



HYBRID ECOLOGY LTD
joined up thinking

Preliminary Ecological Appraisal (PEA):
Jollyboys, Bakers Lane, Felsted, Dunmow, Essex,
CM6 3LP

On behalf of:
Mr and Mrs Cox

Prepared by:
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Summary

Land at Jollyboys, Felsted was visited on 8th March 2024 in connection with a proposal to demolish outbuildings and build a new extension and outbuildings, with associated hard and soft landscaping. This report supports a planning application to Uttlesford District Council.

This report provides the results of a survey and makes recommendations for mitigation methods and enhancements, as appropriate in the context of the proposal, referring to planning policy and best practice guidance where appropriate.

The report is required to inform design, and to provide the Local Planning Authority with certainty on impacts to designated sites, Priority Habitats, and legally protected species.

Designated sites and Priority Habitats

- There are no expected impacts on designated sites or Priority Habitats. Mitigation is not required.

Habitats and species

- Habitats: The site largely comprises an historic property with assorted outbuildings of varying ages. The garden contains areas of lawn, trees, boundary hedgerows, a recently created pond, and hard standing. These habitats are assessed as being of importance at a local level only.
- Bats: Some of the buildings (cart lodge, potting shed, and thatched gym) have low suitability for crevice roosting bats. Further survey is required to determine if bats are roosting in these structures. One dusk emergence survey is initially required. This survey must be undertaken between May and August.
- Nesting birds: The Cart Lodge is used seasonally by nesting swallows. Trees and hedgerows in the garden could be used by a variety of nesting bird species. Any clearance of potentially suitable nesting habitat must be undertaken outside the main breeding season, or immediately after an ecologist has confirmed the absence of active nests (breeding season runs from March to the end of September, although some species such as pigeon can nest year-round).

Enhancement proposal

The landowner is keen to enhance the site for wildlife through a variety of means including bee hives, native tree and hedgerow planting, establishing a wildlife pond in the recently constructed drainage pond, installing a variety of bird and bat boxes, and creating integrated bird and bat features within new buildings. These measures will contribute to Government aims under Paragraph 180(d) of the National Planning Policy Framework 2023 and Local Plan policies which encourage all development to demonstrate biodiversity net-gain.

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1.0 Introduction

Personnel

- 1.1 This report has been prepared by Gemma Holmes; Consultant Ecologist at Hybrid Ecology Ltd. Gemma is a qualified ecologist with 17 years' experience in professional survey work and is an Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Gemma holds licences to survey for great crested newt and bats in the UK (Licence numbers 2015-19096-CLS-CLS and 2016-27305-CLS-CLS respectively).

Brief

- 1.2 Mr and Mrs Cox instructed Hybrid Ecology to produce a Preliminary Ecological Appraisal for land at Jollyboys, Bakers Lane, Felsted (central grid reference TL 6833 1990). The proposals include the demolition of the Cart Lodge, Gym, and Potting Shed buildings, followed by the construction of an extension, car port and garden room, with associated hard and soft landscaping. A location plan is provided in Figure 1 and the survey boundary is provided in Figure 2.

Aims

- 1.3 This report aims to advise the client/developer and relevant members of the project team as to the key ecological constraints and opportunities associated with this project and any necessary mitigation requirements to ensure legal obligations in respect of protected species, designated sites and habitats are met.

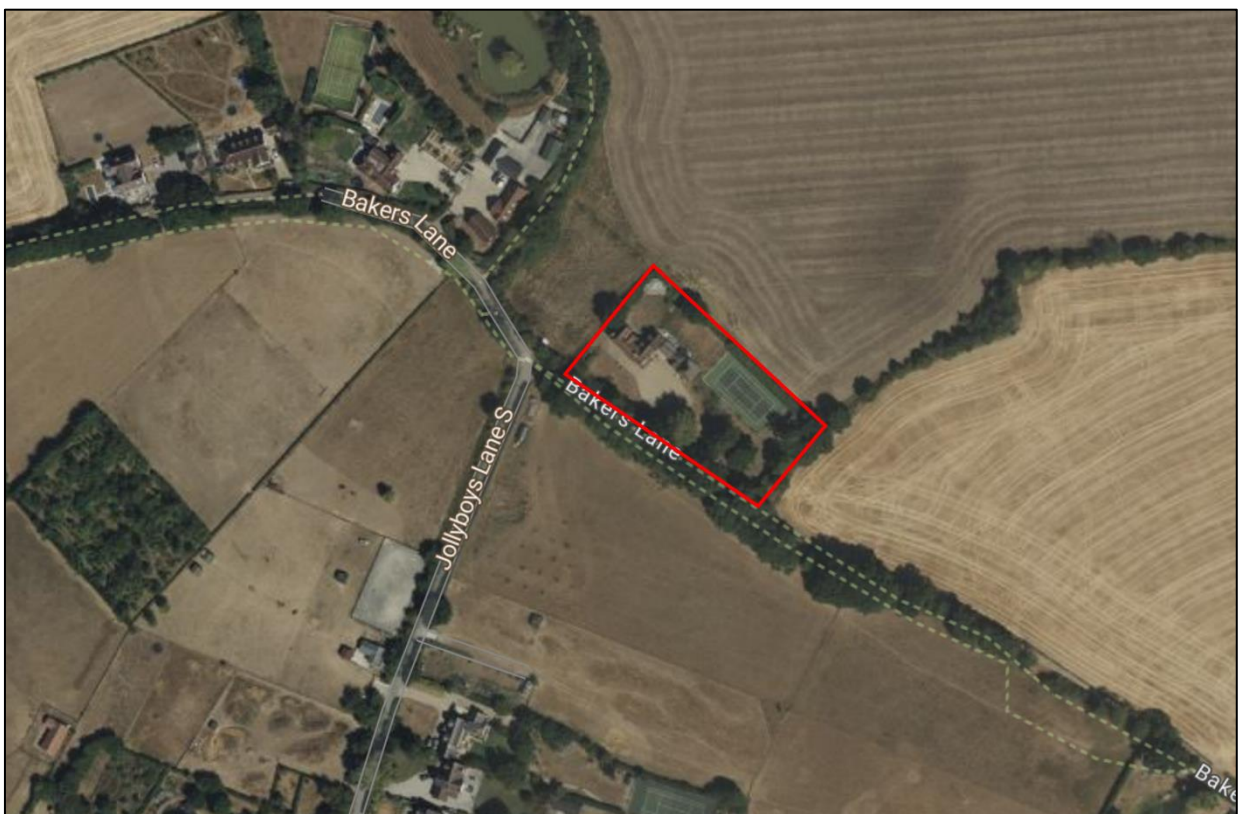
Limitations

- 1.4 Whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. Wildlife is transient and mobile, and results of a survey can reasonably vary from one day to the next or across the seasons.
- 1.5 The protected species assessment provides a view of the likelihood of protected species occurring on the site based on the known distribution of species in the local area and the suitability of the habitat. However, it should not be taken as providing a full and definitive survey of any protected species/group.
- 1.6 In accordance with CIEEM Report Writing Guidelines (December 2017), this report is valid for 18 months, after which habitats are reasonably expected to have changed to warrant an updated survey. Beyond 18 months, this report should not be accepted in support of a planning application.

Figure 1. Location plan



Figure 2. Survey boundary



2.0 Planning Policy and Legislation

National Planning Policy Framework (NPPF, 2023)¹ Paragraph 15. Conserving and enhancing the natural environment (*relevant policies only*)

Paragraph 180

2.1 Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Paragraph 181

2.2 Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

Paragraph 185

¹ [National Planning Policy Framework - 15. Conserving and enhancing the natural environment - Guidance - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/662542/nppf-2023-15-conserving-and-enhancing-the-natural-environment-guidance.pdf)

2.3 To protect and enhance biodiversity and geodiversity, plans should:

- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Paragraph 186

2.4 When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons, and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Paragraph 188

2.5 The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects). This is unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Local Planning Policy

The following information is taken from the Uttlesford District Local Development Plan Adopted 2005.

Note - A new draft local plan is in the final stages of the consultation process.

Policy ENV7 - The Protection of the Natural Environment

Designated Sites

- 2.6 Development proposals that adversely affect areas of nationally important nature conservation concern, such as Sites of Special Scientific Interest and National Nature Reserves, will not be permitted unless the need for the development outweighs the particular importance of the nature conservation value of site or reserve.
- 2.7 Development proposals likely to affect local areas of nature conservation significance, such as County Wildlife sites, ancient woodlands, wildlife habitats, sites of ecological interest and Regionally Important Geological/ Geomorphological Sites, will not be permitted unless the need for the development outweighs the local significance of the site to the biodiversity of the District. Where development is permitted the authority will consider the use of conditions or planning obligations to ensure the protection and enhancement of the site's conservation interest.

Policy ENV8 – Other Landscape Elements of Importance for Nature Conservation Development that may adversely affect these landscape elements

- 2.8 Hedgerows, linear tree belts, larger semi natural or ancient woodlands, semi-natural grasslands, green lanes and special verges, orchards, plantations, ponds, reservoirs, river corridors, linear wetland feature, and networks or patterns of other locally important habitats will only be permitted if the following criteria apply:
- a) The need for the development outweighs the need to retain the elements for their importance to wild fauna and flora;
 - b) Mitigation measures are provided that would compensate for the harm and reinstate the nature conservation value of the locality. Appropriate management of these elements will be encouraged through the use of conditions and planning obligations.

Legislation: Protection of Designated Sites, Habitats and Species

Please note this section is a summary of legislation only and should not be taken as a definitive interpretation of any wildlife law. UK wildlife legislation can be found here: [Legislation.gov.uk](https://legislation.gov.uk)

Designated sites

RAMSAR

- 2.9 Ramsar sites are designated under the Convention on Wetlands of International Importance especially as Waterfowl Habitat. Wetlands are designated, protected and promoted in order to stem the progressive encroachment on and loss of wetlands, which are broadly defined to include marsh, fen, peatland and water.

Special Areas of Conservation (SAC)

- 2.10 Special Areas of Conservation are sites designated by Member States under the EC Habitats Directive. The aim is to establish a network of important high quality conservation sites that will make a significant contribution to conserving habitats and species considered to be most in need of conservation at an international level.

Special Protection Areas (SPA)

- 2.11 Special Protection Areas are designated under the EC Birds Directive, to conserve the habitat of certain rare or vulnerable birds and regularly occurring migratory birds. Any significant pollution or disturbance to or deterioration of these sites has to be avoided.

National Nature Reserves (NNR)

- 2.12 National Nature Reserves are statutory reserves established for the nation under the Wildlife and Countryside Act, 1981. NNRs may be owned by relevant national body (e.g. Natural England in England) or established by agreement; a few are owned and managed by non-statutory bodies. NNRs cover a selection of the most important sites for nature conservation in the UK.

Sites of Special Scientific Interest (SSSI)

- 2.13 Sites of Special Scientific Interest are areas notified under the Wildlife and Countryside Act, 1981, as being of 'special interest for nature conservation'. They represent the finest sites for wildlife and natural features in Great Britain supporting many characteristic, rare and endangered species, habitats and natural features. Notification as a SSSI is primarily a legal mechanism organised by Natural England and selected according to specific criteria.

Local Nature Reserves (LNR)

- 2.14 Land owned, leased or managed by Local Authorities and designated under the National Parks and Access to the Countryside Act. A site of some nature conservation value managed for educational objectives – no need for SSSI status. Some reserves are managed by a non-statutory body.

Local Wildlife Site / Wildlife Sites

- 2.15 Local Wildlife Sites (LoWS) are non-statutory sites designated at a county level as being of conservation importance and often recognised in Local authority development plans. The aim of this identification is to protect such sites from land management changes, which may lessen their nature conservation interest, and to encourage sensitive management to maintain and enhance their importance. Although LoWS have no statutory protection, they are a material consideration in the planning process.

Regionally Important Geological / Geomorphological Site (RIGS)

- 2.16 Regionally Important Geological/Geomorphological Sites are non-statutory earth science sites. The RIGS networks are locally based voluntary groups drawing on both professional and interest groups identifying sites using a methodical and rational approach. RIGS are analogous to non-statutory biological sites – they are not a second tier but sites of regional or local importance in their own right.

Legally protected and Priority Species

- 2.17 The two principal wildlife statutes, directly related to the NPPF and local planning policy, are the Conservation of Habitats and Species Regulations (The Habitats Regulations, 2019, EU Exit as amended) that deals with internationally important sites and species, and the Wildlife and Countryside Act 1981 (as amended) (from here on referred to as WCA, 1981) that deals with nationally important sites.
- 2.18 Certain habitats and species are protected as SSSI under the WCA (1981). Some of these are more strictly protected as proposed or designated SPA, SAC and Ramsar Sites under the Habitats Regulations (2019). These designations protect features and resources listed as being of international importance from both direct and indirect effects arising from a range of issues including proposed development.
- 2.19 Certain species listed on Schedule 5 of the WCA (1981), including all bat species, great crested newt, hazel dormouse and otter are also protected under Schedule 2 of the Habitats Regulations (2019) making them European Protected Species (EPS). Taken together it is illegal to:
- Deliberately kill, injure or capture any wild animal of EPS;
 - Deliberately disturb wild animals of any EPS in such a way to be likely to significantly affect:
 - The ability of any significant groups of animals of that species to survive, breed, rear or nurture their young; or
 - The local distribution of that species.
 - Recklessly disturb a EPS or obstruct access to their place of rest;
 - Damage or destroy breeding sites or resting places of such animals;
 - Deliberately take or destroy the eggs of such an animal;
 - Possess or transport any part of a EPS, unless acquired legally; and/or
 - Sell, barter or exchange any part of an EPS.
- 2.20 A range of species other than birds, including water vole is protected from disturbance and destruction under the WCA (1981) through inclusion on Schedule 5.

- 2.21 All breeding birds are protected from deliberate destruction under the WCA (1981). Certain species are further protected from disturbance at their nest sites being listed on Schedule 1 of the WCA (1981).
- 2.22 Common reptiles including common lizard, slow-worm, grass snake and adder are protected under the WCA (1981), they are listed as Schedule 5 species, therefore part of Section 9(1) and section 9(5) apply; the Countryside and Rights of Way Act 2000 (CRoW) also strengthens their protection.
- 2.23 Badger is protected from sett disturbance and destruction under the Protection of Badgers Act (1992).
- 2.24 Section 40 of the NERC Act 2006 places a legal duty on local authorities to conserve biodiversity. Section 41 (S41) sets out a list of species and habitats of principal importance. These species are known as Priority Species and are those identified as requiring action under the former UK Biodiversity Action Plan (BAP) and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.
- 2.25 Native, species-rich hedgerows are protected as being 'important' under the Hedgerow Regulations (1997).
- 2.26 Japanese Knotweed *Fallopia japonica*, along with a number of other introduced and invasive species, are listed under Schedule 9 of the WCA (1981). Japanese knotweed is highly invasive, and its rhizomes cause damage to structures. Hence it is also classed as controlled waste under the Environment Protection Act (1990) and has therefore either to be removed and disposed of in a licensed landfill or the rhizomes buried to a depth of at least 5m.

3.0 Methodology: Desktop Study

Mapping exercise

- 3.1 Aerial imagery (Google Earth Pro, 2024) was used to examine the landscape context of the site in relation to significant ecological assets such as woodland, established hedgerows, grassland and any naturalised features that would allow wildlife use and dispersal.
- 3.2 Multi-Agency Geographical Information for the Countryside (MAGIC) mapping was used to:
 - Determine the proximity to international, national and locally designated sites and whether the site lies within the Zone of Influence/Impact Risk Zone, as appropriate.
 - Identify any areas of land mapped by Natural England as Priority Habitat within 250 metres of the site.
 - Identify any European Protected Species (EPS) mitigation licenses granted by Natural England for great crested newt or bats within a 2km radius of the site that could be relevant to this development.

Biological Records Search

- 3.3 A biological records search for legally protected and priority species within 1km of the site was obtained from Essex Field Club on 8th March 2024.

4.0 Methodology: Habitats and Species

Phase 1 Habitat Survey

- 4.1 An ecological walkover survey was carried out on 8th March 2024 by ecologist Anthony Owers (BSc Hons). The survey included all land shown in Figure 2. The survey was undertaken broadly in accordance with the Handbook for Phase 1 Habitat Survey (JNCC 2010). This is a standard technique for obtaining baseline ecological information for areas of land, including proposed development sites.

Protected/priority species scoping

- 4.2 The survey also included an assessment of the site's potential to support any legally protected species; or Species and Habitats of Principal Importance (Priority Species), as identified by Section 41 of the Natural Environment and Rural Communities Act (2006).
- 4.3 The site was assessed for its suitability for the protected animals that are likely to occur in the area. Considering the results of the desk study, the location and habitats on site, a scoping assessment was carried out for:
- Bats (roosting, foraging and commuting)
 - Great crested newts *Triturus cristatus* (GCN) – terrestrial only
 - Hazel dormice
 - Otter and water vole
 - Badger *Meles meles*
 - Birds (including breeding and wintering birds)
 - Invertebrates
 - Reptiles
 - Rare and notable plant species
 - Invasive non-native plant and animal species
 - Other notable species.
- 4.4 Where best practice guidelines exist, these have been used to assess the likelihood that individual species will be present, for example Bat Surveys: Good Practice Guidelines (BCT 2016) and Habitat Suitability Index for Great Crested Newt (Oldham et al, 2000).
- 4.5 A Preliminary Roost Assessment (PRA) was carried out in accordance with BCT, 2023. The PRA included internal and external inspections of buildings to identify any bat evidence (such as droppings) or any visible voids or crevices that could reasonably allow bat access or support a roost. The survey also included a ground-level assessment of trees for features that bats could reasonably use – including cavities, bark lesions, woodpecker holes, fluting, hazard beams, along with any external evidence such as droppings (note droppings decay quickly on trees) and staining/rub marks on the stem/limb.

Figure 3. Guidelines for assessing potential suitability of development sites for bats (BCT, 2023)

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible ^a	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^b and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ^c).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^b and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

The Mitigation Hierarchy

4.6 All development is expected to meet the highest planning standards and follow the Mitigation Hierarchy of avoid, mitigate, compensate and enhance to ensure that significant natural environment impacts are avoided.

- Avoid - Avoiding any loss of or damage to wildlife sites or to protected / Priority species – development must not damage or destroy important national and Local Wildlife Sites.
- Mitigate - Impacts considered unavoidable should be mitigated at the site where the impact occurs, if at all possible.
- Compensate - Any remaining significant biodiversity loss should be compensated for, as close to the area of loss as possible.
- Enhance: Improve degraded ecosystems/return an area to original ecosystem including creating new habitat - habitat creation should be a standard feature of all new development, wherever it is.

Evaluation criteria

4.7 Ecological features (designated sites, habitats, and species) were evaluated where possible in relation to a geographical context (i.e. International, National, Regional, Metropolitan, County, District, Borough, Local and Site), in accordance with CIEEM Ecological Impact Assessment Guidelines (2016). Criteria include designations, quality of habitat in relation to the site context, ability to support notable assemblages of species, contribution to habitat connectivity, dispersal opportunities or providing intrinsic ecological value.

5.0 Results: Desktop Study

Landscape context

- 5.1 The site is a rectangular-shaped plot covering an area of approximately 0.45ha, although the actual development footprint is confined to areas with existing buildings and hard standing and is less than 0.1ha. The site is bordered by arable fields to the north-west, north-east and south-east. A drainage ditch lies between the site and the arable field along the southeastern boundary. Bakers Lane, a tree-lined, single-track road, borders the site to the southwest, beyond which is a managed grass field.
- 5.2 The surrounding landscape is characterised by arable farmland with boundary hedgerows and small woodlands/copses, and by the low-density development and infrastructure associated with the villages of Felsted, Causeway End and Bannister Green. In short, the landscape is semi-rural.

Designated sites/Priority Habitat

Refer to EFC maps in Appendix 1.

- 5.3 The site does not fall within, nor adjoin, a statutory or non-statutory nature conservation site. The nearest statutory designated site is the Flitch Way Local Nature Reserve (LNR), approximately 1.7km to the north. The nearest Site of Special Scientific Interest (SSSI) is Garnets Woods/Barnston Lays woodland, located approximately 4.1km to the southwest of the site.
- 5.4 The site falls within a B-Lines corridor. B-Lines are 3km corridors within which wildflower habitat restoration and creation can be focused and co-ordinated to maximise gains for pollinators. Where relevant, planning applications in or around B-Lines should consider what they can contribute to the growing resources of pollinators in B-Lines.
- 5.5 The only local wildlife site (LoWS) in the area is Felsted Fen, which is located approximately 1.4km to the west.
- 5.6 The proposed development will not directly adversely affect the conservation status of any designated sites due to the small-scale of the proposals, the distances between (>1km), and the intervening agricultural landscape.
- 5.7 The site does not contain any priority habitat. The nearest priority habitat is traditional orchard, located approximately 230m to the south. Due to the small scale and location of the development proposals, no priority habitat will be directly impacted.

Natural England EPS licences

- 5.8 One granted European Protected Species licence was identified within 1km of the site. It relates to disturbance of common pipistrelle and brown long eared bat roost, located approximately 300m to the southeast of the site. See image below from www.magic.gov.uk.

Site Check Results	
Site Check Report Report generated on Mon Mar 11 2024	
You selected the location: Centroid Grid Ref: TL68511971	
The following features have been found in your search area:	
Granted European Protected Species Applications (England)	
Case reference of granted application	2017-28598-EPS-MIT
Species group to which licence relates	Bat
Species on the licence	BLE,C-PIP
Site county of licence	Essex
Licence Start Date	03/05/2017
Licence End Date	31/07/2023
Does licence impact on a breeding site	N
Does licence allow damage of breeding site	N
Does licence allow damage of a resting place	N
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown

6.0 Results: Habitat Survey

A habitat plan is provided in Figure 4. Photographs from the site visit are provided in Figure 5. For full details on legally protected species, please refer to Section 7. Latin names appear in the text once.

- 6.1 The development footprint of the site comprises existing buildings, hard standing and lawn. The lawn is well-maintained with a short sward height of <5cm. The sward is dominated by grass species associated with lawn seed mix, with species including meadow grass *Poa sp.*, rye grass *Lolium sp.*, bent *Agrsotis sp.*, and fescue *Festuca sp.*, Occasional forb species include daisy *Bellis perennis*, dandelion *Taraxacum agg.*, dovesfoot cranesbill *Geranium molle*, and ribwort plantain *Plantago lanceolata*.
- 6.2 The buildings that will be impacted include the following:
- **Thatched extension** - A single storey, timber framed structure with rendered walls and timber windows and doors. The timber framed roof is thatched and then covered in chicken wire. The wire is intact and the roof well-sealed. The walls, window/door frames are also well-sealed. Other than the thatch being at the end of its life, the building is in a good condition.
 - **Cart lodge** - A modern, timber framed cart lodge that was constructed approximately 12 years ago. The walls are a single skin of weatherboard with no interior lining. The roof consists of breathable membrane over the trusses, with peg tiles on battens. The south-western side is open-fronted.
 - **Thatched gym** - A detached, single storey building that was formerly a garage and is currently used as a home gym. The walls are a combination of render, brick and flint, with timber windows and doors. The timber framed roof is thatched and then covered with chicken wire. Other than the thatch being at the end of its life, the building is in a good condition.
 - **Potting shed** - A single storey building constructed from a timber frame. The exterior walls are clad in large planks of weatherboard and the roof is finished with artificial slate tiles. The windows and doors are a combination of timber and metal (Crittal). The internal walls are lined with timber sheets creating a cavity wall. There is a ceiling and enclosed loft space.
- 6.3 The wider site beyond the development footprint includes the main house (Jollyboys); an historic listed property with timber frame, brick and render walls, and a peg-tiled roof with brick chimneys. A small timber and glass summerhouse is situated in the northwestern corner of the site. Other habitats include a recently resurfaced tennis court, hard standing, lawn, a recently built drainage pond, some established trees (willow *Salix sp.*, ash *Fraxinus excelsior*, oak *Quercus robur*), and boundary hedgerows comprising a mixture of cypress *Cupressus sp.*, hawthorn *Crataegus monogyna*, laurel *Prunus sp.*, and ivy *hedera helix*.

Habitats evaluation: The site comprises an historic property with assorted outbuildings of varying ages. The garden contains areas of maintained lawn, trees, boundary hedgerows, a recently created pond, and hard standing. These habitats area assessed as being of importance at a local level only – primarily because of the buildings as opposed to the vegetated habitats. No priority habitats are present or will be impacted by the development.

Figure 4. Habitat plan



Figure 5. Photographs

Thatched gym (left), cart lodge, thatched extension, and main house (right). Looking south-west from the edge of the tennis court.



Thatched extension. This building will be retained but will be re-thatched and the gable end wall modified to link with the proposed extension.



Thatched extension loft space. Heavily cobwebbed. No evidence of roosting bats. Old wasp nests and mouse dropping present.



Cart lodge <20 years old. Potential for crevice roosting bats between roof tiles and breathable membrane. No evidence of roosting bats internally. Three swallow nests from 2023 inside.



Thatched gym building. Viewed from the southeastern corner.



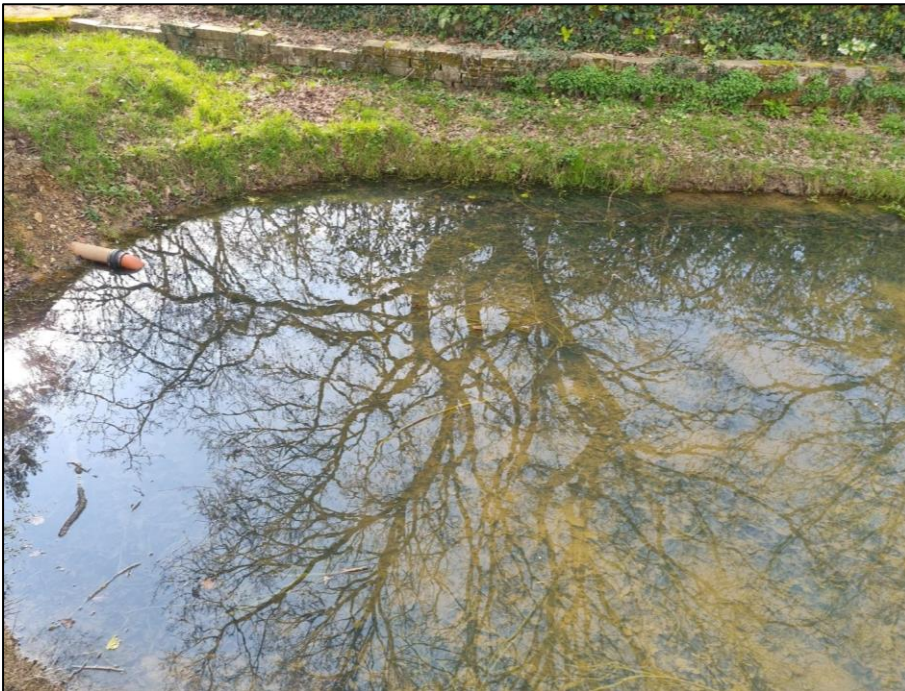
Thatched gym loft space. No evidence of roosting bats.



Potting shed in the northeastern corner of the site. Potential crevice roosting for bats in the lower walls between the weatherboards and the interior lining.



Recently created land drainage pond with pump. Built circa 2022.



Willow tree near entrance with low BRP – woodpecker hole in upper crown. Retained.



House and outbuildings, with hardstanding, tennis court, and lawn. Looking northwest.



7.0 Results: Protected/Priority Species Scoping

This section includes habitat requirements for species/species groups and an assessment in the context of the proposal.

Bats

Data search:

- 7.1 Eleven records for bat species were returned in the data search between 0.3km and 1.7km distance from the site between 1986 and 2010. Species include Leislars, brown long-eared, common pipistrelle, and soprano pipistrelle bats.

Habitat requirements:

- 7.2 In buildings, bats are found inside loft voids, under hanging tile cladding, weatherboards, inside soffit boxes and any sheltered, dry crevice. Bats typically hibernate in cellars, cavity walls and bunkers. In trees, bats are typically found in woodpecker holes, behind flaking bark, or in wounds and hazard beams. The largest roosts are found close to foraging resources such as woodland and waterbodies.

Assessment:

- 7.3 The thatched extension building was assessed as having negligible roosting potential. It is well-sealed with no evidence of past roosting inside the loft space.
- 7.4 The cart lodge has low suitability for crevice roosting bats between the exterior tiles and the breathable membrane lining beneath, with numerous gaps between the tiles providing potential access. There is no enclosed loft space in this structure and no evidence of roosting bats was found inside. The cart lodge is assessed as having low roosting potential.
- 7.5 The thatched gym (a former garage) is generally well-sealed, although some daylight was visible inside the loft space at the base of the roof. No evidence of past roosting in the loft was found but there is the potential for bats to access the roof between the chicken-wired thatch and the walls. This building is assessed as having low bat roost suitability.
- 7.6 The timber potting shed has the potential for bats to roost in the cavity between the external weatherboards and the internal lining on the walls. The enclosed loft space was heavily cobwebbed with no evidence of bats within it. This building is assessed as having low roost suitability.
- 7.7 The main house, which is not being impacted by the proposed development, has numerous potential access points for bats between the old peg tiles. This building was not internally inspected. From the external survey, it is assessed as having high bat roosting potential but is unaffected.
- 7.8 Bats have been confirmed roosting within 300m of the site to the southeast (see Magic EPS licence) and given the age of the main house, and the suitability of it and some of the outbuildings, it is reasonable to assume that bats could use some of these buildings as roosts.

- 7.9 Of the buildings to be impacted by the proposals, the cart lodge, thatched gym, and potting shed all have the potential to be used by bats and further surveys are required in the form of two dusk emergence surveys. These can be conducted between May and September, with a minimum of three weeks between each survey. If bats are recorded roosting, a third survey will be required to classify the roost (species, numbers, etc.) and provide sufficient information to produce a mitigation strategy and apply for a European Protected Species licence. Conversely, if no bats are recorded roosting during the initial two surveys, then bat absence can be reasonably assumed, and no further work is required.
- 7.10 The willow tree has a woodpecker hole in one of the upper pollarded limbs which could potentially be used by roosting bats, if not used by birds. This tree is being retained. If any works are planned to this tree in the future, beyond the removal of regrowth back to old cut points, then this feature should first be inspected by a suitably qualified ecologist.
- 7.11 The site and surrounds provide good quality bat foraging habitat with a mosaic of grassland, lines of trees and hedgerows, ponds, and old buildings. Given the small scale of the proposals, impacts from the development upon bat foraging in the local area are considered to be minimal, provided artificial lighting is kept to a minimum.
- 7.12 In general, there is scope to enhance the site for roosting bats through the inclusion of an integrated bat roost feature in the new extension, and through the installation of bat roost boxes on existing trees. The specific recommendations will be guided by the results of the further bat surveys.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	One dusk emergence survey is required to determine if bats are roosting in any of the buildings to be affected by development proposals. This must be undertaken between May and August.
Avoidance	No works to be carried out on the cart lodge, thatched gym, or potting shed until emergence survey has been completed.
Mitigation	Pending results of further survey.
Compensation	Pending results of further survey.
Enhancement	At least one integrated bat roost feature (e.g. bat tile, bat brick, soffit box) should be incorporated into the extension, along with at least one bat box on a suitable tree on the site.

Great crested newt (GCN)

Data search

- 7.13 Three records for GCN were returned by EFC between 2012 and 2018. All three were 1.4km distance from the site.

Habitat requirements:

- 7.14 Breeding sites are mainly medium-sized ponds, though ditches and other waterbody types may also be used less frequently. Ponds with ample aquatic vegetation (which is used for egg-laying) seem to be favoured.
- 7.15 Great crested newts do not require very high-water quality but are normally found in ponds with a circum-neutral pH. Broad habitat type varies greatly, the most frequent being pastoral and arable farmland, woodland, scrub, and grassland. There are also populations in coastal dunes and shingle structures.
- 7.16 Great crested newts can be found in rural, urban and post-industrial settings, with populations less able to thrive where there are high degrees of fragmentation. The connectivity of the landscape is important, since great crested newts often occur in metapopulations that encompass a cluster of several or many ponds.

Assessment:

- 7.17 The site mostly provides low-quality terrestrial habitat for amphibians due to the abundance of hard standing and managed lawn. The foundations and lower walls of the buildings are generally well-sealed, leaving potential shelter habitat on the site restricted to hedgerow bases around the site perimeter.
- 7.18 There is a pond on the site. It was built less than two years ago as part of a project to solve land drainage issues on the site. It is connected to a pump which expels excess water into the drainage ditch which runs outside the south-eastern boundary. The pond does not have any aquatic or marginal vegetation. Three other ponds were identified within 250m of the site. The first is located approximately 100m to the north-west and is a large pond which was not visible from publicly accessible land. According to historical Google Earth imagery, it was created in 2007. The second pond is in the grass field, approximately 60m to the southwest of the site and was created sometime between 2014 and 2017. It was not clearly visible from public land. The third pond is located approximately 240m to the southeast along Bakers Lane. It appears to be a long-established pond associated with an old property. This pond was not clearly visible from public land.
- 7.19 Due to the presence of four ponds within 250m of the site, including the recently created drainage pond on the site, there is the potential for great crested newts (GCN) to disperse through the site if breeding populations exist in and around any of the off-site ponds. However, the areas of the site that will be impacted by the development proposals do not provide suitable habitat for this species.
- 7.20 Assuming all work takes place on the existing hard standing/maintained lawn areas, there is not a reasonable likelihood of GCN being present and affected.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	Retain on-site pond. Ensure all work takes place on hard standing/sealed surfaces or maintained lawn areas.
Mitigation	None
Compensation	None
Enhancement	The landowner has stated their intention of establishing a wildlife pond in the new drainage pond. The planting of native aquatic and marginal plants is recommended. No fish should be introduced.

Dormouse

Data search

7.21 No dormouse records were returned in the data search.

Habitat requirements:

7.22 The hazel dormouse requires wooded habitats, usually semi-natural woodland containing hazel coppice and oak, and a rich understorey cover through which to disperse safely between trees (English Nature 2006).

Assessment:

7.23 The site largely provides no habitat for dormice, as it comprises buildings, hard standing, and lawn. The hedgerows are all well-maintained and are either conifer or hawthorn, neither of which are optimal for this species. The trees along Bakers Lane and around the recently created drainage pond provide some habitat for this species, although they lack favourable arboreal structure and connectivity to potentially suitable woodland habitat in the wider landscape. The likelihood of dormice using the site, or the immediate surrounding area, is assessed as being extremely low. No further survey or mitigation is required.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	None
Mitigation	None
Compensation	None
Enhancement	None

Otter and water vole

Data search

7.24 Two historical records of water vole were returned in the data search. These are 1.4km and 1.5km distance from the site, both in 1991. A single otter record was returned, 1.5km from the site in 2009.

Habitat requirements:

7.25 Both species require flowing water, deep enough to support foraging behaviour and with connectivity into the wider landscape.

Assessment:

7.26 There is no suitable aquatic habitat for either species in the local area and both species are assessed as being absent within the zone of influence around the site. No further survey is required.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	None
Mitigation	None
Compensation	None
Enhancement	None

Reptiles

Data search

7.27 No reptile records were returned in the data search.

Habitat requirements:

7.28 Common lizard, slow worm, grass snake and adder require mosaic habitats with features in which to bask, forage and shelter. These habitats need to have onward connectivity for dispersal. Suitable habitats include grassland with scrub edges or small woodland coppices (Edgar et al. 2010).

Assessment:

7.29 Most of the site provides low-quality foraging and shelter habitat for reptiles, as it largely comprises buildings, hard standing, and well-managed lawn. The hedgerow bases could be used by sheltering and dispersing reptiles if populations are present in the local area.

- 7.30 As the development is confined to areas of the site that contain buildings, lawn and hard standing, the potential risk of individual reptiles being harmed by the proposals is low and no further survey or mitigation is necessary.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	None
Mitigation	None
Compensation	None
Enhancement	None

Birds

Data search

- 7.31 Numerous bird records were returned in the data search, including the following species listed under Schedule 1 of the WCA: red kite, barn owl, brambling, hobby, peregrine, and Cetti’s warbler.

Habitat requirements:

- 7.32 Nesting birds can be found in scrub, trees and buildings between March and September inclusive (note some species, including pigeon, will nest all year round).

Assessment:

- 7.33 The site provides nesting opportunities for a wide variety of garden birds within buildings, hedgerows, and trees.
- 7.34 Three swallow nests from last season were found inside the cart lodge building. Precautionary measures are required with regards to timings of building demolition and any future vegetation clearance. An open-fronted building should be retained for swallow, or a compensatory nest site (e.g. an open shed type building) will be provided with nest cups where appropriate.
- 7.35 The site provides foraging opportunities for a variety of birds – primarily widespread garden species and those associated with human habitation.
- 7.36 Provided a suitable soft landscaping design is implemented, the development proposals are likely to result in enhanced foraging opportunities for birds in the local area.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	All building demolition works, and any tree/hedge works must be undertaken outside the breeding season, or immediately after an ecologist has confirmed the absence of active nests.
Mitigation	If active nests are found during site clearance or the construction phase, all works must cease in the area and the nest left undisturbed with a species-appropriate buffer (advised by project ecologist) until the young have fledged.
Compensation	Should the cart-lodge be removed, compensatory nest provision would be required for swallow.
Enhancement	There is scope to install a variety of bird boxes or integrated features in the new extension or other proposed outbuildings (i.e. swift bricks and sparrow terraces). Suitable soft landscaping will provide additional foraging and nesting habitat post development.

Legally protected plants/invertebrates

Data search

7.37 The data search included numerous records of moth and butterfly species, several of which are UKBAP species, as were records of WCA Schedule 8 protected bluebell *Hyacinthoides non-scripta*.

Assessment:

7.38 The site is highly unlikely to support any legally protected plants or invertebrates, due to its small size, use, composition, and location. The site falls within a B-Lines corridor. As such, efforts should be made to enhance the site for pollinators. The landowner has already stated their intention of keeping honeybees on the site. In addition, the inclusion of solitary bee hives would further enhance the site. The planting of flowers and shrubs will significantly increase opportunities for pollinators on the site in the future.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	None
Mitigation	None
Compensation	None
Enhancement	Beehives and the planting of a variety of flowers attractive to pollinators.

Badger

Data search results

7.39 Confidential – available on request.

Habitat requirements:

7.40 Badger is a widespread, common mammal and is legally protected due to persecution rather than rarity or conservation significance.

7.41 European badger requires habitats in which to build their setts and in which to forage. Badgers preferentially choose sloping banks (road verges, railway embankments, woodlands) with easy-dig substrate for sett building where foraging habitat is available.

Assessment:

7.42 No badger setts were identified on the site or on accessible/visible land within 30m of the boundary. There were no signs indicating that badgers forage on the site or disperse through it. The flat ground and waterlogged nature of the clay soil limits the suitability of the immediate area for sett creation. As such, precautionary measures are not required.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	None
Mitigation	None
Compensation	None

8.0 Ecological Constraints and Opportunities

Constraints:

- 8.1 Some of the buildings (cart lodge, potting shed, and thatched gym) are potentially suitable for use by crevice-roosting bat species. One dusk emergence survey is required to determine if bats are roosting in these structures. If bats are found to be roosting, a total of three surveys and a European Protected Species licence will be required from Natural England before any works can commence.
- 8.2 The Cart Lodge is used seasonally by nesting swallows. Trees and hedgerows in the garden could be used by a variety of nesting bird species. Any clearance of potentially suitable nesting habitat must be undertaken outside the main breeding season, or immediately after an ecologist has confirmed the absence of active nests (breeding season runs from March to the end of September, although some species such as pigeon can nest year-round).

Opportunities:

- 8.3 Biodiversity net-gain is now encouraged under Paragraph 180(d) of the NPPF. Householder projects are however exempt from demonstrating mandatory Biodiversity Net Gain. The following recommendations are reasonable and proportionate and would improve conditions on the site for local wildlife.
 - Integrated bird features: The new extension and/or car port should include a minimum of one swift brick and an accessible area for swallows to build nests.
 - Integrated bat features: A minimum of one integrated bat roost features should be built into the extension and/or car port.
 - Bird and bat boxes: A minimum of one bat box and two generalist bird boxes should be installed on suitable trees on the site.
 - Tree planting: Native specimen trees could be included in landscape design.
 - Hedgerow planting: Native, species-rich hedgerows could be included in the landscape design.
 - Shrubs and flowers: Species of known benefit to wildlife should be included in the soft landscape design, specifically for pollinators and night-flying invertebrates.
 - Pond enhancement: Planting of native aquatic and marginal plants.
 - Bee hives: The landowner has stated their intention of keeping bees on the site. Solitary bee hives could also be installed in garden.

Suitable habitat boxes for the site are provided in Appendix 2.

9.0 Conclusions

- 9.1 Hybrid Ecology was instructed to carry out an ecological assessment in relation to a proposed development at Jollyboys, Bakers Lane, Felsted, in Essex.
- 9.2 A mapping exercise and desk study were undertaken to determine constraints relating to designated sites, Priority Habitats, and protected species. A survey was carried out in February 2024 to map habitats and identify any potential for/evidence of legally protected species. The survey also identified opportunities for ecological enhancement.
- 9.3 The site comprises an historic property with assorted outbuildings of varying ages. The garden contains areas of lawn, trees, boundary hedgerows, a recently created pond, and hard standing. These habitats were assessed as being of importance at a local level.
- 9.4 The outbuildings have scope to support roosting bats. Further survey is required. Mitigation is required in respect of nesting birds.
- 9.5 Provided all further surveys, avoidance, mitigation, and enhancement measures detailed in this report are complied with, it is considered that the proposal can be made acceptable with minimal impact to local biodiversity.

Enhancement opportunities

- 9.6 The development proposal should include biodiversity enhancements which include habitat boxes/features for bats and nesting birds, native tree and hedgerow planting, and shrubs and flowers of known benefit to wildlife. These measures will contribute to biodiversity net-gain in accordance with the NPPF. The design, maintenance and management could be secured by a condition.

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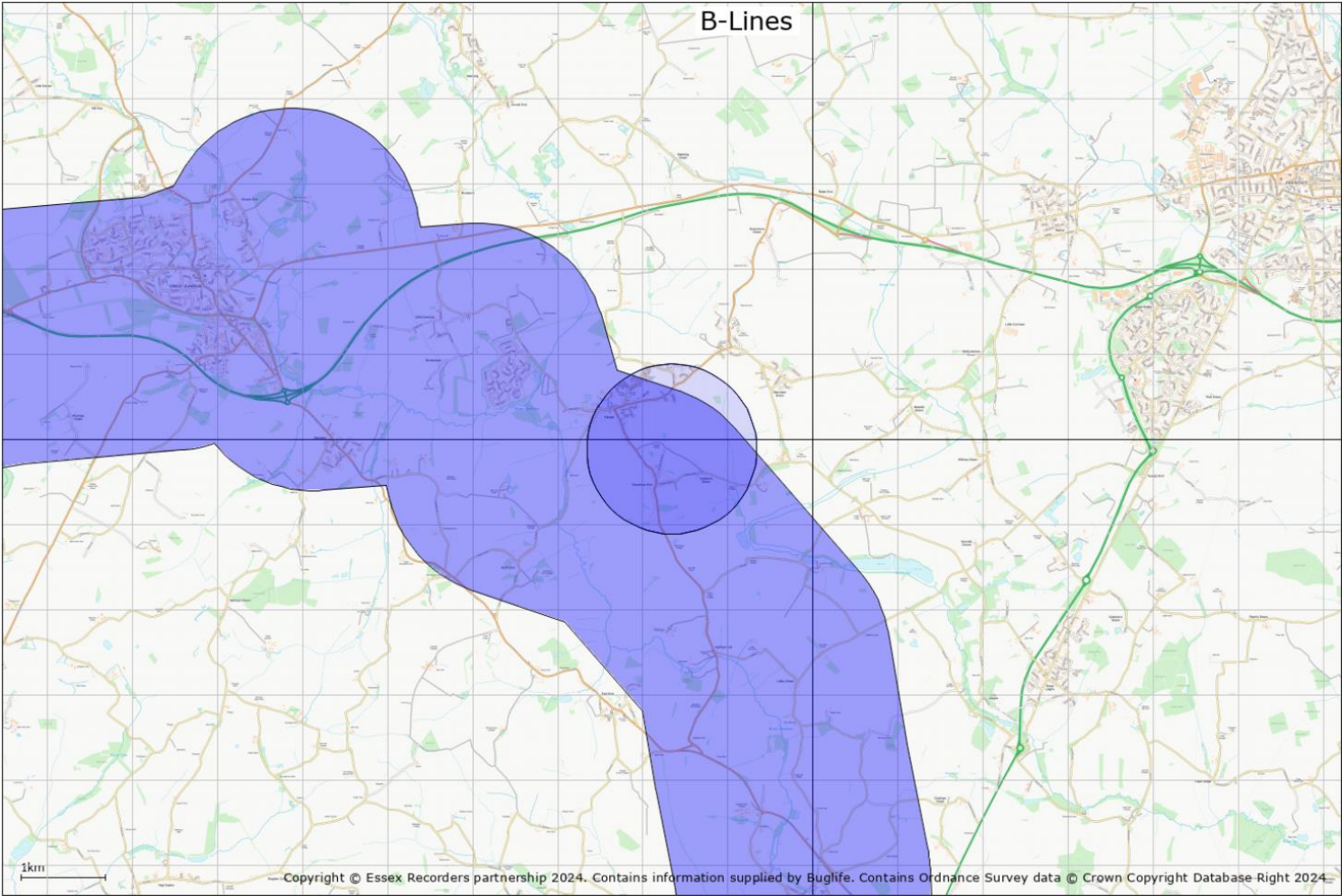
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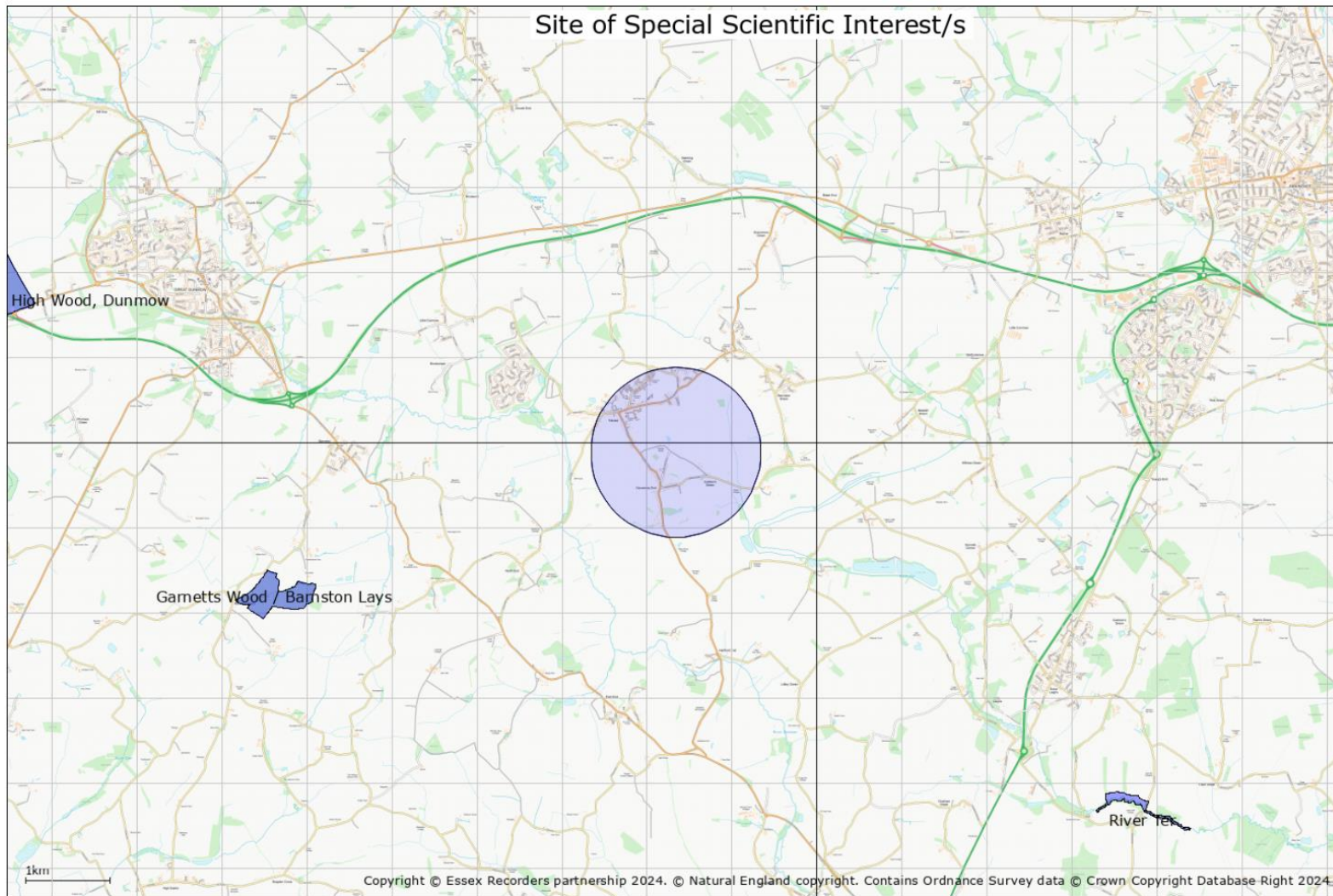
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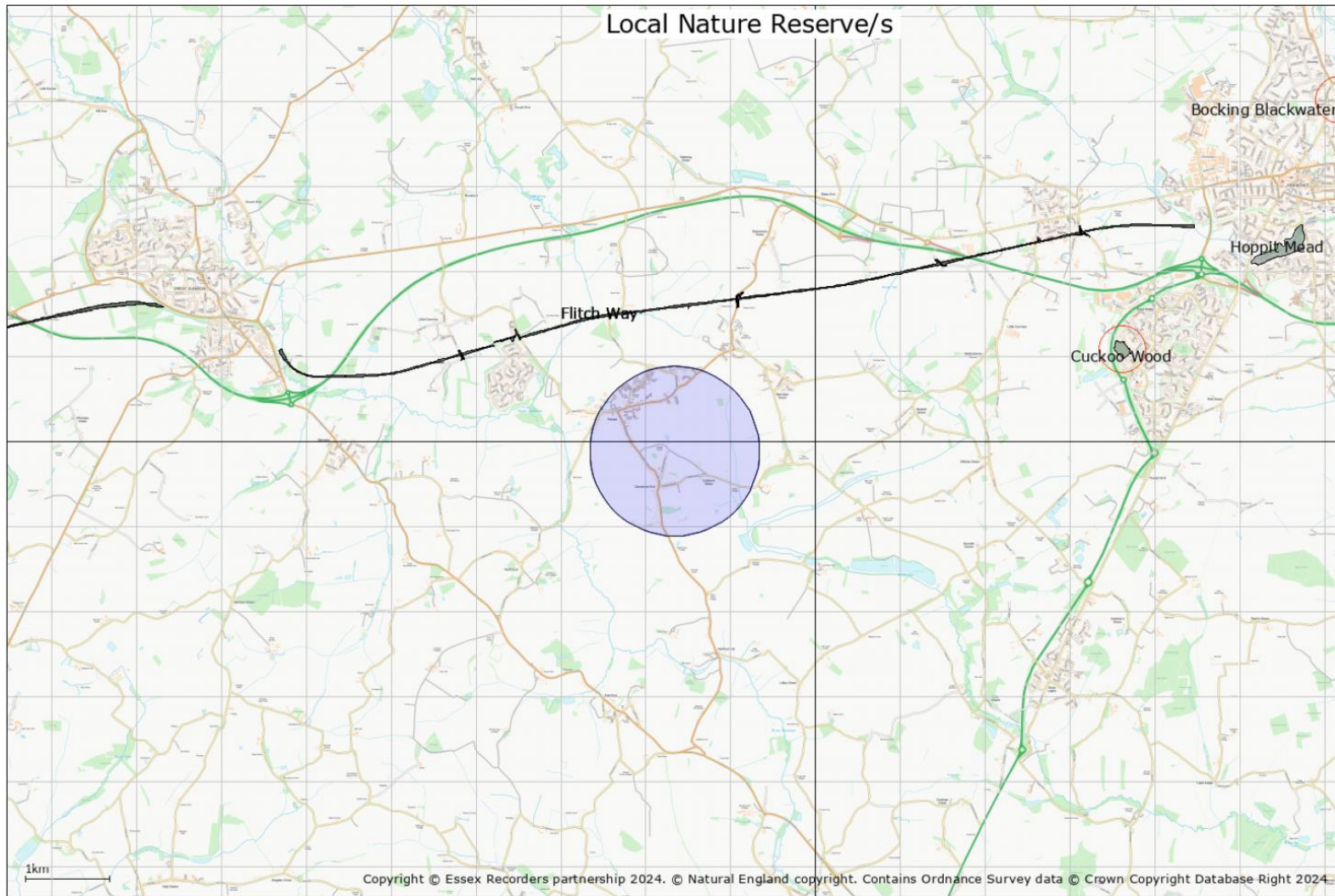
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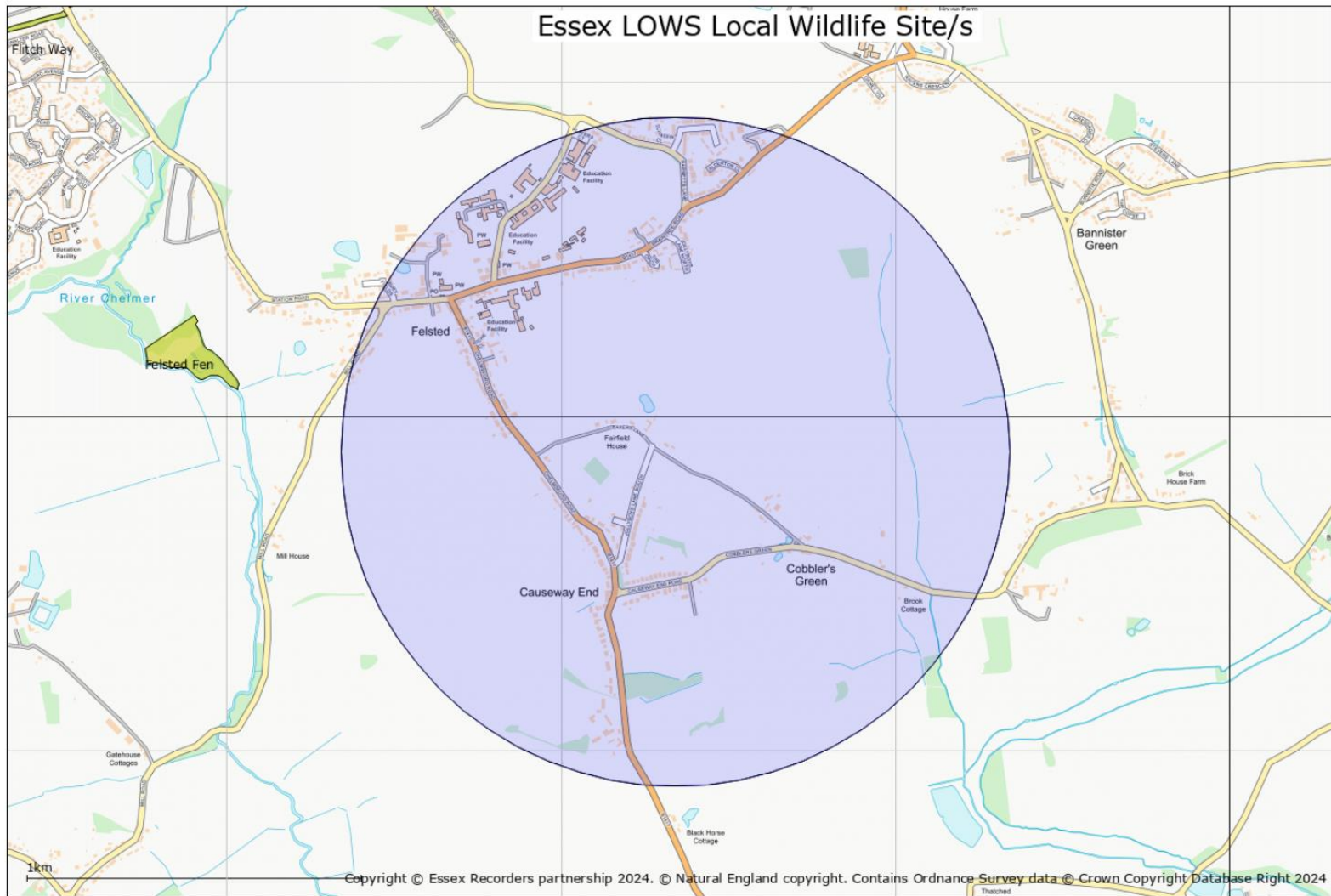
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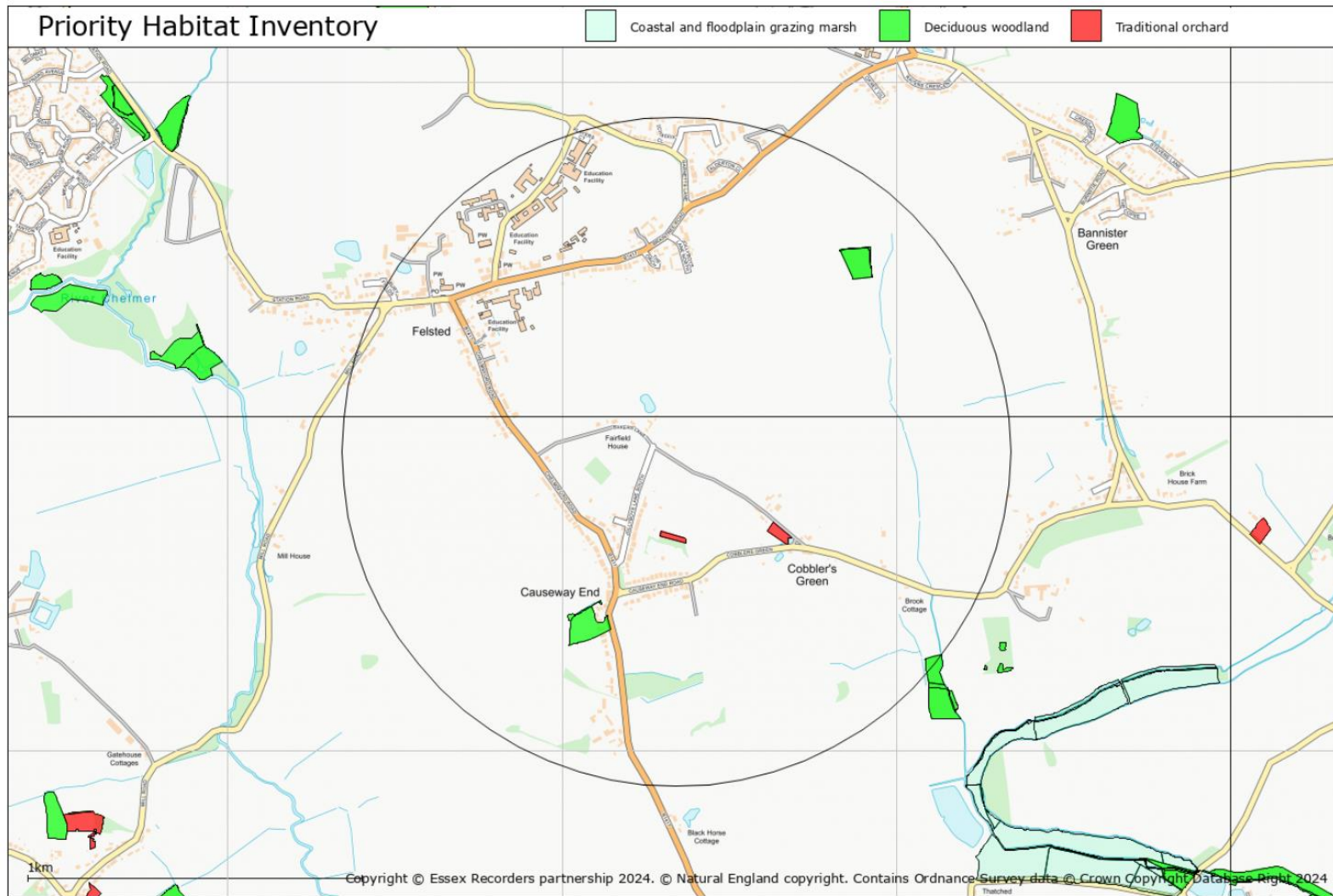
Appendix 1. Essex Field Club data search maps











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Appendix 2. Habitat boxes appropriate for the site

“Habibat” integrated bird and bat box designs

Available here: <https://www.habibat.co.uk/bat-boxes>



The Habibat Bat Box is a large, solid box made of insulating concrete with an internal roost space, which can be incorporated into the fabric of a building as it is built or renovated.

A variety of facings can be fitted to suit any existing brick, wood, stonework or rendered finish, rendering the box unobtrusive and aesthetically pleasing.

The Habibat box is suitable for species which are most commonly found roosting in buildings in the UK, such as Pipistrelle, Natterer's, Whiskered, and Brandt's bats.

All boxes in the Habibat Bat Range, are available in the following finishes:

- Unfaced for use with Render or Cladding Systems
- Standard Smooth Red, Blue, Buff
- Bespoke, to suit the product you are using on site
- As a Bat Maternity Box
- Coursed to suit existing brick or blockwork. This includes, English, Flemish, Stack or Stretcher. Speak to the Habibat Design Team to discuss which would be suitable to complete your build.



Integrated Eco Bat Box for buildings

Available here: <https://www.nhbs.com/integrated-eco-bat-box>

- Materials: Recycled LDPE plastic outer with internal FSC OSB roost chamber
- Construction: Outer panels welded, internal chamber formed from stapled panels
- Finish: Black carcass with red, green or black front panels
- Dimensions: 44cm x 21.5cm x 11.1cm
- Entrance: 1.7cm wide
- Internal (Cavity): Open roost chamber, 6cm wide
- Internal (Crevice): Two crevices, 2.2cm wide
- Weight: 3kg
- Access: No access once fitted, self-cleaning, droppings fall out of entrance slot
- Fixing: Held in brickwork by mortar/sealant

THREE CREVICE BAT BOX



£72

Individually Handmade - Specifications are in cm and approximate.
External: 43 high x 21.5 wide x 13.5 deep
Internal: 41 x 16.5 x 1.8 crevices @ 3
Weight approx. 8.5kg
Designed for larger groups of crevice dwelling bat species, such as Common and Soprano Pipistrelles.

Greenwoods Eco Habitats 3 crevice bat boxes

Available here: <https://www.greenwoodsecohabitats.co.uk/>



Vivara Pro 32mm woodstone bird box

- Dimensions (mm): 205 x 200 x 310
- Entrance hole: 28
- Weight (kg): 4.2
- Species: Tree sparrows, great tits, crested tits, nuthatches, coal tits and pied flycatchers
- Siting: Fix to a tree with an aluminium nail. These boxes are robust and do not rust, therefore reduce damage to the tree.



Vivara Pro open-fronted woodstone bird box

- Dimensions: 24cm x 19cm x 17.5cm (H x W x L)
- Entrance hole: Open
- Species: Suitable for wrens, robins, spotted flycatchers, pied and grey wagtails, song thrushes and blackbirds.
- Siting: Open fronted nest boxes should be sited in undergrowth such as ivy to provide cover for the nest. These nest boxes have a removable front panel for easy cleaning.

All Vivara Pro boxes can be found here - <https://www.wildcare.co.uk>



Solitary bee hive

Specification: 200mm x 180mm x 160mm

Available here: <https://www.vinehousefarm.co.uk/solitary-bee-hive>