



SMALL ECOLOGY LIMITED

Preliminary Ecological Assessment Report Barns at Fears End Farm, Sandon, Buntingford, SG9 0QZ



Report completed by: Chris Smith, CEnv, MIEMA

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Table of Contents

Non-technical summary.....	4
1. Background.....	11
2. Methods for desktop and field survey.....	11
2.1 Preliminary ecological assessments.....	11
2.2 Roost characterisation surveys.....	12
3. Results.....	13
3.1 Site location and features.....	13
3.2 Protected sites.....	13
3.3 Habitats present.....	18
3.4 Screening assessment for species.....	23
4. Assessment of effects.....	29
4.1 Description of project.....	29
4.2 Effects of project.....	29
4.3 Habitats and species features.....	29
5. Recommendations.....	33
5.1 Recommendations for further surveys.....	33
5.2 Requirements for additional assessments.....	33
5.3 Application of mitigation hierarchy.....	33
5.4 Recommendations for construction mitigation.....	35
5.5 Recommendations for enhancement.....	35
5.6 Requirements for licencing.....	36
6. References.....	37
7. Figures.....	38
7.1 Site location and features.....	38
7.2 Results of records centre search.....	42
7.3 Results of MAGIC search.....	43
7.4 Details of project proposal.....	45
8. Photographs.....	48
8.1 External views of main buildings.....	48
8.2 Other site features.....	53
8.3 Habitats within site.....	54
Appendix 1 : Plant list for site.....	58
Appendix 2 : Protocol for Preliminary Ecological Assessment.....	59
Appendix 3 : Protocol for Preliminary Bat Roost Assessment of buildings and structures.....	61
Appendix 4 : Protocol for great crested newts.....	62
Appendix 5 : Biological Records Centre search results.....	64
Appendix 6 : Detailed descriptions of buildings.....	65

Report summary

Scope	Preliminary Ecological Assessment Report,
Project	Barns at Fears End Farm, Sandon, Buntingford, SG9 0QZ
Planning description	"Conversion of agricultural buildings into 9 dwellings"
Address	Fears End Farm, Sandon, Buntingford, HERTS SG9 0QZ
Grid reference	532610, 234977
Development area (approx)	~1853m ²
Date of site visit	25/07/23
Date of MAGIC search	12/08/23
Planning authority	North Hertfordshire Council
Application reference	not available
Report author	Chris Smith, CEnv, MIEMA

Non-technical summary

This report is a Preliminary Ecological Assessment Report that assesses Barns at Fears End Farm, Sandon, Buntingford, SG9 0QZ, described in the report as the project. The project location is at Fears End Farm, Sandon, Buntingford, HERTS SG9 0QZ and the grid reference is 532610, 234977. The development area of the project extends to an area of ~1853m².

The site consists of a series of agricultural sheds and buildings of various constructions along with associated hardstanding and small areas of gardens, amenity grassland and fruit trees. There are no mature trees within the site. The site has a wooded copse adjacent to the south which is connected to a hedgerow network. To the east of the site is a substantial woodland, but the surrounding land use is predominantly arable.

The report is to assist a planning application to North Hertfordshire Council, for which the reference is not available. The description of the project in the planning application is "Conversion of agricultural buildings into 9 dwellings".

The report was produced to inform the client and their design team about

- the key ecological constraints and opportunities associated with the project;
- key possible mitigation requirements following the 'Mitigation Hierarchy'; and
- any detailed further surveys that might be required.

Supporting surveys

The following were carried out to establish an ecological baseline at the site:

- a desktop search, including of MAGIC and of the Local Environment Records Centres;
- a walkover of the site and surrounding areas on 25/07/23, including an assessment of the potential for protected species;
- a Preliminary Roost Assessment of buildings and trees at the site
- Bat Roost Characterisation surveys, of upto three emergence surveys on each buildings on dates of 04/07/2024, 10/07/2024, 30/07/2024 and 19/08/2024.

Personnel

Chris Smith CEnv, MIEMA, who has a Level 2 (CL18) licence to survey bats from Natural England and a Level 1 licence (CL08) to survey for newts, carried out the field work and report writing.

Designated sites

There is one designated sites within 1km of the site, Blagrove Common SSSI , which is approx 1350 m to south.

There are no Local Wildlife Sites directly adjacent to the site, but Philpott's Wood is 130m east of the site. There are multiple other Local Wildlife Sites and Ancient Woodlands within 2km.

Habitats and species

Details of habitats and species are given in the following tables.

There was a Common pipistrelle *Pipistrellus pipistrellus* maternity roost, emerging from the southern gable end of Building 1 and potentially other locations on east elevations.

Numbers of emerging bats peaked at upto ~96 Common pipistrelle on 30/07/2024.

Common pipistrelle *Pipistrellus pipistrellus* commuting was also noted from Building 1 into tree belt to south and then east into the nearby wood.

Lighting levels

The site has low levels of lighting approximating to Zone E2 of ILE(2020). There is existing external lighting on some buildings, but no nearby street lights or urban areas.

Table 1: Scoping assessment for site features: Habitats

Habitat	Potential S41 priority habitat?	Local significance?	Details	Further consideration?
A1.1.2 Broadleaved woodland - plantation	Yes	Yes	[TN6] Poplar plantation mixed with ash and other species to south and outside of ownership; ; outside of redline	No
A1.1.2 Broadleaved woodland – plantation {orchard}	No	Yes	[TN18] Outside the barns and storage areas, there is a small orchard to the South of Barn #5 .	No
B2.2 Neutral grassland - semi-improved	No	No	[TN12] Small meadow to north with apparent good diversity; outside of redline and ownership	No
B6 Poor semi-improved grassland	No	Yes	[TN2] Grass verge associated with field edge and barn; some species of interest but not high diversity; outside of redline	No
G2.1 Running water - eutrophic	No	No	[TN13] Ditch to south of site; low water quality; limited water depth; outside of redline	No
J1.1 Cultivated/disturbed land - arable	No	No	[TN16] Vegetable gardens	No
J1.2 Cultivated/disturbed land - amenity grassland	No	No	[TN17] Adjacent arable fields; sown to cereals; outside of redline and ownership	No
J2.1.1 Intact hedge - native species-rich	Yes	Yes	[TN4] Hedge to west of road; [TN5] Hedge to east of road in front of main house; outside of redline	Yes
J2.3.1 Hedge with trees - native species-rich	Yes	Yes	[TN3] Hedge running north and south of site along road; ; outside of redline	Yes
J3 Built-up areas	No	No	Former agricultural buildings and surrounding yards, roads and hardstanding	No

Table 2 Scoping assessment for site features: Species

Species	Statutory protection?	Evidence of presence?	Potentially present ? ¹	Details	Further consideration?
Rare and scarce plants	No	No	No	Generally hardstanding and ruderal habitats; no potential within existing buildings and surrounds	No
Great crested newts	Yes	No	No	Desktop records within 2km, but none close; no nearby ponds within 250m.	No
Reptiles	Partial	No	No	No suitable habitat for reptiles, assuming development doesn't extend into the meadow to the north. The site mainly consists of hard standing, small areas of ruderal rules and tightly mown amenity grassland.	No
Breeding birds	Yes	Yes	Yes	Old nests and potential for nesting birds within the buildings. Species noted including yellow hammer singing in the trees adjacent, and also blackbird, chaffinch and dunnock.	Yes
- Barn owls and other Schedule 1 species	Yes	No	No	No signs of barn owls noted; no potential roosting or breeding sites within buildings. Red kite flew over, but no potential nesting areas within site.	No
Water vole	Yes	No	No	Stream present along south side regarded as too shallow and ephemeral to support species; no potential for water voles.	No
Hazel dormouse	Yes	No	No	Majority of site unsuitable habitats; hedgerows recently coppiced; significant distance to suitable habitat such as Philpott's Wood; no nearby records	No
Bats					
- Roosts within site	Yes	No	Yes	Common pipistrelle maternity roost present in Building #1. Limited potential within other buildings and no evidence of emergence	Yes
- Foraging/commuting	Yes	No	No	Rural locality with good hedgerows; near very large woods to east; highly likely to be used by foraging commuting bats on south side; species present Brown long-eared Plecotus auritus , Natterer's Myotis nattereri, Soprano pipistrelle P. pipistrellus pygmaeus and potential Leisler's Nyctalus leisleri. Brief passes of Barbastelle Barbastellus barbastella were also noted.	Yes
Badger	Yes	No	Yes	No obvious signs of badgers within the site. The surrounding landscapes is highly suitable . Setts may be present in plantation to south.	Yes
Otter	Yes	No	No	Limited aquatic habitats; very high within catchment; no potential for otters; no desktop records .	No

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Likely significant effects

The development area mainly consists of hardstanding and building and any impacts are seen as being limited to the following pathways:

- Direct loss of hedgerows and trees from any widening of visibility splays;
- Direct effects on breeding birds within buildings or hedgerows if carried out during the breeding season;
- Direct effects on bats and their roosts from conversion works;
- Increased light levels in nearby woodland and hedges and affect nocturnal species, in particular bats;
- Construction effects in particular from use of adjacent areas e.g. for storage of materials;
- Accidental discharges to the ditch affecting water quality.

Additional surveys and assessments

Additional recommended surveys are set out in the following table and if species are present mitigation may be required to prevent impacts upon them.

Table 3: Further surveys required

Feature	Additional surveys	Target areas
Breeding birds	If clearance work carried out during breeding season, carry out breeding bird surveys to establish if birds are present	

"Biodiversity Net Gain" as proposed within the Environment Bill 2021 does not apply to Class Q applications.

Application of the mitigation hierarchy

Suggestions are made as to a strategy for the Application of the mitigation hierarchy, which is a sequence of four key actions being 'avoid', 'minimize', 'restore' and 'offset', is set out in best practice by Ekstrom et al (2015) ¹

The project design should avoid impacts on sensitive areas by:

- Retaining the existing hedgerows and associated trees and maintaining a buffer;
- Maintaining a buffer along the southern wooded boundary during construction;
- Avoiding accidental discharge into the existing ditch;

¹.Ekstrom, J., Bennun L and Robin Mitchell, R. (Lead authors) (2015) A cross-sector guide for implementing the Mitigation Hierarchy. Prepared by The Biodiversity Consultancy for CSBI

- Avoiding additional lighting by incorporating a lighting design to prevent light pollution. The site should be subject to a lighting plan as per Zone E2 of ILP Guidance.

The works should be subject to a Construction Environment Management Plan, to include details of working methods; access routes; Construction Exclusion Zones as required; location of any storage for materials; location of compounds and control of any substances hazardous to the environment; and works after dark or use artificial lighting; and post construction restoration measures.

Outline species specific measures are suggested.

Proposed enhancements

To enhance the site for wildlife, the following are suggested :

- To the north and east around the site boundary, a new native hedge could be planted.
- Additional tree planting could take place north of the buildings within hedgerows.
- Bat and bird boxes could be included within any new buildings or on adjacent trees.

Requirements for licencing

Licensed mitigation will be required for bats during works close to or on Building 1.

1. Background

This report is a Preliminary Ecological Assessment Report that assesses Barns at Fears End Farm, Sandon, Buntingford, SG9 0QZ, described in the report as the project.

The report supports a planning application to North Hertfordshire Council, for which the reference is not available. The description of the project in the planning application is "Conversion of agricultural buildings into 9 dwellings".

The site is located at Fears End Farm, Sandon, Buntingford, HERTS SG9 0QZ at 532610, 234977. The development extends to an area of ~1853m².

The site consists of a series of agricultural sheds and buildings of various constructions along with associated hardstanding and small areas of gardens, amenity grassland and fruit trees. There are no mature trees within the site. The site has a wooded copse adjacent to the south which is connected to a hedgerow network. To the east of the site is a substantial woodland, but the surrounding land use is predominantly arable.

The following were carried out :

- a desktop search, including of MAGIC and of the Local Environment Records Centres;
- a walkover of the site and surrounding areas on 25/07/23, including an assessment of the potential for protected species;
- a Preliminary Roost Assessment of buildings at the site;
- Bat Roost Characterisation surveys carried out in 2024.

2. Methods for desktop and field survey

2.1 Preliminary ecological assessments

Using the protocols as given in this document's appendices for Protocol for Preliminary Ecological Assessment and Protocol for Preliminary Bat Roost Assessment of buildings and structures, the site was surveyed on 25/07/23 between 14:00 and 17:30. The site was revisited in July to September 2024 during evening bat surveys, when conditions remained unchanged.

A search of Local Environment Records Centres was agreed with the client and is included at Appendix 5 : Biological Records Centre search results.

A search was made of MAGIC on 12/08/23.

Weather conditions on for the PEA were: Dry and sunny; patchy showers in previous days.

Chris Smith CEnv, MIEMA, who has a Level 2 (CL18) licence to survey bats from Natural England (Ref 2015-13304-CLS-CLS) and a Level 1 licence (CL08) to survey for newts (ref 2015-18961-CLS-CLS), carried out the field work and report writing.

Checks were made of buildings on site and the grounds surrounding these. Access was made to all loft voids and spaces that were safely accessible.

2.2 Roost characterisation surveys

Details of these are given within the accompanying report.

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3. Results

3.1 Site location and features

The project's location and key features are shown in Figure 2 : Site location and key features.

The proposed development area of the project extends to an area of ~1853m².

3.2 Protected sites

The relationship of the development to this site is available to planning officers have access to boundary maps of these, referencing their filecode and name.

There are 16 Local Wildlife Sites within 2km as shown in Table 3.1: Local wildlife sites within 2km. There are an additional 13 Ancient Woodlands. The nearest Local Wildlife Site is Philpott's Wood, which is a large woodland 130m east of the site.

There is one statutorily designated sites within 2km, which is Blagrove Common SSSI, approximately 1,138m south. The site is within an Impact Risk Zone for the site, but there are no applicable risks of concern.

Table 3.1: Local wildlife sites within 2km

File Code	Site Name	Grid Reference	Area (ha)	Description	Distance (m)	Further consideration ?
14/014	Philpott's Wood	TL329349	11.67	Mixed plantation on former Ash (<i>Fraxinus excelsior</i>)/Field Maple (<i>Acer campestre</i>)/Hazel (<i>Corylus avellana</i>) woodland. Wildlife Site criteria: Semi-natural woodland with some semi-natural canopy, a varied structure and ancient physical features; incorporates small woods shown on Bryant (1822) (including the wooded parish boundary); a single small wood is shown on the 1st Ed OS; <1 ha; woodland indicators.	130	
14/052	Sandon Churchyard	TL322345	0	Old churchyard with rough, occasionally mown, unimproved neutral/slightly calcareous grassland with a good mix of herbs and grass species, including Red Fescue (<i>Festuca rubra</i>), Lady's Bedstraw (<i>Galium verum</i>), Common Knapweed (<i>Centaurea nigra</i>), Greater Knapweed (<i>Centaurea scabiosa</i>), Wild Basil (<i>Clinopodium vulgare</i>), Oxeye Daisy (<i>Leucanthemum vulgare</i>), Meadow Vetchling (<i>Lathyrus pratensis</i>) and Burnet-saxifrage (<i>Pimpinella saxifraga</i>). Church and environs important for protected species. Wildlife Site criteria: Grassland indicators; species.	440	
07/036	Lord's Wood (N.E. of Sandon)	TL331352	2.25	Ancient semi-natural broadleaf woodland with a high canopy of Ash (<i>Fraxinus excelsior</i>) and Pedunculate Oak (<i>Quercus robur</i>) standards plus Field Maple (<i>Acer campestre</i>). Shrub layer consists of Hawthorn (<i>Crataegus monogyna</i>), Elm (<i>Ulmus</i> spp.), Hazel (<i>Corylus avellana</i>) and young Field Maple. Some coppicing of Field Maple and Hazel. Ground flora typically Dog's Mercury (<i>Mercurialis perennis</i>) and Bluebell (<i>Hyacinthoides non-scripta</i>). Wildlife Site criteria: Ancient Woodland Inventory site.	520	
07/024	Collins Green Lane	TL334348	1.19	Green lane with old hedgerow (linear woodland) supporting woodland indicators, such as Bluebell (<i>Hyacinthoides non-scripta</i>), Giant Fescue (<i>Festuca gigantea</i>) and Wood Meadow-grass (<i>Poa nemoralis</i>), and a good diversity of woody species, including Wayfaring-tree (<i>Viburnum lantana</i>). Important for mammals and birds. Wildlife Site criteria: Green lane with features and structure indicative of ancient origins; woodland indicators.	620	
14/015	Notley Lane	TL330343	0.46	Old green lane with a muddy track and ancient species-rich hedges and ditches including Pedunculate Oak (<i>Quercus robur</i>), Ash (<i>Fraxinus excelsior</i>), Field Maple (<i>Acer campestre</i>), Hazel (<i>Corylus avellana</i>), Dogwood (<i>Cornus sanguinea</i>), Spindle (<i>Euonymus europaeus</i>) and Wayfaring Tree (<i>Viburnum lantana</i>). Bluebell (<i>Hyacinthoides non-scripta</i>), Dog's Mercury (<i>Mercurialis perennis</i>) and Primrose (<i>Primula vulgaris</i>) have been recorded in the ground flora. Wooded green lane shown as a wooded strip Bryant (1822).	640	

14/016	Notley Green Common	TL329342	1.58	An area of damp unimproved tussocky grassland crossed by a ditch in the south-west. The grassland assemblage includes much Tufted Hair-grass (<i>Deschampsia cespitosa</i>) with Common Knapweed (<i>Centaurea nigra</i>), Meadow Vetchling (<i>Lathyrus pratensis</i>) and Marsh Thistle (<i>Cirsium palustre</i>). The western side adjacent to the road is dense Blackthorn (<i>Prunus spinosa</i>) scrub with some Grey Willow (<i>Salix cinerea</i>) and old Crack Willows (<i>Salix fragilis</i>). The eastern part of site is dense thorn scrub grading into Pedunculate Oak (<i>Quercus robur</i>) woodland with Ash (<i>Fraxinus excelsior</i>), Field Maple (<i>Acer campestre</i>) and Elder (<i>Sambucus nigra</i>). Wildlife Site criteria: Grassland indicators.	710	
14/017	Tichney Wood	TL326338	3.74	Ancient coppiced semi-natural woodland with limited standards. The woodland is mainly Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) coppice and Oak/Ash (<i>Fraxinus excelsior</i>)/Field Maple (<i>Acer campestre</i>)/Hazel (<i>Corylus avellana</i>) coppice with a fairly good ground flora; including abundant Bluebell (<i>Hyacinthoides non-scripta</i>) and Dog's Mercury (<i>Mercurialis perennis</i>) plus species such as Wood Anemone (<i>Anemone nemorosa</i>) and Primrose (<i>Primula vulgaris</i>). Early Purple Orchid (<i>Orchis mascula</i>) has also been recorded. Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.	970	
14/032	Hawkins Wood	TL337347	9.62	Ancient semi-natural Ash (<i>Fraxinus excelsior</i>)/Field Maple (<i>Acer campestre</i>)/Hazel (<i>Corylus avellana</i>) woodland with old coppiced Hazel and a low frequency of standards, but Ash and elm (<i>Ulmus</i> spp.) becoming prominent to the south. Thorn scrub is also present. The ground flora is not diverse but supports some woodland indicator species, mainly Dog's Mercury (<i>Mercurialis perennis</i>) and Bluebell (<i>Hyacinthoides non-scripta</i>). Additional species recorded include Wood Sedge (<i>Carex sylvatica</i>), Giant Fescue (<i>Festuca gigantea</i>), Wood Meadow-grass (<i>Poa nemoralis</i>), and the orchids Common Twayblade (<i>Neottia ovata</i>) and Common Spotted-orchid (<i>Dactylorhiza fuchsii</i>). Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.	1020	
07/017	Ducks' Green & Kelshall Lane	TL337356	2.73	Old green lane, wet in places with marshy vegetation, tall herbs, grasses and bordered by substantial hedges and tree fringes which support a good mix of woody species, including several large Elms (<i>Ulmus</i> sp.), and typical hedgerow flora. Wildlife Site criteria: Green lane with features and structure indicative of an ancient origin.	1280	
14/051	The Chapel, Roe Green	TL317337	0	Building and environs important for protected species. Wildlife Site criteria: Species.	1420	
14/009	Roe Green Common	TL314336	6.23	Large village green with areas of unimproved neutral grassland on damp Boulder Clay supporting a species-rich community. Plants recorded include Cowslip (<i>Primula veris</i>), Adder's-tongue (<i>Ophioglossum vulgatum</i>), Welled Thistle (<i>Carduus crispus</i>), Lady's Bedstraw (<i>Galium verum</i>), Lady's-smock (<i>Cardamine pratensis</i>), False Fox-sedge (<i>Carex otrubae</i>) and Creeping-Jenny (<i>Lysimachia nummularia</i>). There is a series of small ponds plus mixed species hedges and patches of scrub are present along parts of the boundary. Wildlife Site criteria: Grassland indicators.	1450	

14/010	Roe Wood	TL311341	11.44	Ancient semi-natural woodland with derelict Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) coppice plus some old Ash (<i>Fraxinus excelsior</i>) stools in the centre of the wood. Large areas replanted with Norway Spruce (<i>Picea abies</i>) and Hybrid Black Poplar (<i>Populus x canadensis</i>). There is some Ash/Field Maple (<i>Acer campestre</i>)/Hazel (<i>Corylus avellana</i>) coppice in the south-east corner. A pond adds to the habitat diversity. Wildlife Site criteria: Ancient Woodland Inventory site with restorable elements of its previous semi-natural character including some semi-natural canopy and ancient features; woodland indicators.	1470	
14/031	West Wood (W. of Buckland)	TL340336	7.6	Ancient semi-natural woodland composed of Ash (<i>Fraxinus excelsior</i>)/Field Maple (<i>Acer campestre</i>)/Hazel (<i>Corylus avellana</i>) and Pedunculate Oak (<i>Quercus robur</i>)/Hornbeam (<i>Carpinus betulus</i>) coppice-with-standards. The ground flora is moderately diverse and supports a number of woodland indicators including Bluebell (<i>Hyacinthoides non-scripta</i>), Dog's Mercury (<i>Mercurialis perennis</i>), Early Dog-violet (<i>Viola reichenbachiana</i>) and Primrose (<i>Primula vulgaris</i>). Habitat diversity is increased by the presence of a pond, stream and ditches. Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.	1820	
07/016	Ducks' Green West Meadow	TL336366	2.23	Old meadows supporting unimproved neutral grassland with a good mix of herb and grass species, including much Common Knapweed (<i>Centaurea nigra</i>) and Yellow Rattle (<i>Rhinanthus minor</i>), an uncommon species in the County. The southern meadow contains a pond. Wildlife Site criteria: Grassland indicators.	1830	
14/024	Friars Wood	TL320328	24.58	Ancient semi-natural woodland composed principally of Pedunculate Oak (<i>Quercus robur</i>), Ash (<i>Fraxinus excelsior</i>) and Field Maple (<i>Acer campestre</i>) with Hazel (<i>Corylus avellana</i>) coppice. There is a small area in the east of Ash/Hornbeam (<i>Carpinus betulus</i>) coppice and some Grey Willow (<i>Salix cinerea</i>) scrub to the north. The ground flora is species-rich and is typical of a wet Boulder Clay wood. Species recorded include Bluebell (<i>Hyacinthoides non-scripta</i>), Wood Anemone (<i>Anemone nemorosa</i>), Remote Sedge (<i>Carex remota</i>), Wood Millet (<i>Milium effusum</i>), Primrose (<i>Primula vulgaris</i>) and Common Dog-violet (<i>Viola riviniana</i>). Several plants of limited distribution within the County have been noted including Common Twayblade (<i>Neottia ovata</i>), Herb Paris (<i>Paris quadrifolia</i>) and Wood Small-reed (<i>Calamagrostis epigejos</i>). An old ditch, moats and ponds and a derelict green lane bisecting the wood add habitat diversity. A good diversity of birds has been recorded. Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.	1930	
14/023	Sandon Moor	TL324329	2.34	One of the few surviving Boulder Clay acidic marshes in the county with a rich flora characterised by Blunt-flowered Rush (<i>Juncus subnodulosus</i>), Great Horsetail (<i>Equisetum telmateia</i>) and Marsh Valerian (<i>Valeriana dioica</i>). Long established ditches bisecting the site support Common Watercress (<i>Rorippa nasturtium-aquaticum</i>), Brooklime (<i>Veronica beccabunga</i>) and sedges (<i>Carex</i> spp.). Much of the southern half of the moor is covered by wet and dry scrub consisting of Goat and Grey Willow (<i>Salix caprea</i> and <i>S. cinerea</i>) plus old coppiced Alder (<i>Alnus glutinosa</i>), Hawthorn (<i>Crataegus monogyna</i>) and Hazel (<i>Corylus avellana</i>) with scattered trees of Ash (<i>Fraxinus excelsior</i>) and Pedunculate Oak (<i>Quercus robur</i>). Dog's Mercury occurs in the drier areas. Wildlife Site criteria: Grassland indicators.	1990	

Table 3.2: Ancient Woodland Inventory Sites

Site Name (where known)	Grid Reference	Category	Area (ha)	Distance (m)
	TL326338	ASNW	3.69	970
	TL308342	ASNW	1.63	1770
	TL338346	ASNW	5.42	1070
	TL307342	PAWS	0.67	1940
Friars Wood	TL321327	ASNW	24.81	1930
Lords Wood	TL331352	ASNW	2.25	520
Roe Wood	TL309340	ASNW	0.44	1830
Roe Wood	TL312341	ASNW	4.39	1510
Roe Wood	TL312340	PAWS	0.92	1570
Roe Wood	TL310340	PAWS	0.63	1730
Roe Wood	TL313341	PAWS	0.74	1470
Roe Wood	TL311342	PAWS	1.77	1570
West Wood	TL340336	ASNW	7.60	1820

Table 3.3: Scoping assessment for site features: Statutorily designated sites

Designated site	Statutory protection?	Details	Potential linkage ?	Further consideration
Blagrove Common SSSI	Yes	Marsh grassland with <i>Juncus subnodulosus</i> - <i>Cirsium palustre</i> and locally uncommon species . Approx 1350 m to south https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1000847	No	No

3.3 Habitats present

Features are target noted [Tx] in Figure 2 : Site location and key features and photographs are presented in Section 8. Photographs.

A1.1.2 Broadleaved woodland - plantation

To the south of the site there is a poplar *Populus* plantation [TN6] mixed with some ash and other tree species and with a reasonable understory of Blackthorn *Prunus spinosa* and a ground flora that includes false wood broom *Brachypodium sylvaticum* and Dog's-mercury obvious.

The northern edge of the wood may be a former hedged on the south side of the ditch, but the hedge line appears defunct if present.

South of Barn #5, there is a small orchard [TN18], consisting of a limited number of trees.

The plantation, but not the orchard, appears to be potential S41 Priority Habitat and to be of 'local' significance. The plantation is a relevant consideration for planning.

B2.2 Neutral grassland - semi-improved

To the north of Farm, there is a small area of grassland managed as a meadow [TN12] with apparent good diversity. This appears to be outside the red line, so was not investigated fully, but appears diverse inspected from the adjacent track. Present are Meadow barley, Meadow Timothy, Red fescue and Crested dog's tail as well as Ox's-eye Daisy. Ladies bedstraw, Hedge bedstraw, Tufted vetch, Yarrow, and significant amounts of white Clover and false oak grass.

This seems to be potentially cut for hay and it is about 50 centimetres tall and reasonably tussocky. It is bounded on the north side by the hedge of the neighbours farm.

This does not appear to be potential S41 Priority Habitat. The feature is assessed as being of 'local' interest as habitat. This habitat is outside of the redline and not a relevant consideration for planning, but may be worth consideration for Biodiversity Net Gain.

B6 Poor semi-improved grassland

The grass verge associated with the field edge and barn surrounds [TN2] have some species of interest, but is not of high diversity

This is an area of ruderals and tall grassland with species including Hoary ragwort, creeping thistle, Tall oat-grass, Nettles, Red bartsia, Bramble, Hairy tare, Bristly ox's-

tongue, Scentless mayweed, White Clover, and teasel, along with soft creeping grass, especially along the track margins.

This does not appear to be potential S41 Priority Habitat. This habitat does not appear to be of 'local' significance. This feature is not a relevant consideration for planning.

G2.1 Running water - eutrophic

Along the south of the site is a ditch/stream [TN13] which has low water quality and limited water depth, considering recent rain. There is no associated backside vegetation to the stream with vegetation including bearded couch and False wood brome as well as a thickets of nettles.

This does not appear to be potential S41 Priority Habitat. This habitat appears to be of 'local' significance. This feature is a relevant consideration for planning.

J1.1 Cultivated/disturbed land - arable

Around the buildings to the south and east, there is a series of vegetable gardens [TN16]

To the north, the site is surrounded by adjacent arable fields [TN17], sown to cereals at the time of the survey.

These do not appear to be potential S41 Priority Habitat. This habitat appears to be of 'negligible' significance. This feature is not a relevant consideration for planning.

J2.1.1 Intact hedge - native species-rich

There are multiple hedgerows associated with the site, but not within the redline.

To west of road, there is a low hedge [Hedge A - TN4], which has field maple mixed with two small Ash, Field rose, suckering Elm, Blackthorn, and Bramble. There is no associated hedge bank. There is a hedge parallel on the other side which has connections to hedges on either end. There are scattered standards, including a large oak standard to the South. The field is accessed by a gate. There are also push-throughs in the hedge, which are probably from deer.

To the West of the road, Hedge B [TN4] has a very large oak in it with some limited bat features such as knot holes and flaky bark. It has a ditch. Species present include Hazel, Elder, Oak, Field Maple, scrambling Bramble, and Blackthorn. The hedge has been laid relatively recently, and has moderate regrowth. There is no associated woodland flora. Hairy Willowherb *Epilobium hirsutum* is common.

On the east side of the road in front of main house [Hedge C TN5], there is an "Intact hedge- native species-rich" which has been similarly coppiced and laid between the two entrances to the garden. It contains two trees being an Ash to the north and a Field Maple to the South. As well as similar species to those present in the Hedge A, there is

Field Maple again. There is an associated ditch on the outside. There is no significant flora.

All hedges are connected to a hedge to the north and to the South, Both the western and eastern hedges have a wide grassland verge in front of them. There is no particular diversity associated with the grass or hedge.

All hedges appears to be significant hedgerows and appears to be potential S41 Priority Habitat. This habitat appears to be of 'local' significance. This feature is a relevant consideration for planning.

J2.3.1 Hedge with trees - native species-rich

There are hedges with trees, running north and south along road [TN3], which appear to be native species-rich and with mature trees.

There is a hedgerow on the South side of the site [TN17], which runs eastwards along the margin of the arable field and links from the poplar woodland to Philpots Wood to the east [See note on Commuting bats].

These appears to be potential S41 Priority Habitat. This habitat appears to be of 'local' significance. This feature is a relevant consideration for planning.

Table 3.4: Summary of hedgerows

Target note	Hedge Reference	Details
Hedge A -[TN3]	J2.1.1 Intact hedge - native species-rich	To west of road, there is a low hedge, which has field maple mixed with two small ash trees, Field rose, suckering Elm, Blackthorn, and Bramble. There is no associated hedge bank. There is a hedge parallel on the other side and connections to hedges on either end. There are a number of standards
Hedge B [TN4]	J2.1.1 Intact hedge - native species-rich	The hedge is been laid relatively recently, and has moderate regrowth. A very large oak in it with some limited batch features such as knot holes and flaky bark. It has a ditch. Species present include. Hazel, elder, Oak, , Field Maple, scrambling bramble, and blackthorn. There is no associated woodland flora. Great Willow herb is common.
Hedge C [TN5]	J2.1.1 Intact hedge - native species-rich	On the east side of the road in front of main house There is an Intact hedge - native species-rich has been similarly coppiced and laid between the two entrances to the garden. It contains 2 trees and ash to the north and a Field Maple to the South. As well as a species present in the hedge, there is. Field Maple again. there is an associated ditch on the outside. No part within Flora.
Hedge D [TN21],	J2.3.1 Hedge with trees - native species-rich	There is a hedgerow on the South side of the site , which runs eastwards along the margin of the arable field and links to the poplar woodland.

Target note	Hedge Reference	Details
Hedge E [TN22]	J2.3.1 Hedge with trees - native species-rich	There are tall hedges with trees, running north and south along road , which are native species-rich and with mature trees.

J3 Built-up areas

There are a series of buildings on the site that are further described in [Appendix 6 : Detailed descriptions of buildings](#) and also discussed in [Bats](#).

The buildings are surrounded by a storage yard with occasional tall ruderals and recent tree plantings. There are also extensive concrete surrounds and hardstanding to buildings [TN14].

The relevant target notes are summarised below.

The boundary of the buildings are continuous with the surrounding field and there is no hedge or fence around the east and north.

The buildings are not S41 Priority Habitat and are of “negligible” significance. This feature is not a relevant consideration for planning.

[NB Planning references for buildings differ from field notes. Both are included below.]

Table 3.5: Buildings within site

Target note	Sworders Building Reference	Descriptions Reference	Details
[TN7]	Building 1	Barn #2	Large purpose built barn partly converted to storage and studio
[TN22]	Building 2	Barn 7	Storage unit made from corrugated metal with steel roof
[TN9]	Building 3	Barn #4.	Former agricultural shed, now used for storage; false ceiling internally prevented full inspection. Sheet roof; wooden walls
[TN10]	Building 4	Barn #5	Former agricultural shed, now used for storage and workshop;; false ceiling internally prevented full inspection. Sheet roof; wooden walls
[TN8]	Building 5	Barn #3.	Former agricultural shed, now used for storage. Sheet roof; wooden walls
[TN11]	Building 6	Barn #6.	Former agricultural shed, now used as workshop. Tiled roof; lined; loft present but no signs of bats on inspection
[TN22]	Building 7		Storage unit made from corrugated metal with steel roof

Other buildings not within application are as follows.

Table 3.6: Details of other buildings not within application

Target note	Descriptions Reference	Sworders Building Reference	Details
[TN1]	Barn #1	Not in application	Open fronted cart shed; separated from other buildings within complex
[TN15]	Existing bungalow	Not in application	Well maintained bungalow; not internally inspected

Aquatic habitats – Standing water

Within the site, there are no water bodies or any other aquatic habitats.

Based on Google and MAGIC, there are no ponds obvious within 250m.

3.4 Screening assessment for species

Rare and scarce plants

Although no specific survey was carried out, there was no evidence of rare or scarce plants found during the survey.

The habitats within the site mainly consist of hard standing and ruderals.

The desktop notes several rare and scarce plants within 2km, mainly associated with woodland habitats.

Whilst the adjacent woodland may have rare and scarce plants present, there is no potential within the existing buildings and their surrounds.

Rare and scarce plants are concluded as unlikely to be present based on the unsuitable habitats. Rare and scarce plants are not a relevant consideration for planning.

Great crested newts

There was one EPSL within 2km, although there were no records of great crested newts on MAGIC. There were 9 records returned by the desktop within 2km including breeding records.

There are however no nearby ponds within 250m. The ditch is shallow and flowing during rain and is not regarded as suitable habitat.

Table 3.7: Granted European Protected Species Applications (England)

Case reference of granted application	Species group to which licence relates	Species on the licence	Site county of licence	Licence Start Date
EPSM2013-6044	Amphibian	Great Crested Newt	Hertfordshire	09/09/2013

The species feature is concluded as unlikely to be present based on the lack of nearby ponds. The habitats on site generally consist of buildings and hardstanding and much of the site is unsuitable as terrestrial habitat.

Great crested newts and the habitat they use are protected under legislation. This species is a S41 Priority Species. This species feature is not a relevant consideration for planning.

Reptiles

Although no specific survey was carried out, there was no evidence of reptiles found during the survey.

There were three records returned within 2km by the desktop, including a single record of common lizard from Blagrove Common HMWT Nature Reserve (HERC 2024).

Table 3.8: Reptile species within 2km from desktop

Common name	Latin name
Common Lizard	Zootoca vivipara
Grass Snake	Natrix helvetica
Slow-worm	Anguis fragilis

There is no suitable habitat for reptiles, assuming development does not extend into the meadow to the north. The site mainly consists of hard standing, small areas of ruderals and tightly mown amenity grassland.

The species feature is concluded as unlikely to be present based on the lack of suitable habitat.

All species of reptile are protected under legislation. Some species are S41 Priority Species. This species feature is not a relevant consideration for planning.

Breeding birds

There was evidence of breeding birds found during the survey, which included old nests within the buildings. There were common birds observed during the survey, which included singing yellowhammer adjacent to the site with blackbird, chaffinch and dunnock present within the buildings and surrounding hedgerows. A red kite flew over during the survey.

The desktop notes multiple records of red kites and other Schedule 1 species (HERC 2024).

There were no evidence or suitable breeding places within the buildings of barn owls or other Schedule 1 species. Common breeding birds are present on or near to the site.

Nesting birds are protected under legislation. Species such as yellowhammer are a S41 Priority Species. Breeding birds are a relevant consideration for planning.

Water vole

There was no incidental evidence of water voles found during the survey. The ditch along the south of the site appears too shaded, shallow and lacking in suitable habitat to support water voles.

There were no records returned within the desktop (HERC 2024).

The habitats present on the site are not suitable for water voles and they are concluded as unlikely to be present.

Water voles and their burrows and nests are protected under legislation. Water voles are a S41 Priority Species. However this species feature is not a relevant consideration for planning.

Hazel dormouse

In England, dormouse are generally associated with ancient coppiced woodlands [see Goodwin et al. 2018 for a recent review]. The site is at some distance from the large and potentially suitable Philpott's Wood.

There were no suitable habitats for this species within or adjacent to the site. Whilst there are hedgerows along the road frontage, the hedgerow network runs largely through arable fields; and along the road frontage has been coppiced.

There were no records returned within the desktop (HERC 2024).

The species feature is concluded as unlikely to be present based on the lack of suitable habitat.

This species feature is not protected under legislation. This species is a S41 Priority Species. This species feature is not a relevant consideration for planning.

Bats

Site context

The site itself has few trees, but there is a large poplar plantation to the site and connections via hedgerows to a large wood to the east.

Lighting levels

The site is within a rural area. The site has external lighting associated with the buildings, but much of this is assumed not to be in operation at the present time.

As per ILP(2020) ² the site appears to correspond to Zone E2 "Rural: Low district brightness ". A baseline for external lighting would be required to confirm this technically.

Table 3.9: Lighting zones as per ILP Guidance Note 01/20

Zone	Surrounding Lighting	Environment Examples	Sky Quality Measurements
E0	Protected Dark	Astronomical Observable dark skies, UNESCO starlight reserves, IDA dark sky places	(SQM 20.5+)
E1	Natural Dark	Intrinsically dark National Parks, Areas of Outstanding Natural Beauty etc	(SQM 20 to 20.5)
E2	Rural Low district brightness	Sparsely inhabited rural areas, village or relatively dark outer suburban locations	(SQM ~15 to 20)
E3	Suburban Medium district	Well inhabited rural and urban settlements,	

² ILP(2020) Guidance Note 01/20: Guidance notes for the reduction of obtrusive light.

Zone	Surrounding Lighting	Environment Examples	Sky Quality Measurements
E4	brightness Urban High district brightness	small town centres of suburban locations Town/city centres with high levels of night-time activity	

Roosting bats

There were two ESPL for bat roosts within 2km as given in the following table, both of which were for breeding sites.

Table 3.10: Granted European Protected Species Applications (England)

Case reference of granted application	Species group to which licence relates	Species on the licence	Site county of licence	Licence Start Date
EPSM2010-2257	Bat	C-PIP;BLE;NATT	Hertfordshire	16/09/2010
2019-43358-EPS-MIT	Bat	BARB BLE C-PIP NATT	Hertfordshire	07/11/2019

There was no direct evidence of bats found during the survey.

The HERC desktop notes roosts or potential roosts for the following species within 2km

Table 3.11: Bat roosts within 2km

Common Name	Scientific Name
Natterer's Bat	Myotis nattereri
Barbastelle	Barbastella barbastellus
Brown Long-eared Bat	Plecotus auritus
Common pipistrelle	Pipistrellus pipistrellus
Serotine	Eptesicus serotinus
Soprano Pipistrelle	Pipistrellus pygmaeus

Potential of the buildings

There was no direct evidence of bats found during the initial surveys. The potential of the buildings is shown in Table 3.12: Potential of buildings for bats.

There is limited potential within buildings, except for the existing bungalow and Building 1. Suitable potential roosting features include weather boarding, tiled roofs and ridge tiles. The potentials for each building are set out in the following table.

For full details of buildings see [Appendix 6 : Detailed descriptions of buildings](#).

Table 3.12: Potential of buildings for bats

Target note	Sworders Building Reference	Building details reference	Details	Potential for bats
[TN7]	Building 1	Barn #2	Large purpose built barn partly converted to storage and studio	Medium
[TN22]	Building 2	Barn #7	Storage unit made from corrugated metal with steel roof	Negligible
[TN9]	Building 3	Barn #4.	Former agricultural shed, now used for storage; false ceiling internally prevented full inspection. Sheet roof; wooden walls	Negligible-Low
[TN10]	Building 4	Barn #5	Former agricultural shed, now used for storage and workshop;; false ceiling internally prevented full inspection. Sheet roof; wooden walls	Negligible-Low
[TN8]	Building 5	Barn #3.	Former agricultural shed, now used for storage. Sheet roof; wooden walls	Negligible
[TN11]	Building 6	Barn #6.	Former agricultural shed, now used as workshop. Tiled roof; lined; loft present but no signs of bats on inspection	Low

Other buildings not within application

Table 3.13: Potential of other buildings not within application

Target note	Reference	Sworders Building Reference	Details	Potential for bats
[TN1]	Barn #1	Not in application	Open fronted cart shed; separated from other buildings within complex	Negligible
[TN15]	Existing bungalow	Not in application	Well maintained bungalow; not internally inspected	Medium

Identified bat roosts

Subsequent surveys

Foraging/commuting

The site is within a rural locality with a good network of hedgerows and nearby very large woods to east. The site is highly likely to be used by foraging commuting bats, especially along the poplars and tall trees on the south side.

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E-mail: chris.smith@smallecology.uk || website: smallecology.uk

Page | 27

Conclusions

Bat roosts are present in Building 1 and other roosts may be present or near to the site.

Based on the habitats present and the limited lighting of the site, the site is concluded as likely to support significant activity by commuting and foraging bats.

Some species of bats are S41 Priority Species. Roosting, commuting and foraging bats are a relevant consideration for planning.

Badger

Although no specific survey was carried out, there was no evidence of badgers found during the survey.

There were 36 records returned within the desktop (HERC 2024).

The location appears highly suitable for badgers. There were no obvious signs of badgers within the site. The surrounding landscapes is highly suitable for badgers with large woodlands and a good hedgerow network. They may be present within adjacent areas such as woodlands and inaccessible areas. Setts within 50m are viewed as possible. Badgers and their setts may be present on or near to the site.

Badgers and their setts are protected under legislation. Badgers are not a S41 Priority Species. Badgers and badger setts are a relevant consideration for planning.

Otter

There was no incidental evidence of this species found during the survey.

There were no records returned within the desktop (HERC 2024).

Whilst there is a ditch on the southern boundary of the site, the site is felt to be too high in the watershed for any potential for otters and to have very limited associated wetland habitat.

Otters and their resting places are protected under legislation; and are a S41 Priority Species. This species feature is not a relevant consideration for planning.

Invasive species

There were no invasive species identified during the initial visit.

4. Assessment of effects

4.1 Description of project

Details of the project are given in [8. Details of project proposal](#), including a proposed layout.

The project description is "Conversion of agricultural buildings into 9 dwellings".

Alterations in lighting level are likely at the site in the absence of sensitive design.

4.2 Effects of project

Designated sites

"Impact Risk Zones"³ are a spatial tool used by Natural England to screen planning applications for potential impacts on designated sites such as SSSIs/SACs/SPAs & Ramsar sites. The tool can be accessed freely via the MAGIC website.

The site is within an impact zone. There are no applicable risks of concern.

Nutrient neutrality

The site is not within a catchment identified as requiring nutrient neutrality considerations.

Impacts from increase in recreational disturbance

The site is not within a location requiring a consideration of the increased recreational use of European sites associated with new development.

4.3 Habitats and species features

The direct impacts on habitats and features are summarised in Table 4.1: Habitat features: preliminary assessment of impacts and for species identified as likely to be present in Table 4.2: Species features: preliminary assessment of impacts.

Great crested newts

Natural England Rapid Risk Assessment⁴ is a method for screening projects for their effects on great crested newts.

Based on a distance of >250m and development footprint of less than 5 hectares, a Natural England Rapid Risk Assessment for newts gives a result of "Green", indicating an offence is highly unlikely if newts were present beyond these distances.

There is no potential for effects on great crested newts.

³See https://magic.defra.gov.uk/Metadata_for_magic/SSSI%20IRZ%20User%20Guidance%20MAGIC.pdf

⁴See https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509011/gcn-work-schedule.doc

Bats

The development of Building 1 will affect the Common pipistrelle maternity roost and this is not avoidable due to the location of the roosts within the building. Construction nearby may also cause disturbance to the roost.

Key identified pathways

The development area mainly consists of hardstanding and building and the impacts are seen as being limited to the following pathways:

- Direct loss of hedgerows and trees from any widening of visibility splays;
- Direct effects on breeding birds within buildings or hedgerows if carried out during the breeding season;
- Direct effects on bats and their roosts from conversion works of Building 1;
- Increased light levels in nearby woodland and hedges and affect nocturnal species, in particular bats;
- Construction effects in particular disturbance of the maternity roost and from use of adjacent areas e.g. for storage of materials;
- Accidental discharges to the ditch affecting water quality.

Table 4.1: Habitat features: preliminary assessment of impacts

Habitat	Potential S41 priority habitat?	Local significance ?	Likely significant effect from development ?	Further consideration for mitigation ?
A1.1.2 Broadleaved woodland - plantation	Yes	Yes	No: no direct impacts; outside of development area	Yes
A1.1.2 Broadleaved woodland – plantation {orchard}	No	Yes	No; loss of trees, but habitat not of significance	No
B2.2 Neutral grassland - semi-improved	No	No	No: no direct impacts; outside of development area	No
B6 Poor semi-improved grassland	No	Yes	No; loss of habitat, but habitat not of significance	No
G2.1 Running water - eutrophic	No	No	Yes; potential effects from accidental pollution during construction or operation; direct impacts from earthworks	No
J1.1 Cultivated/disturbed land - arable	No	No	No: no direct impacts; outside of development area	No
J1.2 Cultivated/disturbed land - amenity grassland	No	No	No; loss of habitat, but habitat not of significance	No
J2.1.1 Intact hedge - native species-rich	Yes	Yes	Yes; potential for effects from visibility splays or drainage works	Yes
J2.3.1 Hedge with trees - native species-rich	Yes	Yes	Yes; potential for effects from visibility splays or drainage works	Yes
J3 Built-up areas	No	No	No; loss of trees, but habitat not of significance	No

Table 4.2: Species features: preliminary assessment of impacts

Species	S41 priority species?	Statutory protection?	Likely significant effect from development ?	Further consideration?
Great crested newts	Yes	Yes	No [See above]	No
Breeding birds	Some	Yes	Yes, if construction during nesting season then potential loss of nests and disturbance	Yes
Bats	Some	Yes		
- Roosts within site	Some	No	Yes: direct loss or disturbance of roost sites within Building 1; potential for injury or death of bats present	Yes
- Foraging/commuting	No	Yes	Yes: loss of foraging and commuting features; increased lighting levels	Yes
Badger	No	Yes	Yes, risk of disturbance during construction if unidentified setts within 30m; potential for injury or death	Yes

5. Recommendations

5.1 Recommendations for further surveys

Recommendations for further surveys are set out in the following table.

Table 5.1: Further surveys required

Feature	Additional surveys	Target areas
Breeding birds	If clearance work carried out during breeding season, carry out breeding bird surveys to establish if birds are present	

5.2 Requirements for additional assessments

Biodiversity Net Gain

Biodiversity Net Gain is not required for "Class Q" applications made under Town and Country Planning (General Permitted Development) (England) Order 2015.

5.3 Application of mitigation hierarchy

As defined by the CSBI (2013⁵), the mitigation hierarchy is: *'the sequence of actions to anticipate and avoid impacts on biodiversity and ecosystem services; and where avoidance is not possible, minimize; and, when impacts occur, rehabilitate or restore; and where significant residual impacts remain, offset.'*

The NPPF refers to a three stage "mitigation" hierarchy, consisting of avoidance, mitigation and finally compensation.

Best practice is set out in Ekstrom et al (2015) ⁶ as a sequence of four key actions being 'avoid', 'minimize', 'restore' and 'offset', which differs slightly from the NPPF wording but is more clearly worded and is what will be referred to here.

The following is a broad overview of the approach within this project.

Avoidance

The project design should avoid impacts on sensitive areas by:

- Retaining the existing hedgerows on site and associated trees and maintaining a buffer;
- Maintaining a buffer between the woodland boundary and the development during construction.

⁵CSBI (2013a). Framework for Guidance on Operationalizing the Biodiversity Mitigation Hierarchy. December 2013.

⁶.Ekstrom, J., Bennun L and Robin Mitchell, R. (Lead authors) (2015) A cross-sector guide for implementing the Mitigation Hierarchy. Prepared by The Biodiversity Consultancy for CSBI

- Avoiding accidental discharge into the existing ditch
- Avoiding additional lighting by incorporating a lighting design to prevent light pollution. The site should be subject to a lighting plan as per Zone E3 of ILP Guidance.

Environment al Zone	Sky Glow ULR [Max %] ⁽¹⁾	Light Intrusion (into Windows) E _v [lux] ⁽²⁾		Luminaire Intensity I [candelas] ⁽³⁾		Building Luminance Pre-curfew ⁽⁴⁾
		Pre- curfew	Post- curfew	Pre- curfew	Post- curfew	Average, L [cd/m ²]
E0	0	0	0	0	0	0
E1	0	2	0 (1*)	2,500	0	0
E2	2.5	5	1	7,500	500	5
E3	5.0	10	2	10,000	1,000	10
E4	15	25	5	25,000	2,500	25

Table 5.1: Obtrusive Light Limitations for Exterior Lighting Installations – General Observers

Minimise

The project design should minimise impacts by :

- Reducing as far as possible any hedgerow loss from visibility splays; loss of the meadow to the north; and of any mature trees;
- Implementing mitigation measures as set out in recommendations for the Construction stage below.

Rehabilitate or restore

Rehabilitate or restore here refers to temporary impacts from a development such as construction. The project design should ensure that

- Any habitats likely to be damaged during construction have in place an effective plan to restore them once construction is complete.

Offset

Offsets are normally sought where significant residual impacts remain. This is unlikely on this project except if there is significant loss from visibility splays. Where applicable the project design should therefore act to:

- Set out a long-term strategy to offset any losses from the development e.g. early planting of replacement hedgerows;

- Implement as early as possible offsetting measures to ensure that habitats are mature e.g. early planting of replacement hedgerows.

5.4 Recommendations for construction mitigation

The works should be subject to a Construction Environment Management Plan, to include details of working methods; access routes; Construction Exclusion Zones as required; location of any storage for materials; location of compounds and control of any substances hazardous to the environment; and works after dark or use artificial lighting; and post construction restoration measures.

Outline species specific measures are given in the following table. The details of these measures needs to be informed by the site design and additional surveys.

Table 5.2: Species specific measures

Species	Mitigation measures required	Required measures
Breeding birds	Yes: if during breeding season	Site clearance works should ideally be completed outside the bird nesting season (1 March to 31 August) or only be completed following checks by an appropriately experienced ecologist. Retention of hedgerow network; shrub and tree planting within development
Bats		
Roosts within site	Yes: if present and affected	To be confirmed based on additional surveys.
Foraging/ commuting	Yes;	Lighting plan. Retention of hedgerow network; suitable lighting
Badger	Yes: if present and affected	Mitigation measures during construction consisting of buffer zone with southern woodland

There were no invasive Schedule 9 species identified.

5.5 Recommendations for enhancement

The following suggestions are made with respect to enhancing the site :

- To the north and east around the site boundary, a new native hedge could be planted.
- Additional tree planting could take place around Building #1.
- Bat and bird boxes could be included within any new buildings or on adjacent trees.

5.6 Requirements for licencing

Site development may require licencing for impacts on bat roosts. Should bats be identified as roosting within buildings then a licence may be required and specialist advice should be sought from an ecologist or Natural England.

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6. References

Collins, J et al (2016) Bat Surveys for Professional Ecologists – Good Practice Guidelines – 3rd Edition. Bat Conservation Trust, London

Goodwin, C. E. D., Suggitt, A. J., Bennie, J., Silk, M. J., Duffy, J. P., Al-Fulaij, N., ... McDonald, R. A. (2018). Climate, landscape, habitat, and woodland management associations with hazel dormouse *Muscardinus avellanarius* population status. Mammal Review, 48, 209–223.

Natural England (2018) Presence only records for great crested newts determined through Natural England class licence surveys. Available online.

Natural England (2020) Great Crested Newt eDNA and Habitat Suitability Index Survey results for Ponds surveyed for District Level Licensing 2017,2018,2019

Hertfordshire Environmental Records Centre (HERC) (2024) Data Search Results 09/10/2024 HERC Ref: 202410_013

7. Figures

7.1 Site location and features

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Figure 1 : Site location and key features

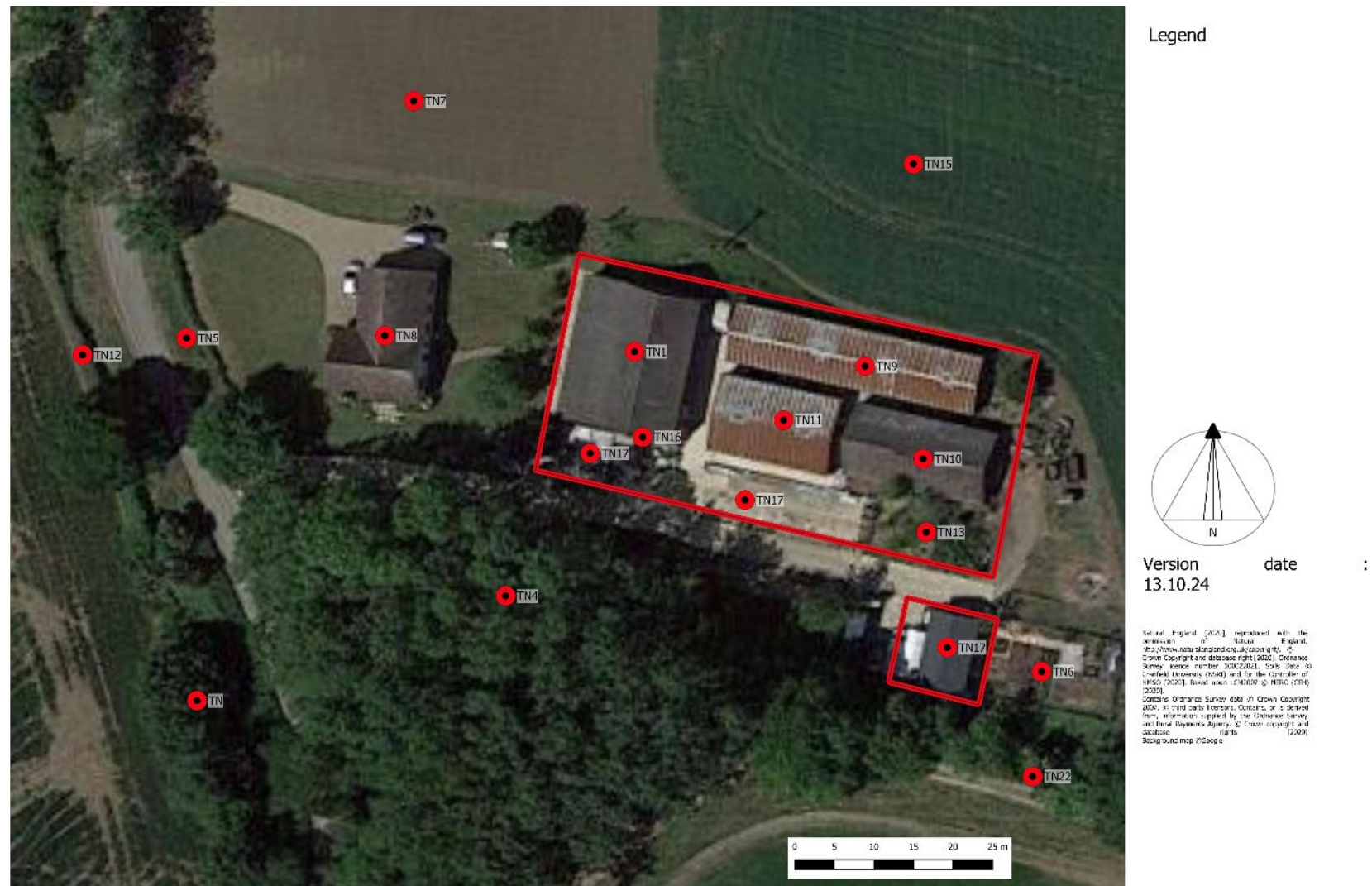
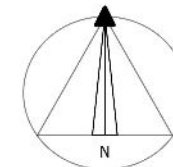


Figure 2 : Site location and key features



Legend



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Target notes for site

TN#	Description	
TN1	Built-up areas	Building #1 to north-west; open fronted; no signs of barn owls or bats
TN2	Poor semi-improved grassland	Grass verge associated with field edge and Building; some species of interest but not high diversity
TN3	Hedge with trees - native species-rich	Hedge running north and south of site along road
TN4	Intact hedge - native species-rich	Hedge to west of road
TN5	Intact hedge - native species-rich	Hedge to east of road in front of main house
TN6	Broadleaved woodland - plantation	Poplar plantation mixed with ash and other species to south
TN7	Built-up areas	Building 1; large purpose built barn partly converted to storage and studio
TN8	Built-up areas	Building 5. Former agricultural shed, now used for storage.
TN9	Built-up areas	Building 3. Former agricultural shed, now used for storage.
TN10	Built-up areas	Building 4 Former agricultural shed, now used for storage and workshop
TN11	Built-up areas	Building 6. Former agricultural shed, now used as workshop
TN12	Neutral grassland - semi-improved	Small meadow to north with apparent good diversity
TN13	Running water - eutrophic	Ditch to south of site; low water quality; limited water depth
TN14	Built-up areas	Concrete surrounds and hardstanding to buildings
TN15	Built-up areas	Existing bungalow
TN16	Cultivated/disturbed land - arable	Vegetable gardens
TN17	Cultivated/disturbed land - amenity grassland	Adjacent arable fields; sown to cereals
TN18	Broadleaved woodland - plantation	Outside the Buildings and storage areas, there is a small orchard to the South of Building 5 SS.
TN19	Built-up areas	Building2: Prefab unit south of Building 1. Metal shed
TN20	Hedge with trees - native species-rich	Hedge running east to Philpotts Wood
TN21	Hedge with trees - native species-rich	Hedges running north and south along road
TN22		Location of Common pipistrelle maternity roost
TN23		Philpott's Wood Local Wildlife Site

7.2 Results of records centre search

Figure 3 : Results of desktop search with records centre (© as shown)

The relationship of the development to this site is available to planning officers who have access to boundary maps of these, referencing their filecode and name.

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7.3 Results of MAGIC search

Figure 4 : Results of MAGIC search – 2000m buffer (© MAGIC 2022)

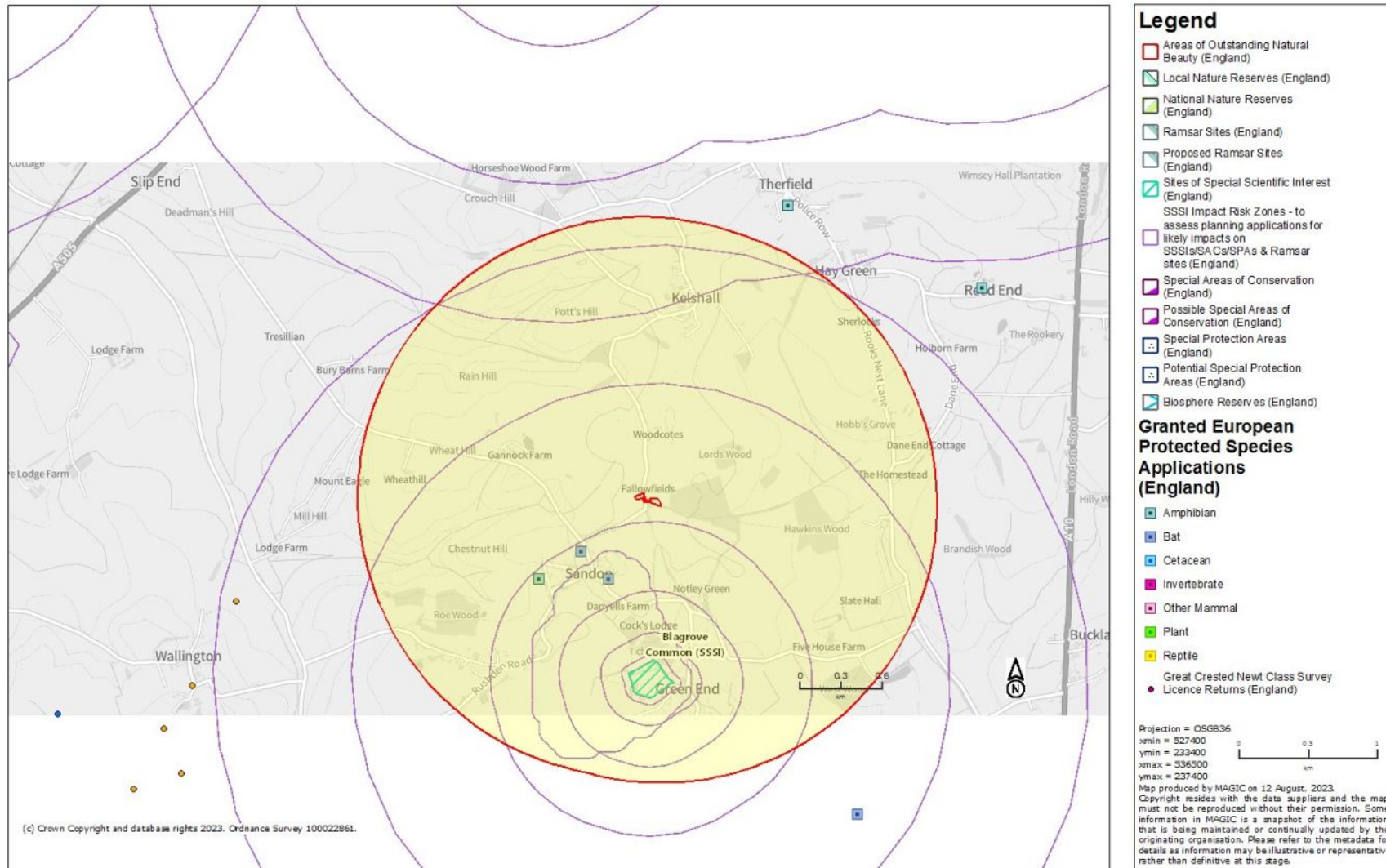
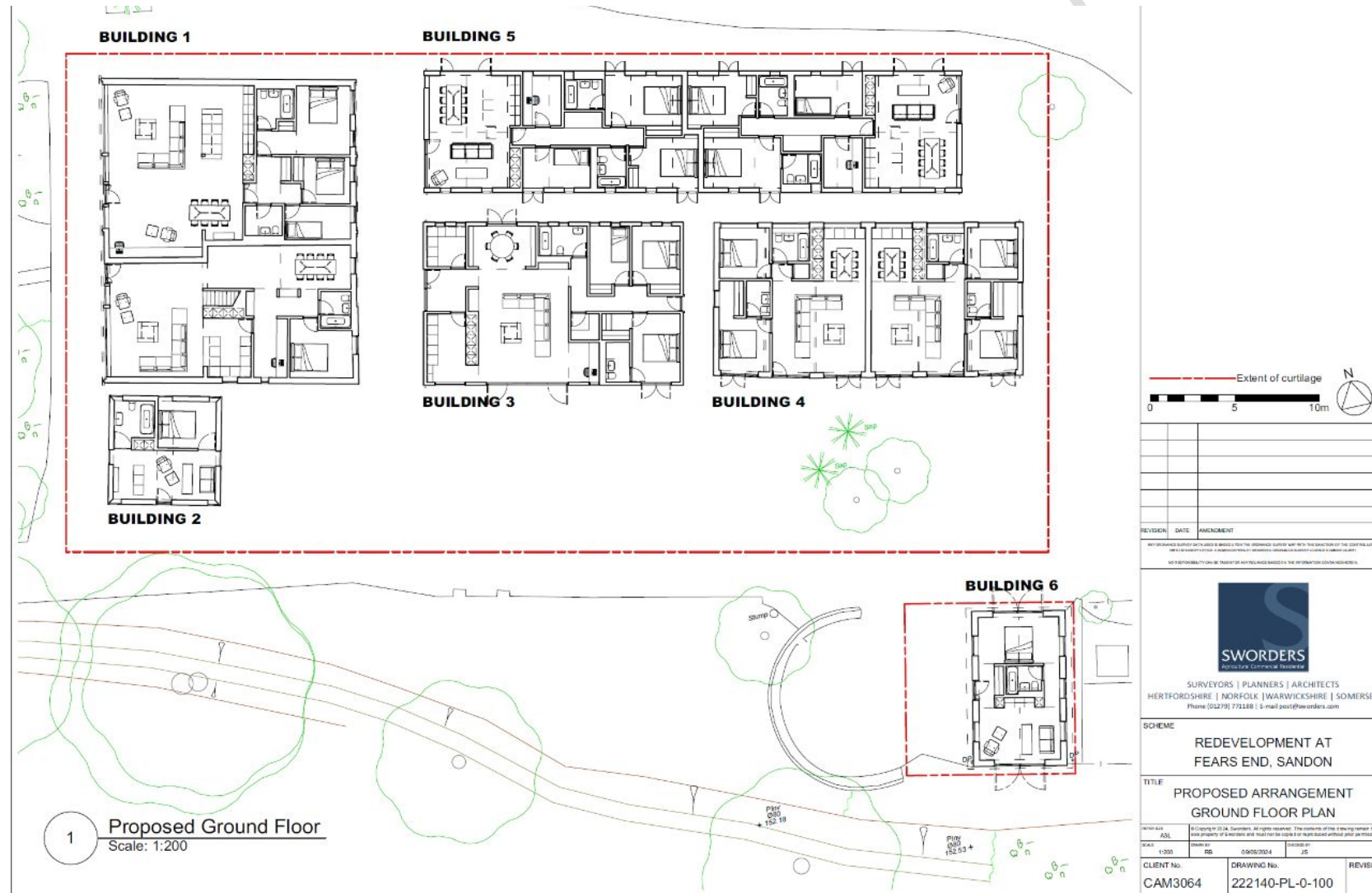


Figure 5 : Results of MAGIC search – 250m buffer(© MAGIC 2022)



7.4 Details of project proposal

Figure 6 : Project proposal





REVISION	DATE	AMENDMENT

REVISION	DATE	AMENDMENT
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SURVEYORS | PLANNERS | ARCHITECTS
HERTFORDSHIRE | NORFOLK | WARWICKSHIRE | SOMERSET
Phone (01279) 771188 | E-mail post@sworders.com

SCHEME

REDEVELOPMENT AT
FEARS END, SANDON

TITLE

BUILDING 1

PROPOSED ELEVATIONS [1 OF 2]

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CLIENT No. CAM3064		DRAWING No. 222140-PL-1-301
		REVISION

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8. Photographs

8.1 External views of main buildings



Figure 7: Building 1 - view from east



Figure 8: Building 1 - open north side



Figure 9: Building 1 - southern wall



Figure 10: Building 2



Figure 11: Building 2



Figure 12: Building 2



Figure 13: Building 3 - western end



Figure 14: Building 4 - western gable



Figure 15: Building 2 to left with Building 5 to right



Figure 16: Building 5: eastern gable



Figure 17: Building 4 and Building 5 from south side

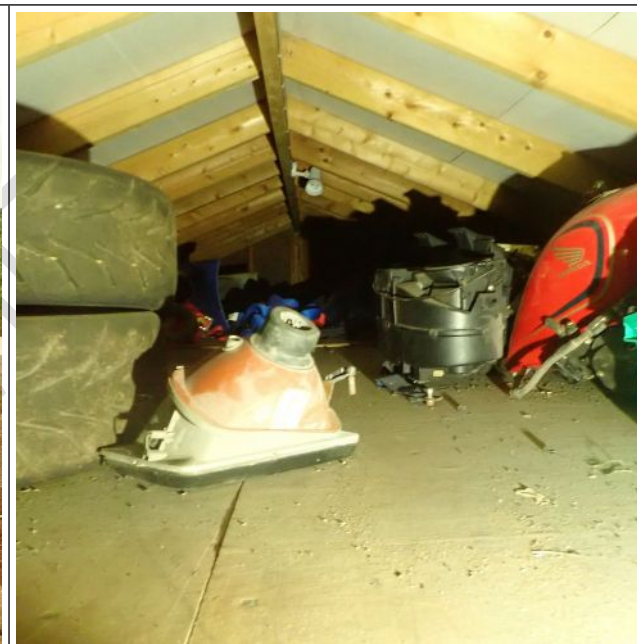


Figure 18: Building 6 - loft space



Figure 19: Building 6 - eastern wall looking north



Figure 20: Building 7 from south side with Building 2 behind

8.2 Other site features



Figure 21: Entrance road to yard



Figure 22: Poplar plantation to south

8.3 Habitats within site

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Figure 23: Main road looking north with entrance to Building 1 on left



Figure 24: Hedge in front of bungalow



Figure 25: North side of main buildings with Philpott's Wood in distance



Figure 26: Entrance to bungalow

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Appendix 1 : Plant list for site

Not available.

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Appendix 2 : Protocol for Preliminary Ecological Assessment

Relevant guidelines

CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester⁷

JNCC (2010) Handbook for Phase 1 habitat survey - a technique for environmental audit⁸

Weather conditions/timing constraints

Can be undertaken under any weather conditions; no timing constraints; no optimum timing.

Process Overview

The survey will comprise both a desk study and walkover survey.

The appropriate “area of search” (AOS) for the study will be based on the nature of the proposals and will be determined on a case-by-case basis following an assessment of the “zone of influence” (ZOI) of the project.

Desk Study

A desk study will be carried out of the AOS to collate available information about the site and surrounding area from following sources:

- Accessible aerial photos and maps to identify the habitats and species potentially present, and context of the site within wider landscape;
- Public databases within MAGIC to identify any relevant nature conservation sites and their designated features;
- Where agreed, a search by the Local Environmental Records Centre of the AOS for any relevant records of species, habitats or locally designated sites (e.g. Local Wildlife Sites);
- Any other easily available records.

The sources searched will be recorded within any report.

Field survey

As far as safely or physically accessible, the footprint of the proposed development and accessible surrounding areas will be walked over.

The habitats present will be described and where appropriate classified according to the guidance within JNCC (2010). Field notes will be taken on plant species present and the extent and structure of habitats.

⁷<https://cieem.net/wp-content/uploads/2019/02/Guidelines-for-Preliminary-Ecological-Appraisal-Jan2018-1.pdf>

⁸<http://jncc.defra.gov.uk/page-2468>

Where appropriate, target notes will be used as per JNCC(2010) to map any features of additional ecological interest.

Photographs will be taken of general site and where possible any features of especial ecological interest.

Any incidental sightings of priority or protected species, or field signs of such species will be recorded.

Any incidental records of non-native invasive plant species will be recorded.

Assessment

Identification of features

Based on the results of the desktop and field surveys, a list will be compiled of those ecological features relevant for consideration within planning to include:

- designated sites;
- protected or priority species;
- priority habitats;
- ecological features of local significance.

Potential for protected or priority species

An assessment will be made of the potential for presence of protected or priority species.

Where protected species are confirmed as present, their presence, known species and any other additional information on type of usage will be noted.

Otherwise the potential for species within the AOS will be evaluated and recorded.

Buildings, trees and other structures will be subject to appraisal via relevant other protocols.

Further consideration

An assessment will be made as to whether a feature requires further consideration, based on the desktop information, field results and potential of the site to support such a feature

Equipment used

Binoculars.

Licence requirements

None, unless additional considerations due to presence of protected species or protected sites

Appendix 3 : Protocol for Preliminary Bat Roost Assessment of buildings and structures

Relevant guidelines

English Nature (2004) Bat Mitigation Guidelines

Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition. Bat Conservation Trust, London.

Weather conditions/timing constraints

Can be undertaken under any weather conditions; no timing constraints; no optimum timing. Periods of heavy rain prior may reduce visibility of signs of roosting bats.

Field survey

A systematic search will be made of any buildings for signs of roosting bats by trained personnel, based on external and internal inspection where safety allows.

A visual assessment will be undertaken during daylight hours as far as the building or structure is accessible to identify any Potential Roost Features (PRFs) present.

Ladders will be used to access any PRFs under 3.5m to allow a detailed inspection.

Where appropriate binoculars, a torch and/or endoscope will also be used to assist the search for evidence of bats.

Field notes will be made of the context of the site, including the suitability of the surrounding habitat for foraging and commuting.

Assessment

If no confirmed bat roosts are found, based on the field survey results, the buildings or other structures will be assessed and assigned to the suitability classes of Collins (2016) as: "negligible", "low", "medium", "high" and "unclear".

An assessment will be made also of the potential for use as hibernation.

Where bats or roosts are present, the presence of the roost, known species and any other additional information on type of usage will be noted.

Equipment used

Binoculars; torch; ladders; endoscope.

Licencing requirements

Requires Natural England licence where there is potential for disturbance of bats.

Appendix 4 : Protocol for great crested newts

Relevant guidelines and references

Amphibian and Reptile Groups of the United Kingdom (2010) *ARG Advice Note 5 Great Crested Newt Habitat Suitability Index May 2010*

<https://www.arguk.org/get-involved/projects-surveys/great-crested-newt-habitat-suitability-index>

Natural England (2015) *Great crested newts: surveys and mitigation for development projects : Standing advice for local planning authorities who need to assess the impacts of development on great crested newts*. Last updated 24 December 2015 .

<https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects>

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10(4), 143-155

Natural England (2018) Presence only records for great crested newts determined through Natural England class licence surveys. Available online.

Natural England (2020) Great Crested Newt eDNA and Habitat Suitability Index Survey results for Ponds surveyed for District Level Licensing 2017,2018,2019

Weather conditions/timing constraints

Can be undertaken under any weather conditions;

HSI : no timing constraints; no optimum timing.

eDNA : Natural England will only accept eDNA survey results from samples collected between 15 April and 30 June each year.

Desktop

Except for very large developments, the surveyor will identify all obvious ponds within 250m-500m of the site using maps and aerials, mark and number them on a map and record their distances to the site.

A search will be made of Natural England (2018) and Natural England (2020).

HSI survey

A daytime visit will be undertaken to ponds where there is access permission and an assessment made for each field criterion.

Any ponds found during the field survey will be added to the map and similarly assessed.

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Preliminary Ecological Assessment Report, Barns at Fears End Farm, Sandon, Buntingford, SG9 0QZ

E-mail: chris.smith@smallecology.uk || website: smallecology.uk

Page | 62

Where the surveyor has noted that a pond has been removed, this will be noted as such.

Where possible, the surveyor will take a photograph of the pond.

eDNA sampling

A daytime visit will be made during the period when the newts are likely to be present.

Samples will be sent for analysis to a suitably-equipped laboratory able to undertake the laboratory work in strict adherence to the methods in the technical report.

Assessment

Using the results, the ecologist will calculate the HSI and present these as per the following table.

Based on the field survey results, the ponds will be assessed and assigned to the suitability classes of Collins (2016) as : "poor", "below average", "average", and "excellent". Where access was not possible ponds will be categorised as unclear.

Table 4.1: Example HSI score for pond

SI1	Location	Zone A	1
SI2	Pond Area	50-100m ²	0.1
SI3	Pond Drying	Sometimes drying	0.5
SI4	Water Quality	Poor	0.33
SI5	Shade	96-100%	0.2
SI6	Fowl	Absent, except moorhen	1
SI7	Fish	Absent	1
SI8	Ponds	7	0.85
SI9	Terrestrial Habitat	Moderate	0.67
SI10	Macrophytes	<1%	0.3
Calculated HSI score			0.47 - Poor

For the eDNA results, the report will include :

- a declaration that the methods in the technical report were followed
- confirmation of which waterbodies were tested and on what dates;
- copies of the results from the laboratory.

Equipment used

Binoculars.

Licences

Any eDNA samples must be collected by a licenced surveyors to comply with Natural England guidelines.

Appendix 5 : Biological Records Centre search results

Not applicable

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Appendix 6 : Detailed descriptions of buildings

Name or # for building	Building 1	Building 2
Site:	Fears End Farm, Sandon, Buntingford SG9 0QZ	Fears End Farm, Sandon, Buntingford SG9 0QZ
Date:	25/07/23	25/07/23
Surveyor:	CS	CS
Description of age and use	open fronted cart Lodge used for storage	Two modern large back-to-back open fronted cart sheds with a high roof. Southern end is converted into an artist workshop upstairs and downstairs there is an area of storage.
Pictures		
EXTERNAL FEATURES		
Wall construction and materials	Fibre board external with wooden planked walls with internal wooden frame Substantial gaps at top and bottom for ventilation. Low blockwork base.	Block substructure and then fibre board roof over. Southern end in workshop area has been ship lapped on the outside which appears to be in good condition, but has some gaps.
Roof construction and materials	Fibre single pitched box roof with no lining	The eastern side has a pitched roof which is open and unlined. The western side has a pitch roof as well, which slopes westward, also unlined
Windows, door and other openings	Open fronted on northern side	The downstairs room has a glass fronted door and is as light internally. The upstairs room is brightly lit by multiple windows. Remaining space open fronted.
Chimneys and other roof features	None	None
INTERNAL FEATURES		
Cracks and crevices	Slight gap between internal and external boarding; no obvious signs when inspected	The downstairs well lit internally. Separated from the upstairs by a well sealed insulated floor. The upstairs workshop is clean and well fitted. Walls in remaining area well pointed.
Roof and ridge	No lining; small timbers	The upstairs workshop has no visible loft space and converted to apex.
Cobwebbing		
Evidence of presence	None	None
Overall potential for bats?	No obvious potential for bats	South side of the barn is ship lapped on all the external sides, which has good potential for bats, although there was Other areas with no potential for bats.
Constraints	Access was possible throughout	Access was possible throughout
		evidence of pigeons.

Name or # for building	Building 3	Building 4
Site:	Fears End Farm, Sandon, Buntingford SG9 0QZ	Fears End Farm, Sandon, Buntingford SG9 0QZ
Date:	25/07/23	25/07/23
Surveyor:	CS	CS
Description of age and use	Previous agricultural unit now used as storage	Used for storage.
Pictures		
EXTERNAL FEATURES		
Wall construction and materials	Wooden external walls with a wooden strip over a block substructure, wooden superstructure internally aligned with board.	Building 4 is of a similar design, slightly higher. It also has a tin roof. It runs into a slightly higher building at the eastern end (Building 5). Substructure is solid block with a wooden. Vertically grooved wooden plank superstructure that's internally lined.
Roof construction and materials	The roof is pitched with tin sheeting with fascia boards at the end. Internally lined. There are drain pipes, but no fascia board on the outside and the tin is sealed at the apex.	The roof apex is a thin triangular piece of tin. It has wooden fascia boards on the South side.
Windows, door and other openings	Internally the building is well lit by glazed vents along either side. Approximately 12 either side. The windows are well sealed with tight wooden and tin surrounds.	Both buildings have sliding doors. Similarly lit well on either side of building by glazed vents again. here's about a dozen either side.
Chimneys and other roof features		None
INTERNAL FEATURES	None	
Cracks and crevices	The Timbers inside are small, machined and have no obvious crevices. They're quite lightweight. there is no obvious crevices for bats to get into. The timber cladding is overlapping with some very limited potential for roosts between that.	None. Similar to Bldg 3
Roof and ridge		This has a ceiling about head height, so it has a loft space within it.
Cobwebbing		Limited
Evidence of presence	Concrete floor relatively easy to see back droppings.	None noted. internal electric electric lighting and a concrete floor.
Overall potential for bats?		
Constraints		

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Name or # for building	Building 5	Building 6
Site:	Fears End Farm, Sandon, Buntingford SG9 0QZ	Fears End Farm, Sandon, Buntingford SG9 0QZ
Date:	25/07/23	25/07/23
Surveyor:	CS	CS
Description of age and use	large. Former agriculture unit. Being used As for storage and as a workshop.	Southeast corner. ISolid modern wooden construction with a block substructure.
Pictures		
EXTERNAL FEATURES		
Wall construction and materials	The walls internally insulated. Similar structure to the others in that it consists of a block work base with a wooden upper superstructure with internal lining, board and external groove timber. Base only two bricks high. there is no external lighting.	Shiplap on the outside which is reasonable fitting, but has crevices in places. it is quite thick ship lap.
Roof construction and materials	Appears to be moulded fibre board.	Sheeting manufactured with mock tiled effect. Boxed eaves with metal. Metal ridge. Sheeting metal or plastic coated construction.
Windows, door and other openings	Six windows along north side; glazed; internally well lit by. Windows in the Northside. Opening door on the east and the west end,	Well lit internally with internal electric lighting, 4 good fitting windows, bright with daylight; door well fitting with minor gaps
Chimneys and other roof features	Metal boss at each end on the apex.	None
INTERNAL FEATURES		
Cracks and crevices	None within walls. Purloins project. through gables to form potential gaps.	None internally; walls and windows well sealed
Roof and ridge	Internally, it is got electric strip lighting and a false ceiling with insulation above it.	Ceiling with a loft. Loft space accessed. Low ~3 foot; no external access apparent via eaves. Eaves not sealed
Cobwebbing	Limited	None
Evidence of presence	Internally, there is no signs of bats.	None
Overall potential for bats?	Low to negligible	Low to negligible
Constraints	Partial view of roof void due to false ceiling and not accessible	

Name or # for building	Building 7	Building 8
Site:	Fears End Farm, Sandon, Buntingford SG9 0QZ	
Date:	25/07/23	
Surveyor:	CS	
Description of age and use	Modern "container" building, used for storage	
Pictures	Yes	
EXTERNAL FEATURES		
Wall construction and materials	Panelled prefab unit /portacabin; corrugated metal sheeting	
Roof construction and materials	Flat roof; sheet over metal frame	
Windows, door and other openings	Wooden panelled; poor condition	
Chimneys and other roof features	None; holes in roof	
INTERNAL FEATURES		
Cracks and crevices	Walls panelled without cracks	
Roof and ridge	Flat roof; no void	
Cobwebbing		
Evidence of presence	None from external inspection	
Overall potential for bats?	Negligible	
Constraints	No internal access possible	