protected species such as otters or water voles. There was a ditch that culverts within site and runs adjacent to the south-east of site, owing to the habitats adjacent to the ditch and nature of the woodland, the site was not considered suitable for these species.

Target Notes¹

Target Note 1 – Mammal holes

- 3.43 There were a number of mammal holes identified in the south-east of site within the woodland and the tall forb habitats onsite. These were small in size and were believed to be in use by rabbits.

Target Note 2 – Barn owl boxes

- 3.44 Two of the buildings onsite, buildings B1 and B3, contained barn owl boxes on the wooden joists. Close inspection of these boxes was not conducted at the time of the survey; however, no barn owl pellets were identified within these buildings.

¹ See Appendix 1 Habitat Map showing target note locations

4.0 Discussion

- 4.1 The following paragraphs consider the effects of the development on designated sites, priority habitats and protected and priority species. Where the desk study and UKHab survey provides sufficient evidence for an assessment of effects on any of these groups to be taken through planning, these are detailed below, the need for additional surveys and when and how these should be completed are summarised, if required.

Effects on designated sites

- 4.2 There are several internationally designated sites located within 15km of the site, the closest of which include Solent and Dorset SPA c. 6.1km south, Duncton to Bignor Escarpment SAC c. 7.3km north, and Arun Valley SAC, SPA, and Ramsar c. 9.8km north-east of site. Given the distance between the designated sites and proposed development site, it is considered that the proposed scheme will not result in the loss, fragmentation, or isolation of these sites or impact the features for which they are designated. Additionally, it is considered that the habitats onsite do not support any of the species that the designated sites are designated for.
- 4.3 The site lies within the 12km buffer zone of Singleton and Cocking Tunnels SAC, designated for supporting populations of Barbastelle and Bechstein's bat. At 11.9km from the Sussex Bat SAC the site is considered to be on the outer fringe of the wider conservation area wherein significant impacts or severance to flightlines are to be considered. However, it is considered as the site lacks mature linear features, the woodland may provide suitable habitat however lacks connectivity with other woodland in the local area. Therefore, it is considered that the favourable conservation of the species the site is designated for will not be impacted by proposed works.
- 4.4 The site does not fall within any statutory designated area, additionally, there are no nationally designated sites located within 2km of the site. The closest designated site is Fairmile Bottom SSSI and LNR located c. 3.5km north-east of site. Due to the distance and lack of connectivity with the designated site it is not considered any direct or indirect impacts are expected.

Effects on priority habitats

- 4.5 There are several priority habitats identified within the local area, the closest of which were ancient and semi-natural woodland c. 360m south-east, deciduous woodland c. 360m south-east, and lowland fens c. 480m north-east. Given the distance and lack of connectivity to site it is considered that proposed development will not result in the isolation or fragmentation of these priority habitats.

Effects on on-site habitats

- 4.6 The site comprises generally common and widespread habitat types, with the most significant value being provided by the other broadleaved woodland, individual trees, and mixed scrub. The habitat in the centre of site are not considered to be ecologically significant comprising of developed land in the form of hardstanding and buildings. The loss of the majority of habitat onsite is not considered to be ecologically significant owing to the developed nature of the site within the wider North Choller Farm, however, the loss of any habitats on site should be suitably addressed within a Biodiversity Net Gain Assessment, targeting a minimum of a 10% increase in biodiversity units present post development.

Protected Species

Bats

Roosting assessment

- 4.7 The ten buildings identified onsite were assessed for their roosting bat potential, these have been classified to having '**negligible**', '**low**', '**moderate**', or '**high**' roosting bat potential in accordance with the Bat Conservation Trust (BCT) Good Practice Guidelines (2023).
- 4.8 Buildings B1, B3, and B8 were considered to have **low** bat roost potential and as such will require one dusk emergence survey to be conducted between May and August inclusive. If any bats are identified to be emerging from these buildings, a further two surveys will need to be conducted, at least three weeks apart from May to September, inclusive.
- 4.9 Buildings B2 and B6 were considered to have **moderate** bat roost potential, and as such, will require two dusk emergence surveys to be conducted between May and September inclusive, at least three weeks apart with at least one of the surveys conducted between May and August. If bats are identified on either of these visits, a third survey will be required.
- 4.10 Building B5 was considered to have **high** bat roost potential and will require three dusk emergence surveys to be conducted between May and September inclusive, at least three weeks apart with at least two surveys between May and August.
- 4.11 Buildings B4, B7, B9, and B10 were considered to have **negligible** bat roost potential, and as such these will require no further survey work.

- 4.12 In regard to trees identified onsite, none of the scattered trees or trees located within the woodland were considered to house any PRFs and therefore no further surveys are recommended for these trees.

Foraging and commuting habitats

- 4.13 The site was considered to support suitable habitat for foraging and commuting bats in the form of scrub habitats, mature trees and hedgerow. According to Bat Conservation Trust guidelines, it is important that proportionality is employed when recommending further survey work for bat species on a proposed development site. As stated within section 2.2.19 of the latest survey guidelines (2023), the following points need to be taken into account with regard to planning bat surveys:

- Likelihood of bats being present;
- Type of proposed activities;
- Scale of proposed activities ;
- Size, nature and complexity of the site;
- Species concerned;
- Number of individuals.

- 4.14 In terms of the likelihood of bats using the site for foraging and commuting purposes, there are a number of bat species present within 1km of the site boundary in local records, most of which are common and widespread species including common and soprano pipistrelle, noctule, and brown long-eared bat. The desktop study also identified barbastelle c. 890m north of site. However, the site is dominated by developed land of negligible potential for foraging and commuting bats. Although the boundary features including woodland, mixed scrub, and tall forbs may provide suitable foraging opportunity for bat species, it was considered that the site lacks connectivity with more suitable habitat in the surrounding landscape. Overall, it was considered that foraging and commuting bats may utilise the site opportunistically however is not considered to be a valuable resource for foraging and commuting bats and further surveys are not recommended.

- 4.15 It is always recommended that a sensitive lighting scheme is implemented as part of the scheme. All bat species are nocturnal, resting in dark conditions in the day and emerging at night to feed. Many species of bats are known to sample light levels before emerging from their roost; only emerging for their night's hunting when the light intensity outside reaches a critical level after sunset. Artificial lighting can restrict and shorten the time bats spend foraging at night or

completely discourage bats from using an area at all. This needs to be considered, with a sympathetic lighting scheme for the development. Recommendations include:

- Installing lighting only if there is a significant need;
- Using LED luminaires due to their lower intensity, sharp cut-off and good colour rendition – any lights with UV elements or metal halide lights should not be used;
- Lights with peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone 2012);
- Lights with an upward light ratio of 0% and good optical control;
- Careful consideration of column height to avoid light spill;
- Avoid putting lighting near hedgerows or other boundary features and angling light away from these linear features which are used by commuting and foraging bats;
- Planting a barrier or using man-made features required within the scheme to form a barrier

Great-crested newts

- 4.16 There is one pond located within 250m of the site, this is P1 located c. 100m south-east, this has been considered to provide some potential for breeding GCN owing to the emergent and marginal vegetation suitable for egg laying and did not appear to have any fish within. However, short sward cow grazed field separate the site from this pond. It was also considered that the habitats present onsite including majority developed land was not suitable for GCN in their terrestrial phase. The tall forbs, mixed scrub, and woodland were considered to be more suitable for the species, therefore, it is recommended that eDNA surveys are carried out on pond P1 to determine whether this is a GCN breeding pond. Mitigation can be assessed once the results of these surveys have been conducted to determine likely presence/absence.

Reptiles

- 4.17 The majority of site was considered unsuitable for reptiles owing to the developed nature of the site. Additionally, the grassland onsite is subject to regular disturbance by machine access and active farm use. It was considered that these areas of short sward grassland and bare ground were unsuitable for reptiles owing to the lack of cover from potential predators.
- 4.18 Some suitability is located in longer sward grassland and tall forbs along boundaries of site, and as such it is recommended a reptile survey be conducted to assess the potential reptile assemblage present, and design appropriate mitigation. The site should be surveyed by using artificial refugia following Froglife, 1999 guidance. This must be conducted during the reptile

survey season of March to September, inclusive. Some survey in October may be possible if suitable weather conditions persist. Reptile refugia (roofing felt mats) should be placed across site and left to bed in for a period of two weeks prior to the first check. The refugia should be checked seven times, under suitable conditions of below 18°C, in dry and clear weather.

Nesting and breeding birds

- 4.19 The mixture of habitats including woodland, scattered trees, and scrub was considered to provide opportunities for nesting birds. As such, any removal of suitable habitat should be implemented outside the breeding bird season (March-September inclusive) or immediately after a nesting bird check by a suitably qualified ecologist. If an active nest is identified, works in the vicinity of the nest must cease until the birds have fledged the nest.
- 4.20 Old suspected swallow nests were identified within three of the buildings onsite, B2, B5, and B8. Although these were empty at the time of the surveys, it is recommended that major works to these buildings are undertaken outside the nesting bird season or are first inspected by a suitably trained ecologist for any active birds nests.
- 4.21 Two of the buildings onsite, B1 and B3, contained barn owl boxes (Target Note 2, Appendix 1). However, no barn owl pellets were identified within any of the buildings onsite and the desktop study did not return records of the species within 1km of the site. These were investigated by a licenced individual and it was not considered barn owls were utilising the boxes onsite.
- 4.22 With the site subject to regular disturbance and having limited value to specialist bird species such as ground nesting birds, no local SPAs for which the site could be functionally linked, it is considered that further breeding bird surveys would not be required.

Badgers

- 4.23 There were a number of mammal holes identified to the east of site, the majority of these are small in size and were believed to likely be rabbit holes. However, as a precaution sticks wrapped in sticky tape were loosely placed over the two largest hole and monitored on the update walkover, these had not moved and there were no hairs identified, therefore these were confirmed not to be in use by badgers or other wildlife at the time of the survey. It is recommended that prior to works, an update walkover is conducted to ensure no setts have been created between the last visit on site and the start of works.

-
- 4.24 If any additional mammal holes are discovered during the works and will be affected by the proposals, these should be assessed by a suitably qualified ecologist to determine the species of their inhabitant and whether any further survey measures and mitigation are required. Holes not inhabited by badgers that will be impacted by works, can be excavated sensitively by hand tools; this will ensure that individuals are not crushed or asphyxiated during works in line with the requirements of the Wild Mammals Protection Act 1996.
- 4.25 To protect any burrowing mammals including badgers, during the construction phase of the project, best practice guidelines are recommended to be followed, to help ensure no individuals are harmed during the construction phase of the project:
- Any excavations and/or trenches associated with construction are either covered at night or supplemented by means of escape for any badgers that may fall into the excavation whilst foraging;
 - Any open pipes or conduits laid should be blocked off each night to prevent badgers from entering them;
 - As far as possible, construction work should only take place between dawn and dusk with no late evening work to reduce possible disturbance.

Other species

- 4.26 The site has potential to support hedgehogs within the woodland and scrub habitats. Whilst receiving no specific legal protection, they are protected from certain forms of harm under the wild mammals (Protection) Act 1996. There is a risk that without mitigation, vegetation clearance could result in the death or injury of hedgehogs. As such, it is recommended that any scrub vegetation and refugia piles are hand searched prior to clearance. Any hedgehogs found should be allowed to move off site of their own accord or removed gently by hand to an area of safety.
- 4.27 Suitable habitat for stag beetle is not present across most of the site, which consists of developed land and highly disturbed grassland.
- 4.28 The site was not considered to provide suitable habitat for other protected species such as hazel dormice, otters, or water voles.

Ecological Enhancements

- 4.29 A number of enhancements can be incorporated within the development scheme to help reduce potential ecological impacts to provide net gains to biodiversity in line with NPPF (2021) and the

proposed Environment Bill. It is important to utilise native species of local provenance in landscaping schemes to enhance the ecological value of a development.

- 4.30 Log piles can be created using any woody material removed during works for use as refugia by reptiles, amphibians, small mammals and invertebrates (Figure 7). They can be situated in a variety of locations, such as damp places with some situated in sunnier locations. They can be placed, around the very edges of the site and positioned under mature trees. These should be stacked and perhaps some leaf litter added. Planting around log piles with species such as honeysuckle or clematis can also add value.



Figure 7: Log piles and hibernacula can be created within the edges of the site or in the retained habitats on site

- 4.31 All adjoining garden fences on site should have a 13cm x 13cm hole at the bottom to provide a passageway for hedgehogs to travel between gardens and other habitats on site. Fences and walls are one of the main reasons why hedgehog numbers are declining as the amount of land available to them is reduced. To ensure that new residents do not block these 'highways', small signs can be erected above the hole, such as those produced by the People's Trust for Endangered Species (PTES), informing them of their purpose (Figure 8). Hedgehog boxes can also be installed within areas of greenspace in discrete locations against boundary features and/or scrub where they will be sheltered and undisturbed (Figure 8).



Figure 8: Hedgehog highway sign for fences (hedgehogstreet.org) (left) and hedgehog box (right)

- 4.32 It is recommended that integrated bat tubes be incorporated into the structure of a range of new buildings on site, to provide new roosting opportunities for crevice-dwelling species.
- 4.33 They should be installed into buildings close to known commuting and foraging routes along important linear features on development boundaries with dark corridors. An example of a recommended tube might include Schwegler 2FR Bat Tubes and Habibat 001 bat boxes unfaced for render (Figure 9). Both require no maintenance as droppings fall out of the entrance ramp. The added benefit of the Schwegler 2FR tubes is that connecting holes allow several tubes to be placed next to each other to create a larger roost space. These should be placed where they will receive sunlight for most of the day, on south and west-facing aspects, as temperature is an important factor in the success of artificial bat roosts. They should also be placed as close to the eaves or gable apex as possible and not above windows to reduce the risk of cat predation. They should not be placed closed to artificial light sources. A booklet should be created for future homeowners informing them of what the tubes are for and the legal protection surrounding bat roosting sites.

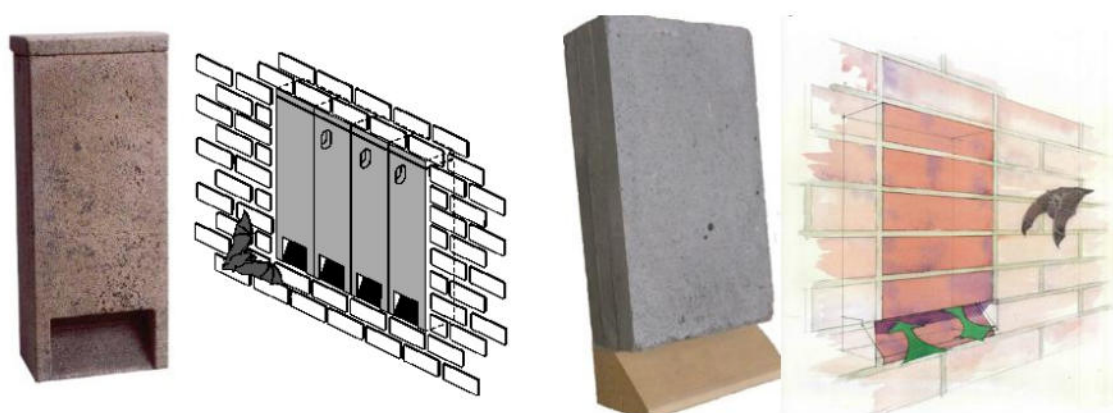


Figure 9: Schwegler 2FR tube (left) and Habibat 001 bat box (right)

- 4.34 Another type of roost which can be incorporated into certain buildings is a soffit bat box (Figure 10). This caters for crevice-dwelling species such as pipistrelles and certain *Myotis* species such

as Natterer's and Whiskered bat. This type of box makes use of an underutilised area of a building and would require no maintenance as droppings would drop through the entrance hole. These should be located on buildings close to linear features and dark corridors and if installed on private buildings, the owners should be made aware of their purpose and legal protection.



Figure 10: Soffit bat box (Wildcare)

4.35 Tree-mounted bat boxes can also be installed in suitable retained trees onsite to create additional roosting provision. Recommended boxes include:

- Vivara Pro WoodStone Bat Box – A general purpose bat box that supports a range of species (Figure 11). These can be hung on trees in a variety of heights and aspects in order to provide a variety of micro-climates.
- Large Multi Chamber WoodStone Bat Box – This is a multipurpose box designed for larger colonies and a range of bat species including pipistrelles, noctules and brown long-eared bats. These should be hung on mature trees around the site (Figure 11).



Figure 11: Vivara Pro WoodStone Bat Box (left) and Large Multi Chamber WoodStone Bat Box (right)

4.36 Additional bird nesting opportunity can also be installed on site, as integrated boxes within proposed buildings and within existing trees on site. Hardwearing woodcrete boxes, or similar, are recommended. Figure 12 gives examples of suitable bird boxes, of which these or similar,

could be installed on the buildings or trees. The box should be positioned on a north or east facing aspect and at least 2m above the ground if possible, swallow bowls should be positioned inside an outbuilding or porch close to the ceiling (c.6cm).



Figure 12: Examples of suitable bird boxes which could be installed on site – Vivara Pro WoodStone Swallow bowl (left), Vivara Pro Barcelona WoodStone Open Nest Box (centre) and Vivara Pro Seville 32mm WoodStone Nest Box (right)

- 4.37 It is recommended that replacement barn owl boxes be installed onsite to replace the loss of the existing barn owl boxes located inside the buildings onsite. Examples of suitable boxes that can be installed on suitable retained trees onsite or on the side of any new buildings are displayed in Figure 13.



Figure 13: Examples of barn owl nest boxes which could be installed on site – Nestbox Company Barn Owl Nest Box (left) and Wildcare Eco Barn Owl Nest Box (right)

5.0 IMPACT ASSESSMENT

- 5.1 This section of the report forms an EcIA (Ecological Impact Assessment) and is designed to quantify and evaluate the potential impacts of the development on habitats and species present on site or within the local area.
- 5.2 The approach to this assessment accords with guidance presented within the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM 2023). In essence, an EcIA assesses the activities associated with a proposed scheme that are likely to generate changes within identified zone of influences, on identified ecological features and receptors. The proposals are subsequently reviewed and mitigation and compensation measures are outlined which help to reduce negative impacts.
- 5.3 Table 2 below summarises the impacts and required mitigation for each receptor as previously detailed in the discussion.

Table 2: Assessment of effects from the proposal after mitigation and compensation.

Feature	Scale of Importance	Mitigation/Compensation Required	Residual Effect
Designated sites	International, national and country	None required.	Not significant
Priority Habitats	Local	None required	Not significant
On-Site Habitats	Site	Will require off-site offsetting in line with BNG principles.	Not significant
Bats (Roosting)	Not yet determined	Presence/likely absence surveys to be undertaken of a number of building on site	Not yet determined
Bats (commuting and foraging)	Up to site	Sensitive lighting	Not significant
GCN	Not yet determined	eDNA survey of nearby pond required.	Not yet determined
Reptiles	Not yet determined	Presence/likely absence surveys to be undertaken	Not yet determined
Breeding Birds	Site	Use of bird boxes, including provision for swallows.	Not significant
Badgers, foxes and hedgehogs	Site	Pre-works walkover and construction safeguards should be implemented to avoid impacting badgers and other small mammals that might commute or foraging within the site	Not significant

6.0 Conclusions

- 6.1 No impacts on statutory designated sites are anticipated as a result of the development, owing its small scale, no loss of associated habitat and significant distance .
- 6.2 The sycamore woodland on site did not qualify as a priority habitat and the proposed development is not expected to result in any impacts to priority habitats in the surrounding area..
- 6.3 Other broadleaved woodland, modified grassland, scrub and ruderal habitat will be lost as a result of development. Retained habitat can be enhanced for biodiversity, however it is considered likely that off-site offsetting will be required.
- 6.4 Three buildings, B1, B3, and B8 were considered to have low bat roost potential and will require one dusk emergence survey; Buildings B2 and B6 were considered to have moderate bat roost potential and will require two surveys; and, Building B5 was considered to have high bat roost potential and will require three surveys. Surveys should be conducted between May and August, inclusive.
- 6.5 If a bat roost is to be impacted as part of proposals a Natural England mitigation licence will need to be secured prior to works once planning permission has been secured and any relevant conditions discharged.
- 6.6 None of the scattered trees or trees located within the woodland were considered to house any PRFs and therefore no further surveys are recommended.
- 6.7 It was considered the site offered limited suitability for foraging and commuting bats, and no further activity surveys were considered necessary on the basis that any external lighting proposed on site is designed to be sensitive to bats. .
- 6.8 A single suitable pond is present in the local surrounding area. An eDNA surveys is required in order to better understand to presence of GCN in the immediate area and inform a sufficient mitigation strategy if required.
- 6.9 The majority of site was considered unsuitable for reptiles owing to the developed nature of the site and regular disturbance due to active farm use. However, suitable reptile habitats were identified within longer sward grassland and ruderal boundary habitats. As such, reptile surveys have been recommended to be carried out from March – September, inclusive.

- 6.10 It is considered that there are suitable bird nesting and foraging habitat across the site that could be disturbed as a part of the development. It is recommended that clearance of any suitable breeding bird habitat or major interior works to the buildings should be conducted outside the nesting bird season (March – August inclusive), if that is not possible then immediately after a nesting bird check conducted by a suitably qualified ecologist.
- 6.11 Two buildings onsite, B1 and B3, contained barn owl boxes. Investigation of these boxes did not indicate any evidence of barn owls utilising the boxes however there was evidence of little owl and kestrel within B3. It is recommended that replacement bird and barn owl boxes be erected in and around site to compensate for the loss of these.
- 6.12 A number of mammal holes were identified to the east of site and considered likely to be rabbit holes owing to the size, however, as a precaution the two largest holes were monitored with the use of sticky sticks and after a month of no movement of these sticks it was considered the holes were not in use. An update pre-works check for badger setts and best practice guidelines have been outlined within this report to protect any burrowing mammals.
- 6.13 The site was not considered to provide suitable habitat for other protected species such as dormice, otters, and water voles.
- 6.14 Recommendations for enhancements have been made within this report, aimed at improving the ecological value of the site post-development.

7.0 References

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ISBN: 978-1-0687982

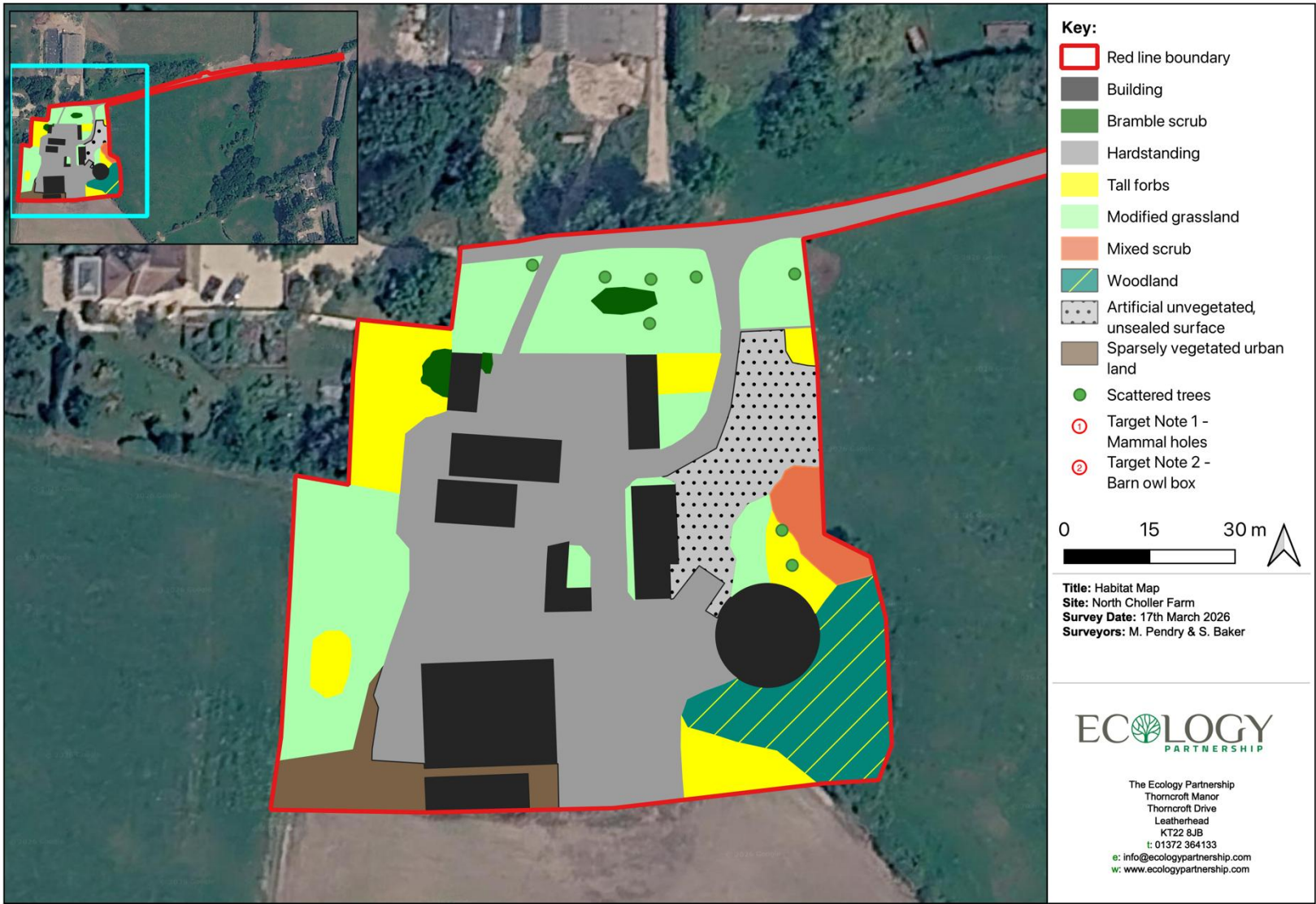
Internet resources:

Google Maps: www.google.co.uk/maps

Magic Interactive Map: www.magic.gov.uk

Arun District Council: www.arun.gov.uk

Appendix 1: Habitat Map



Appendix 2: Photographs

Photograph 1:
Other broad-leaved
woodland in the
south-east of site
bordering B9



Photograph 2:
Acer spp. within
tall forb habitat



Photograph 3: Building B1	 A photograph of a large, old stone building with a steep, tiled roof. The building is partially covered in ivy and has a small window and a doorway. It is situated in a rural area with trees and a dirt path in the foreground.
Photograph 4: Missing tiles on B1 roof	 A close-up photograph of the tiled roof of Building B1. Three red circles are drawn on the roof to highlight areas where tiles are missing or damaged. The roof is covered in dark brown tiles, and a gutter is visible at the bottom.

Photograph 5:
Barn owl box
within B1



Photograph 6:
Internals of B1,
light easily enters
through open
western and
eastern aspects



Photograph 7: Slate roof on B2	 A photograph showing the exterior of a building with a slate roof. The roof is made of dark grey slate tiles. Below the roofline, there is a brick wall with a section of stone masonry. A dark wooden door is visible on the left side of the frame. The sky is blue with some light clouds, and a tree is visible in the background on the right.
Photograph 8: Roof lining within B2 showing gaps within felting	 A photograph showing the interior of a roof structure. It features wooden rafters and a dark, textured lining material. There are visible gaps and tears in the lining material, particularly along the edges and between the rafters, indicating damage or poor installation.

Photograph 9:
Suspected swallow
nests within B2



Photograph 10:
Internal of B3
including barn owl
box



Photograph 11: Hole within brickwork of B3 considered to provide potential for crevice dwelling bat species	
Photograph 12: Boarded ventilation slit on B3 with an old bird's nest	

Photograph 13:
Ventilation slits on
B3 with some
boarded on the
outside



Photograph 14:
Building B4
connected to the
south of B3



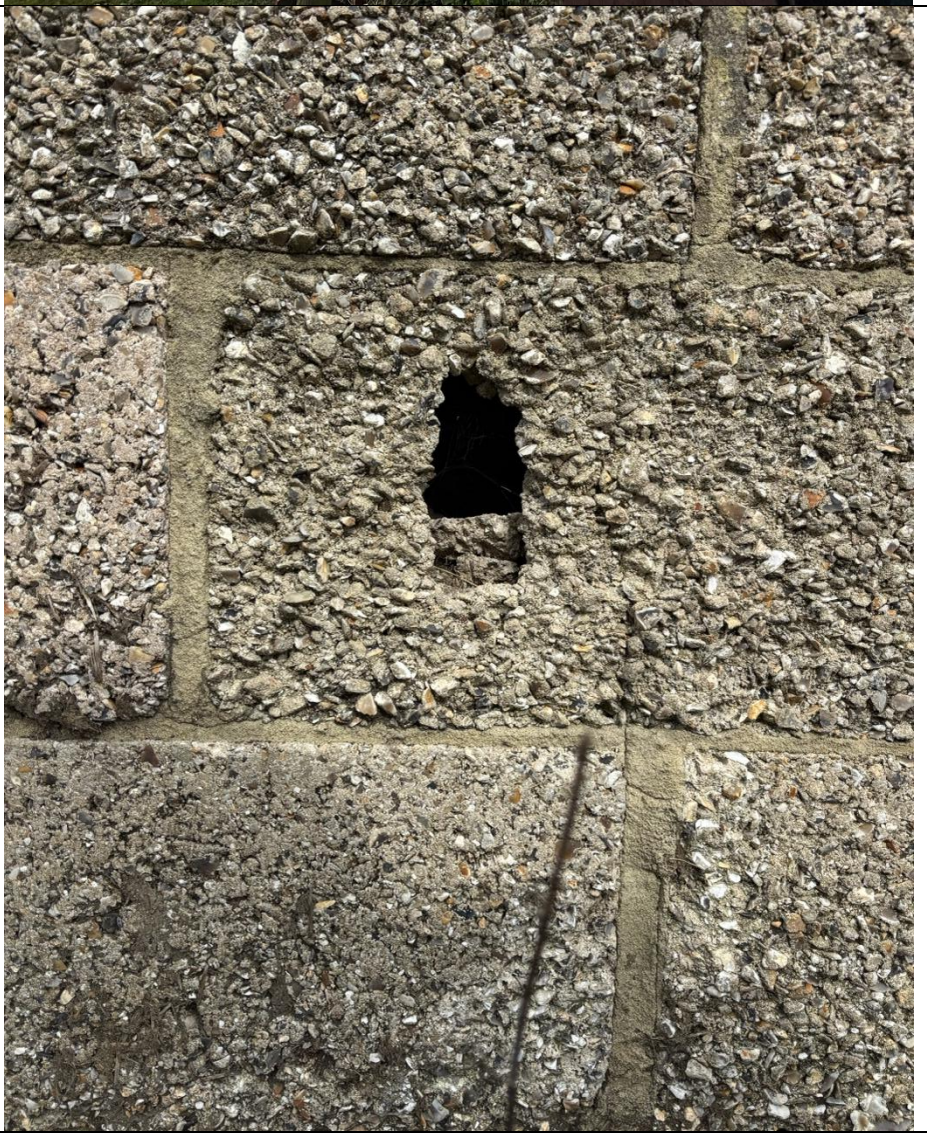
Photograph 15:
Building B5



Photograph 16:
Inside building B5



Photograph 17: Missing mortar on hip tile on B5	
Photograph 18: Missing tile on B5 roof	

Photograph 19: Wooden cladding on side of B5 and B6 breeze block structure and corrugated metal roof	
Photograph 20: Hole within breeze block on B6 creating a cavity that roosting bats may utilise	

Photograph 21: B7 in use for cattle	
Photograph 22: Lesser duckweed within trough adjacent to B7	

Photograph 23:
Building B8



Photograph 24:
Inside B8, no
underlay for the
roof, missing tiles
lets light into the
building



Photograph 25:
Bramble scrub
adjacent to
building B2



Photograph 26:
Modified grassland
onsite



Photograph 27: Hardstanding onsite	 A photograph showing a large, flat, paved area (hardstanding) at a construction or agricultural site. The surface is dark and appears wet or muddy in places. In the background, there are several large piles of gravel and sand, and a yellow tractor is visible on the right. A dark building is on the left, and trees are in the distance under a blue sky with scattered clouds.
Photograph 28: Artificial unvegetated unsealed surface under regular disturbance	 A photograph showing a muddy, rutted path or track. The surface is dark brown and heavily disturbed, with deep tire tracks and puddles of water. In the background, there are trees and a small building, suggesting a rural or farm setting. The sky is blue with some clouds.

Photograph 29:
Trees to the north
of site within
modified
grassland,
including small
area of bramble



Photograph 30:
PRF identified on a
tree to the north of
site, however, was
ruled out owing to
likely water ingress



Photograph 31:
Pond P1



Photograph 32:
Area wherein OS
mapping indicates
P2 is located



Photograph 33:
Area wherein OS
mapping indicates
P3 is located



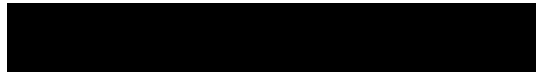
Appendix 3: Species List

Common name	Latin name	DAFOR score
Modified grassland, g4		
Perennial ryegrass	<i>Lolium perenne</i>	D
Creeping buttercup	<i>Ranunculus repens</i>	O
Yarrow	<i>Achillea millefolium</i>	R
Bristly oxtongue	<i>Helminthotheca echioides</i>	R
Broadleaved dock	<i>Rumex obtusifolius</i>	O
Greater plantain	<i>Plantago major</i>	O
Field speedwell	<i>Veronica agrestis</i>	R
Common whitlowgrass	<i>Draba verna</i>	R
White clover	<i>Trifolium repens</i>	O
White dead-nettle	<i>Lamium album</i>	R
Lesser burdock	<i>Arctium minus</i>	R
Spear thistle	<i>Cirsium vulgare</i>	R
Common mallow	<i>Malva sylvestris</i>	R
Yorkshire fog	<i>Holcus lanatus</i>	F
Tall forbs (west), g3c 16		
Common nettle	<i>Urtica dioica</i>	F
Hogweed	<i>Heracleum sphondylium</i>	F
Common ragwort	<i>Jacobaea vulgaris</i>	O
False oat-grass	<i>Arrhenatherum elatius</i>	F
Meadow foxtail	<i>Alopecurus pratensis</i>	O
Creeping thistle	<i>Cirsium arvense</i>	F
Smooth sowthistle	<i>Sonchus oleraceus</i>	O
White dead-nettle	<i>Lamium album</i>	O
Pineappleweed	<i>Matricaria discoidea</i>	O
Yorkshire fog	<i>Holcus lanatus</i>	O
Common dandelion	<i>Taraxacum officinale</i>	O
Canadian fleabane	<i>Erigeron canadensis</i>	R
Nipplewort	<i>Lapsana communis</i>	R
Common couch	<i>Elymus repens</i>	O
Cocksfoot	<i>Dactylis glomerata</i>	O
Perennial sowthistle	<i>Sonchus arvensis</i>	O
Broad-leaved dock	<i>Rumex obtusifolius</i>	O
Common mallow	<i>Malva sylvestris</i>	O

Tall forbs (southwest), g3c 16		
Common nettle	<i>Urtica dioica</i>	F
False oat-grass	<i>Arrhenatherum elatius</i>	R
White dead-nettle	<i>Lamium album</i>	O
Yorkshire fog	<i>Holcus lanatus</i>	O
Canadian fleabane	<i>Erigeron canadensis</i>	R
Common couch	<i>Elymus repens</i>	R
Cocksfoot	<i>Dactylis glomerata</i>	O
Broad-leaved dock	<i>Rumex obtusifolius</i>	F
Common mallow	<i>Malva sylvestris</i>	R
Mugwort	<i>Artemisia vulgaris</i>	O
White campion	<i>Silene latifolia</i>	O
Lesser burdock	<i>Arctium minus</i>	F
Creeping bent	<i>Agrostis stolonifera</i>	O
Barren brome	<i>Bromus sterilis</i>	R
Red campion	<i>Silene dioica</i>	R
Spear thistle	<i>Cirsium vulgare</i>	R
Tall forbs (east), g3c 16		
Common nettle	<i>Urtica dioica</i>	A
Cleavers	<i>Galium aparine</i>	A
Common ivy	<i>Hedera helix</i>	A
Garlic mustard	<i>Alliaria petiolata</i>	R
Sparsely vegetated urban land (u1f)		
Goosefoot	<i>Chenopodium album</i>	A
Knotweed sp.	<i>Reynoutria sp.</i>	A
Pineappleweed	<i>Matricaria discoidea</i>	O
Scented mayweed	<i>Matricaria chamomilla</i>	F
Common mallow	<i>Malva sylvestris</i>	R
Smooth sowthistle	<i>Sonchus oleraceus</i>	R
Redshank	<i>Persicaria maculosa</i>	O
Forget-me-not	<i>Myosotis arvensis</i>	R
Greater plantain	<i>Plantago major</i>	R
Mixed scrub, h3h		
Dogwood	<i>Cornus sanguinea</i>	R
Elder	<i>Sambucus nigra</i>	F
Other broadleaved woodland, w1h		
Common nettle	<i>Urtica dioica</i>	A
Lords-and-ladies	<i>Arum maculatum</i>	O
Ivy	<i>Hedera helix</i>	O

Garlic mustard	<i>Alliaria petiolata</i>	R
Cleavers	<i>Galium aparine</i>	F
Creeping buttercup	<i>Ranunculus repens</i>	R
Perennial ryegrass	<i>Lolium perenne</i>	R
Elder	<i>Sambucus nigra</i>	F
Sycamore	<i>Acer pseudoplatanus</i>	A
Wild cherry	<i>Prunus avium</i>	R
Hazel	<i>Corylus avellana</i>	R
Hawthorn	<i>Crataegus monogyna</i>	R
Bramble scrub, h3d		
Bramble	<i>Rubus fruticosus</i>	D
Hardstanding, u1b6		
Herb Robert	<i>Geranium robertianum</i>	R
Common mouse-ear	<i>Cerastium fontanum</i>	R
Common dandelion	<i>Taraxacum officinale</i>	R
Common groundsel	<i>Senecio vulgaris</i>	R
Lesser duckweed	<i>Lemna minor</i>	R
Scattered trees		
<i>Acer</i> sp.	<i>Acer</i> sp.	-
Willow sp.	<i>Salix</i> sp.	-
Horse chestnut	<i>Aesculus hippocastanum</i>	-
Poplar sp.	<i>Populus</i> sp.	-

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