
Preliminary Bat Roost and Barn Owl Assessment

Pear Tree Farm, Hinderclay

for

David Thorrold

20 November 2023

Client

David Thorrold

Planning authority

Babergh Mid Suffolk

Time limit of reliance

Please note that the reported surveys were conducted on the date(s) stated in the report and that it represents site conditions at the time of the visit. The findings and recommended mitigation are based on these conditions. If site conditions change materially after the site survey, the original report cannot be relied upon and will need to be updated. Ecological reports and surveys can typically be relied on for 18 to 24 months from the date of survey.

Surveys supporting European Protected Species Mitigation Licence applications must be within the current or most recent survey season for bats (May to September), or within two survey seasons for great crested newts (March to June).

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Signed disclosure

The information, data, advice and opinions provided in this report which I have provided is true and has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. I confirm that the opinions expressed are my true and professional bona fide opinions.

Nathan Duszynski, ACIEEM

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SUMMARY

- Greenlight Environmental Consultancy Ltd. has been commissioned to carry out a Preliminary Bat Roost and Barn Owl Assessment for a development at Pear Tree Farm, Hinderclay, Diss, Suffolk, IP22 1HY (grid reference: TM 02142 76835).
- This report outlines the likelihood of bats and barn owls being present and any potential effects of the proposed development on such species.
- The ecology report is required in support of a planning application for the demolition of the existing building and construction of a residential dwelling.
- The survey and assessment were completed by independent, qualified and experienced ecologists with Natural England survey licences for the relevant protected species.
- The findings of the assessment are that there are no significant ecological constraints that would prevent the proposed works.
- **Further surveys for bats are required prior to works commencing to inform an ecological impact assessment of the site and an appropriate mitigation strategy.**
- If the following mitigation and enhancements are incorporated into the proposed layout, there will be a net gain for biodiversity, as is encouraged by the National Planning Policy Framework.

Protected habitats/species	Status	Potential effect	Recommended mitigation and enhancements
Protected sites	Two statutory protected sites within 2km.	No significant impacts on protected sites and their qualifying features.	None required.
Bats	<p>Moderate summer and low hibernation bat roosting potential in building on site.</p> <p>Low value commuting and foraging habitat on site.</p>	<p>Destruction of bat roost/s if present within building on site.</p> <p>Low scale loss and potential light disturbance of commuting and foraging habitats on site.</p>	<p><u>Further surveys required</u></p> <p>Updated PRA survey required to include additional buildings (scheduled for December 2023).</p> <p>At least two activity surveys to be undertaken on the building on site between May-September, with one conducted between May-August.</p> <p>At least two hibernation surveys to be undertaken on building two (outbuilding) between December-February.</p> <p>The outcome of the surveys will inform a detailed mitigation strategy and whether an EPS Mitigation Licence will be required from Natural England.</p> <p><u>Mitigation</u></p> <p>Any lighting schemes will comply with Bat Conservation Trust (GN08/23) and CIE 150:2017 guidance.</p>

Protected habitats/species	Status	Potential effect	Recommended mitigation and enhancements
Breeding birds	Nesting habitats for building nesting birds present on site, including potential breeding habitat for Red and Amber listed species. No suitable barn owl foraging habitat on site.	Low scale loss of nesting habitat on site. Potential disturbance to breeding birds.	<p><u>Mitigation</u></p> <p>Works to any buildings on site to be conducted outside bird nesting season or under watching brief of ecologist if during nesting season.</p> <p><u>Enhancement</u></p> <p>Installation of one integrated swift box and one small bird box, installed on new building and trees respectively.</p>
Other animals	N/A	Potential harm to animals.	<p><u>Mitigation</u></p> <p>If fencing is required, this will be porous and provide openings for hedgehogs. Rough sawn planks will be placed inside any open excavations. Construction materials will be stored off the ground on pallets and waste materials in skips.</p> <p><u>Enhancement</u></p> <p>Installation of four bee bricks.</p>

1. METHOD

- 1.1. A walkover of the site was conducted on 17th May 2023 by Miranda Proctor – an independent, qualified and experienced ecologist. Survey conditions were as follows: 15°C, 8mph wind, overcast and dry.
- 1.2. All survey methods were carried out in accordance with the most up to date good practice guidance for the relevant protected species. Please refer to Appendix A for the full methodology and species breakdown.
- 1.3. Please note, an update survey is scheduled for December 2023 to include additional buildings which fall within the new site boundary. Please see Appendix I for proposed plans.

2. SITE CONTEXT

Location

- 2.1. The general location of the site is shown in Figure 1 below.
- 2.2. The site is situated within the rural village of Hinderclay, with the A143, Little Ouse River and River Waveney located approximately 1.6km south, 1.6km northeast and 2km north respectively. The closest town is Diss, approximately 9.1km northeast of the site.
- 2.3. The site is enclosed by large agriculture buildings with associated hardstanding to the northwest, improved grassland to the northeast and a concrete hardstanding drive to the southeast and southwest. The wider surroundings are comprised of scattered settlements, pockets of woodland and arable fields lined with mature trees and hedgerows.



Figure 1

Satellite image of site surroundings, site indicated by red line.

Image © Google, date accessed 17/05/23

3. DESCRIPTION OF THE DEVELOPMENT

- 3.1. The proposals are for the demolition of the existing building and construction of a residential dwelling. Please refer to Appendix I for the proposed plans.

4. PROTECTED SITES

Statutory

- 4.1. There are two statutory protected sites located within 2km – one Sites of Special Scientific Interest (“SSSI”) and one Special Area of Conservation (“SAC”). Please refer to Appendix C for the full citation.

- i. Blo’ Norton and Thelnetham Fens SSSI, approximately 1.7km north.

“This site is of interest mainly because of the plant communities associated with the remaining areas of open fen. Additional interest is provided by the areas of carr woodland and by some of the meadows adjacent to the fen.”

- ii. Waveney & Little Ouse Valley Fens SAC, approximately 1.7km north.

*“This site occurs in the East Anglian centre of distribution of calcareous fens and contains very extensive great fen-sedge *Cladium mariscus* beds, including managed examples, as well as stands in contact zones between small sedge mire and species-poor *Cladium* beds. The habitat type here occurs in a spring-fed valley fen.”*

- 4.2. The proposed development falls outside of all SSSI Impact Risk Zones, being a rural residential development of less than 100 units.

5. PROTECTED AND NOTABLE SPECIES

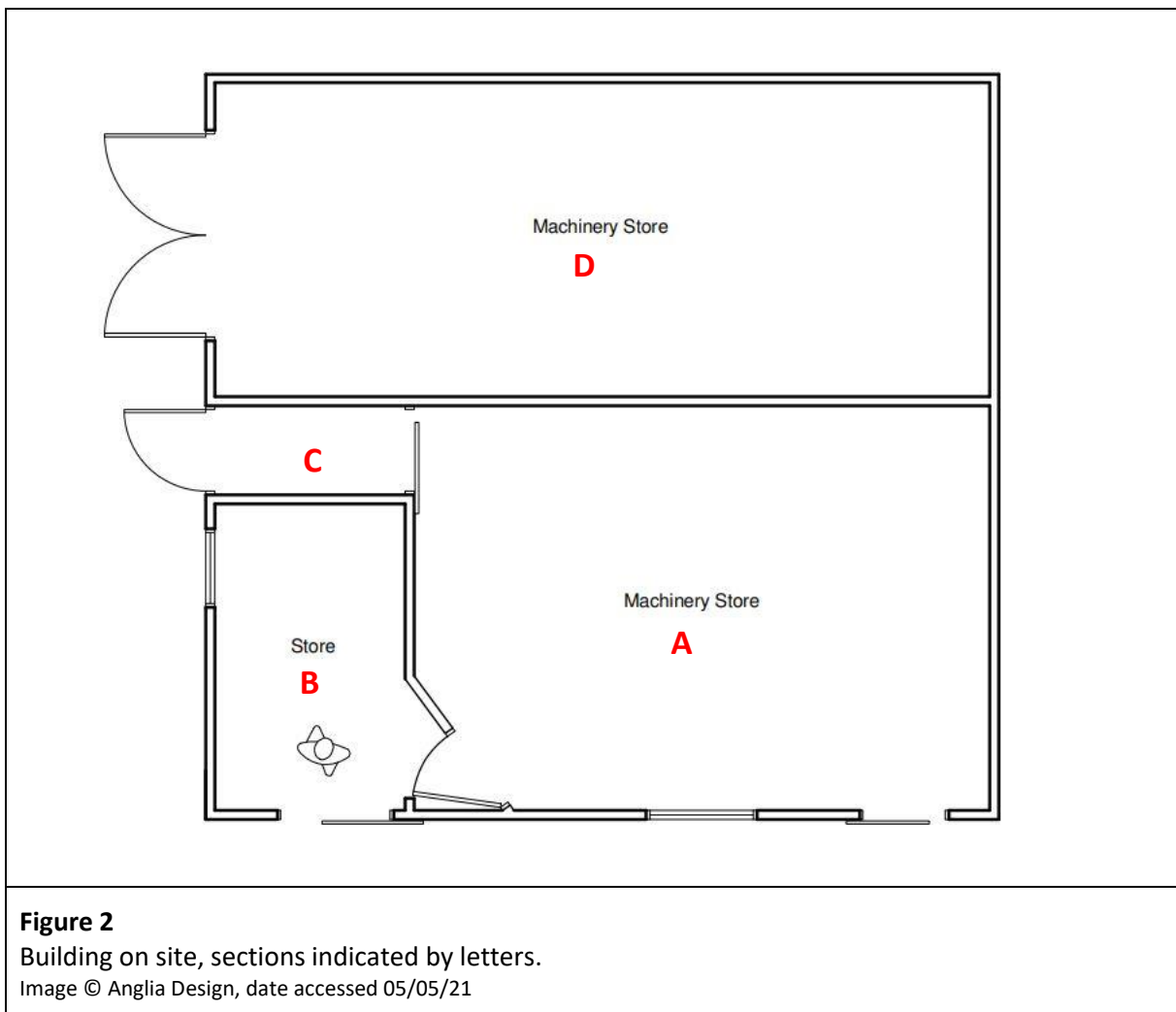
Desktop review

Protected species licences

- 5.1. A 2km search on <http://www.magic.gov.uk/> indicated no records of granted European Protected Species (“EPS”) Mitigation Licences.

Bats

- 5.2. There is one building on site which can be divided into four sections, as indicated in Figure 2 and photos 1-6.



Building one

- 5.3. The store building is constructed of breezeblock walls and a mixture of timber and metal framed doors. The building can be divided into four sections:
- i. Section A features a pitched corrugated asbestos roof, with timber trusses and a ventilated ridge exposing the interior to draughts. Significant natural light is present through the window on the west aspect.
 - ii. Section B features a pitched corrugated asbestos roof, with timber trusses and a ventilated ridge exposing the interior to draughts. Significant natural light is present through the windows on the north and west aspects.
 - iii. Section C features an open north aspect and a timber door along the south wall. It has a single pitch corrugated asbestos roof and timber truss. Significant natural light is present through the open north aspect.
 - iv. Section D has large double doors on the north aspect and breezeblock walls on all other aspects. It features a single-pitched corrugated metal roof and timber trusses. An artificial light is in regular use.
- 5.4. Roosting opportunities are present within crevices in the breezeblock walls and between the breezeblock wall and timbers. Whilst most of the roosting features were either exposed or heavily cobwebbed, one crevice within the breezeblock wall observed externally on the southern aspect was clear, with approximately 50 droppings indicative of brown long-eared *Plecotus auritus* and a collection of bird droppings.
- 5.5. The building is assessed as **moderate** summer and low **hibernation** roost suitability for bats due to its location, roosting features and signs of bats.



Photo 1, west and south aspects of building one, looking north. Yellow line indicates location of breezeblock cavity clear of cobwebs and with a collection of droppings.



Photo 2, north and west aspects of building one, looking southeast.



Photo 3, internal view of section A.



Photo 4, internal view of section B.



Photo 5, internal view of section D.



Photo 6, breezeblock cavity observed on the southern aspect of the building, with approximately 50 droppings indicative of brown long-eared and bird droppings.

Trees

5.6. There were no trees located on or immediately adjacent the site.

Foraging and commuting links

5.7. The site itself provides **negligible** value foraging habitat for bats, with bats mainly using adjacent hedgerows and treelines for foraging and commuting.

5.8. The landscape immediately adjacent to the site is considered of **low** to **moderate** value for foraging and commuting bats, with linked gardens, hedgerows and treelines providing links to the wider landscape. Residential dwellings adjacent the site and within Hinderclay have the potential to provide roosting opportunities for bats.

Birds

5.9. Birds in the UK are classified into three categories of conservation importance - red, amber and green. Factors such as global threat level, population decline, breeding population decline and contraction of breeding range are taken into account to determine classification.

5.10. The following bird species were observed during the site visit:

Amber listed:

Woodpigeon
Wren

Columba palumbus
Troglodytes troglodytes

Green listed:

Blackbird
Blue tit

Turdus merula
Cyanistes caeruleus

5.11. The site provides suitable nesting habitats for building nesting species. A number of blackbird *Turdus merula* and swallow *Hirundo rustica* nests were observed within the building.

5.12. The site provides potential breeding habitat for the following Red listed species: house martin *Delichon urbicum*, house sparrow *Passer domesticus* and swift *Apus apus*.

5.13. The site provides potential breeding habitat for the following Amber listed species: woodpigeon *Columba palumbus* and wren *Troglodytes troglodytes*.

5.14. No signs of barn owl were found on the site and no foraging habitat is present.

6. DISCUSSION AND CONCLUSIONS

Protected sites

- 6.1. The development footprint falls outside all identified protected sites (statutory and non-statutory). There are two statutory protected sites located within 2km of the site.
- Both statutory protected sites (Blo' Norton and Thelnetham Fens SSSI and Waveney and Little Ouse Valley Fens SAC), are located approximately 1.7km north and designated for their fen habitats.
- 6.2. The proposed development falls outside of any SSSI Impact Risk Zones relating to rural residential developments.
- 6.3. The proposed development is expected to have no effects on statutory protected sites or their qualifying features, owing to its relatively small scale, distance to protected sites and limited predicted impacts beyond the area of works.

Bats

- 6.4. The proposed works will require the demolition of the building on site, which has the potential to materially modify or destroy potential bat roosting locations, if present.
- 6.5. The following surveys/mitigation are required to determine if any bat species are present, the nature of their use of the building(s) and any roosting locations:
- i. An updated PRA survey will be required to include additional buildings which fall within the new site boundary (Appendix I) and is scheduled for December 2023.
 - ii. At least two bat activity survey to be conducted on the building on site between May and September. Please note, at least one survey must be conducted between May and August.
 - iii. At least two bat hibernation surveys to be conducted on the building on site between December and February.
 - iv. If bats are found to be present and roosting within any building(s), further activity surveys and a European Protected Species Mitigation Licence may be required for the development.
 - v. Any lighting schemes will follow guidance from the Bat Conservation Trust (GN08/23) and CIE 150:2017. Warm-white (<3,000K) lights with UV filters (where necessary) will be installed away from roosting locations and linear features. Lighting units will feature a beam angle <70°, connected to movement sensors and feature baffles, hoods, louvres and horizontal cut off units at 90° where necessary.

- 6.6. The outcomes of further activity surveys will inform the detailed recommended mitigation for bats. We consider that the proposed development will be able to accommodate this in the form of alternative roosting opportunities, as required.
- 6.7. Building Regulations state that the energy efficiency of buildings must be improved where possible and that contractors must assess the condensation risk within the roof space and make appropriate provisions in line with BS 5250:2011. This British Standard states that both High Resistance (bitumen type 1F) and Low Resistance (non-bitumen coated roofing membranes (NBCRM)) underlays are acceptable as long as appropriate ventilation is provided. As NBCRM are proven to entangle bats through regular contact, which also compromises the integrity of the membrane, the Bat Conservation Trust recommend only NBCRM that have passed the snagging propensity test (must be supplied/installed with the necessary certification) or traditional type 1F bitumen are used.

Birds

- 6.8. The proposed works are expected to result in a low scale loss of bird nesting habitat through the demolition of the building on site.
- 6.9. As a precautionary measure, the following mitigation will be implemented to avoid impacts on birds from the proposed works:
 - i. Any works affecting bird nesting habitat such as management of buildings would ideally need to be conducted outside the main nesting season. If work is planned during the bird nesting season (between 1st March and 31st July), then a precautionary check of all habitats will be conducted by a qualified ecologist immediately prior to starting any work. If any nesting birds are found, an appropriate protection zone from the nest will be required and will be maintained until the young have fledged.
- 6.10. As enhancements, the following will be implemented:
 - i. One integrated swift box (Swift Block – Appendix F).
 - ii. One small bird box (Schwegler 1B or 2H Nest Box – Appendix F).
 - iii. A soft landscaping scheme to include the planting of new native species-rich (≥ 5 species), hedgerows and trees around the site (see Appendix E for suggested species).
- 6.11. Natural England and Local Planning Authorities (“LPA”) have recognised a significant decline in swift populations across the country, and are actively endorsing integrated swift boxes to provide a net gain in biodiversity, as is encouraged by NPPF 2021.

Other animals

- 6.12. The surrounding habitat of the site is considered suitable for hedgehogs. To maintain potential hedgehog routes within the site and between the site and further habitats, any fencing installed will be porous and provide access openings for hedgehogs (see Appendix G for examples).
- 6.13. General mitigation to protect wildlife during the construction period are as follows:
- i. Any excavations will have a rough sawn plank placed inside to act as a ramp to allow any animals that have fallen in to escape. The excavations will be checked each morning works are scheduled for, to remove any animals trapped.
 - ii. Construction materials will be stored off the ground on pallets and waste materials in skips, to prevent providing shelter for animals and subsequent harm when materials are moved.
- 6.14. As enhancements, the following will be implemented:
- i. The installation of one bee brick on new building (Bee brick – Appendix H).

7. BIBLIOGRAPHY

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Appendix A

Methods

Desktop Review

A desktop review of published data, such as records of protected sites and species, OS maps and satellite images has been carried out. A data search was carried out using www.magic.gov.uk for statutory protected sites and habitats.

A field survey visit was conducted to confirm the findings of the desktop review and to record habitats and species located on site.

Equipment available for use during the survey were binoculars, ladders, torches, endoscope and a digital camera.

Bats

An assessment of the habitats on and surrounding the site for bat interest was made, in accordance with latest bat survey guidelines (Collins, 2016).

The building(s) on site was assessed for its potential to support roosting bats and involved a thorough internal and external search of all suitable cavities, holes and crevices. All suitable areas, including objects, ledges and floors were inspected for the following signs:

- Bat droppings
- Stains around roosting places and entrance points
- Urine marks
- Prey remains
- Areas devoid of cobwebs
- Live or dead bats
- Suitable cracks and crevices for bats to enter

In exposed conditions, the signs of bat usage such as droppings and urine marks can be obliterated by heavy rain.

An evaluation system was applied to the building(s) using the following criteria:

- **Negligible roost suitability for bats.** These buildings have no potential roosting features for bats, or very few or minor features in an isolated or unsuitable location such that the presence of a bat roost is considered highly unlikely. Such buildings usually fall into two main types: generally, well maintained without cracks and crevices, no gaps between bargeboard or soffit and wall, or without an attic space; or those which contain some or all of the above features, but are both draughty and thick in cobwebs or contain strong odours such as solvents, diesel etc. It must be borne in mind that a building from this latter group can become suitable for bats following refurbishment. This often happens to houses once the attic space has been cleaned and under-felted prior to timber treatment. When no suitable habitats

for bats are found, no further surveys or European Protected Species (“EPS”) mitigation licence are required.

- **Low roost suitability for bats.** Buildings in this category have one or more potential roost sites that could be used by individual bat opportunistically. These buildings do not however provide suitable conditions (such as space, shelter, temperature, humidity, or light and noise disturbance) to be used on a regular basis by a large number of bats. Structures with low roost suitability for bats will require **one dusk emergence or one dawn re-entry survey** conducted between May and August to assess their current use by bats.
- **Moderate roost suitability for bats.** These buildings contain one or more potential roosting sites which could be regularly used by bats owing to their size, shelter, protection and conditions. These buildings are however unlikely to support a roost of high conservation status (maternity roost or hibernation roost). Structures with moderate roost suitability for bats will require two surveys, **one dusk emergence and one dawn re-entry survey** conducted between May and September with at least one of the surveys undertaken between May and August, to assess their current use by bats.
- **High roost suitability for bats.** This group includes buildings with one or more potential roost sites which are obviously suitable for use by a larger number of bats on a regular basis and potentially for longer periods of time owing to their size, shelter, protection and conditions. These buildings may support a roost of high conservation status (maternity roost or hibernation roost) and will require three activity surveys to assess their current use by bats. The surveys should include at least **one dusk emergence and** at least **one dawn re-entry survey** (the third survey can either be at dusk or dawn) and should be conducted between May and September with at least two of surveys undertaken between May and August.

The habitats on and around the site were assessed for their commuting and foraging potential for bats. An evaluation system was applied to the commuting and foraging potential using the following criteria.

- **Negligible commuting and foraging potential for bats.** Habitat features unlikely to be used by commuting or foraging bats.
- **Low commuting and foraging potential for bats.** Habitats that could be used by a small number of commuting or foraging bats such as, a gappy hedgerow, unvegetated stream or lone trees, but are isolated and not well connected to the surrounding landscape.
- **Moderate commuting and foraging potential for bats.** Habitats that are continuous and connected to the wider landscape such as, lines of trees, scrub, linked back gardens, grasslands and water features.
- **High commuting and foraging potential for bats.** Habitats that are continuous and connected to the wider landscape such as, river valleys, watercourses, hedgerows, lines of trees, deciduous woodland, and grazed parkland. These habitats are likely to be used regularly by commuting or foraging bats and are likely to be close to, or connected to, known roosts.

Birds

The site and its surrounding habitats were assessed for their potential to support breeding birds. Bird nesting habitat could include grassland, hedgerows, scrub, trees and buildings.

Bird species noted during the site visit were recorded. Trees, buildings and grassland were checked for use by barn owls, swifts and skylarks.

Appendix B
Map of protected sites within 2km

MAGiC

Magic Map



Appendix C Protected sites citations

SSSI citations

COUNTY: SUFFOLK/NORFOLK SITE NAME: BLO' NORTON AND
THELNETHAM FEN

DISTRICT:

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981.

Local Planning Authority: Breckland District Council, St Edmundsbury District Council

National Grid Reference: TM 017790 Area: 21.03 (ha.) 51.97 (ac.)

Ordnance Survey Sheet 1;50,000: 144 1:10,000: TM 07 NW

Date Notified (Under 1949 Act): 1959 Date of Last Revision: 1972

Date Notified (Under 1981 Act): 1983 Date of Last Revision: –

Other Information:

The boundary has been modified by the deletion of Hinderclay Fen and of some arable land. Part of the site is managed as a nature reserve by the Suffolk Trust for Nature Conservation.

Reasons for Notification:

This site is of interest mainly because of the plant communities associated with the remaining areas of open fen. Additional interest is provided by the areas of carr woodland and by some of the meadows adjacent to the fen.

The areas of fen least affected by drainage still support calcareous valley fen vegetation with plants such as black bog rush *Schoenus nigricans*, saw sedge *Cladium mariscus*, which is dominant in some parts, and purple moor grass *Molinia caerulea*. A very large number of plant species are associated with these areas, notably 'Fen Orchid' *Dactylorhiza praetermissa*, devil's bit scabious *Succisa pratensis*, long-stalked yellow sedge *Carex lepidocarpa* quaking grass *Briza media*, a small colony of grass of parnassus *Parnassia palustris* and a number of rare mosses. In other parts of the fen, where there is some drying-out in summer, this type of vegetation is replaced by taller vegetation dominated by reed *Phragmites australis* and meadowsweet *Filipendula ulmaria*. This vegetation has a different range of associated species including plants such as hemp agrimony *Eupatorium cannabinum*, purple loosestrife *Lythrum salicaria* and great hairy willowherb *Epilobium hirsutum*.

Woodland and scrub have invaded quite large areas of all three fens. The scrub consists mostly of dense willow, whilst the woodland is mostly alder carr, with ash and oak on the drier parts of Blo' Norton Fen. Beneath the woodland canopy, the ground vegetation is made up of a restricted range of fen plants and weedy species such as nettle and cleavers.

In order to provide some control over the water table in the fen areas the site boundary also encompasses several small fields and ditches. These are of some interest in their own interest with plants such as ragged robin *Lychnis flos-cuculi*, marsh marigold *Caltha palustris* and Marsh thistle *Cirsium palustre* and purple loosestrife all occurring in considerable numbers.

SAC citations

**EC Directive 92/43 on the Conservation of Natural Habitats and of Wild
Fauna and Flora**

Citation for Special Area of Conservation (SAC)

Name: Waveney and Little Ouse Valley Fens
Unitary Authority/County: Norfolk, Suffolk
SAC status: Designated on 1 April 2005
Grid reference: TM054799
SAC EU code: UK0012882
Area (ha): 193.18
Component SSSI: Blo' Norton and Thelnetham Fen SSSI, Redgrave and Lopham Fens SSSI, Weston Fen SSSI

Site description:

This site occurs in the East Anglian centre of distribution of calcareous fens and contains very extensive great fen-sedge *Cladium mariscus* beds, including managed examples, as well as stands in contact zones between small sedge mire and species-poor *Cladium* beds. The habitat type here occurs in a spring-fed valley fen.

Purple moor-grass – meadow thistle (*Molinia caerulea* – *Cirsium dissectum*) fen-meadows are associated with the spring-fed valley fen systems. The *Molinia* meadows occur in conjunction with black bog-rush – blunt-flowered rush (*Schoenus nigricans* – *Juncus subnodulosus*) mire and calcareous fens with great fen-sedge. Where the fen-meadow is grazed it is more species-rich, with frequent southern marsh-orchid *Dactylorhiza praetermissa*.

A population of Desmoulin's whorl snail *Vertigo moulinsiana* occurs in a valley fen at Weston Fen.

Qualifying habitats: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*. (Calcium-rich fen dominated by great fen sedge (saw sedge))*
- *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*). (Purple moor-grass meadows)

Qualifying species: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Desmoulin's whorl snail *Vertigo moulinsiana*

Annex I priority habitats are denoted by an asterisk (*).

This citation relates to a site entered in the Register of European Sites for Great Britain.
 Register reference number: UK0012882
 Date of registration: 14 June 2005
 Signed: *Trev Salmon*
 On behalf of the Secretary of State for Environment,
 Food and Rural Affairs

Appendix D

Legislation

European Protected Species

The Ramsar Convention (1971) on Wetlands of International Importance especially as Waterfowl Habitat seeks to promote the conservation and wise use of wetlands, particularly those which support internationally significant numbers of water birds. This is achieved through the designation of Ramsar Sites.

The European Community Council Directive on the Conservation of Wild Birds (79/409/EEC) sets out general rules for the conservation of all naturally occurring wild birds, their nests, eggs and habitats. It requires member states to designate Special Protection Areas (SPAs) for protection of certain species.

The main piece of legislation relating to nature conservation in Great Britain is **The Wildlife and Countryside Act 1981 (as amended)**. This Act is supplemented by provision in **The Countryside and Rights of Way (CROW) Act 2000** and **The Natural Environment and Rural Communities Act 2006 (in England and Wales)**. This act provides varying degrees of protection for the listed species of flora and fauna, including comprehensive protection of wild birds, their nests and eggs.

The Countryside and Rights of Way Act 2000 strengthens the protection given to SSSIs. It revises the procedures for the notification of SSSIs and for the consenting of operations which may damage the special interest of a SSSI. Local authorities have a duty to take steps, consistent with the proper exercise of their functions, to further the conservation and enhancement of SSSIs. The act also strengthens the existing provisions of the Wildlife and Countryside Act 1981 for the enforcement of wildlife legislation, including a new offence of "recklessly" destroying or damaging the habitats of certain protected species.

UK wildlife is also protected under **The Conservation (Natural Habitats &c.) Regulations 1994** (which were issued under the European Communities Act 1972), through inclusion on Schedule 2. In 2017, these Regulations, together with subsequent amendments, were consolidated into **The Conservation of Habitats and Species Regulations 2017**.

The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites. The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 5. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

National Planning Policy - National Planning Policy Framework (NPPF)

Section 15 of the National Planning Policy Framework 2021 (NPPF): Conserving and enhancing the natural environment states that 'planning policies and decisions should contribute to and enhance the natural and local environment by ... minimising impacts on and providing net gains for biodiversity.'

Office of The Deputy Prime Minister (“ODPM”) Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their impact within the planning system.

Paragraph 98 of Circular 06/2005 states that ‘the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat’.

Implications of legislation and policies

Without this ecological assessment, the potential developer would be unable to demonstrate due diligence in his responsibilities. Furthermore, the local planning authority would not have been provided with sufficient information for a planning decision to be made. This could result in non-determination or refusal of the application.

With legal responsibilities and planning implications, it is essential that any ecological assessment of a potential development site, including the area of this report, must determine the possible presence or absence of any protected species as part of any planning development consideration.

Where mitigation or compensation measures are required to ensure that no significant impacts will result on biodiversity from the development, the proposed measures may be secured through planning conditions or by EPS Mitigation Licences from Natural England.

Bats

All bat species in Britain are protected under the Wildlife and Countryside Act 1981 through inclusion on Schedule 5. They are also protected under the Conservation (Natural Habitats &c.) Regulations 1994 (which were issued under the European Communities Act 1972), through inclusion on Schedule 2. On 30th November 2017, these Regulations, together with subsequent amendments, were consolidated into the Conservation of Habitats and Species Regulations 2017.

European protected animal species (“EPS”) and their breeding sites or resting places are protected under Regulation 42. It is an offence for anyone to deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs. It is an offence to damage or destroy a breeding or resting place of such an animal. It is also an offence to have in one's possession or control, any live or dead European protected species.

The threshold above which a person will commit the offence of deliberately disturbing a wild animal of a European protected species has been raised. A person will commit an offence only if he deliberately disturbs such animals in a way as to be likely significantly to affect (a) the ability of any significant groups of animals of that species to survive, breed, or rear or nurture their young, or (b) the local distribution of abundance of that species. The existing offences under the Wildlife and Countryside Act (1981) as amended which cover obstruction of places used for shelter or protection (for example, a bat roost), disturbance and sale still apply to European protected species.

This legislation provides defences so that necessary operations may be carried out in places used by bats, provided the appropriate Statutory Nature Conservation Organisation (in England this is Natural England) is notified and allowed a reasonable time to advise on whether the proposed operation should be carried out and,

if so, the approach to be used. The UK is a signatory to the Agreement on the Conservation of Bats in Europe, set up under the Bonn Convention. The Fundamental Obligations of Article III of this Agreement require the protection of all bats and their habitats, including the identification and protection from damage or disturbance of important feeding areas for bats.

Barn Owls

The Habitats Regulations (1994), as amended, states that a person commits an offence in the case of Barn Owl only if this species is disturbed in the breeding season. This applies equally to all those bird species listed under Schedule 1.

Breeding Birds

It is an offence to kill, injure or take any wild bird; take, damage or destroy the nest of any wild bird while that nest is in use or being built (even of "pest" species); take or destroy the eggs of any wild bird.

Natural England Licensing - EPS Mitigation Licensing

Licences can be obtained from the Wildlife Management and Licensing Service at Natural England to allow certain activities that would otherwise constitute an offence, for the purposes of development (e.g. destruction of a bat roost, loss of great crested newt aquatic and terrestrial habitat, etc).

Appendix E

Native species suitable for planting and sowing

Plants should be obtained from specialist nurseries and preferably be of local genetic stock.

Key: (f) – fruit and berry species; (e) – evergreen species; (se) semi-evergreen species; (d) – deciduous species

Trees	
Alder (d)	<i>Alnus glutinosa</i>
Apples (f; d)	<i>Malus spp.</i> (local varieties)
Ash (d)	<i>Fraxinus excelsior</i>
Beech (d)	<i>Fagus sylvatica</i>
Bird cherry (f; d)	<i>Prunus padus</i>
Elder (f; d)	<i>Sambucus nigra</i>
Elm (d)	<i>Ulmus procera</i>
Field maple (d)	<i>Acer campestre</i>
Pedunculate oak (d)	<i>Quercus robur</i>
Rowan (f; d)	<i>Sorbus aucuparia</i>
Pears (f; d)	<i>Pyrus spp.</i>
Silver birch (d)	<i>Betula pendula</i>
Small-leaved lime (d)	<i>Tilia cordata</i>
White willow (d)	<i>Salix alba</i>
Wild cherry (f; d)	<i>Prunus avium</i>
Walnut (d)	<i>Juglans regia</i>

Shrubs	
Blackthorn (f; d)	<i>Prunus spinosa</i>
Buckthorn (f; d)	<i>Rhamnus catharticus</i>
Crab apple (f; d)	<i>Malus sylvestris</i>
Dog rose (f; d)	<i>Rosa canina</i>
Dogwood (f; d)	<i>Cornus sanguinea</i>
Field maple (d)	<i>Acer campestre</i>
Guelder-rose (f; d)	<i>Viburnum opulus</i>
Hawthorn (f; d)	<i>Crataegus monogyna</i>
Hazel (d)	<i>Corylus avellana</i>
Holly (e)	<i>Ilex aquifolium</i>
Honeysuckle (f; d)	<i>Lonicera periclymenum</i>
Spindle (f; d)	<i>Euonymus europaeus</i>
Wild privet (f; se)	<i>Ligustrum vulgare</i>
Yew (f; e)	<i>Taxus baccata</i>

Flowering plants	
Bird's-foot trefoil	<i>Lotus corniculatus</i>
Black knapweed	<i>Centaurea nigra</i>
Common cat's-ear	<i>Hypochoeris radicata</i>
Common sorrel	<i>Rumex acetosa</i>
Common vetch	<i>Vicia sativa</i>
Cowslip	<i>Primula veris</i>
Field scabious	<i>Knautia arvensis</i>
Foxglove	<i>Digitalis purpurea</i>
Lady's bedstraw	<i>Galium verum</i>
Meadow buttercup	<i>Ranunculus acris</i>
Meadow vetchling	<i>Lathyrus pratensis</i>
Oxeye daisy	<i>Leucanthemum vulgare</i>
Primrose	<i>Primula vulgaris</i>
Red clover	<i>Trifolium pratense</i>
Selfheal	<i>Prunella vulgaris</i>
Sweet violet	<i>Viola odorata</i>
Wild daffodil	<i>Narcissus pseudonarcissus</i>
Yarrow	<i>Achillea millefolium</i>

Grasses	
Common bent	<i>Agrostis capillaris</i>
Crested dog's-tail	<i>Cynosurus cristatus</i>
Meadow fescue	<i>Festuca pratensis</i>
Red fescue	<i>Festuca rubra</i>
Rough meadow-grass	<i>Poa trivialis</i>
Small timothy	<i>Phleum bertolonii</i>
Smooth meadow-grass	<i>Poa pratensis</i>
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>
Yellow oat-grass	<i>Trisetum flavescens</i>

Flowering Lawn Mixture – EL1 Emorsgate Seeds

<https://wildseed.co.uk/product/mixtures/complete-mixtures/special-habitat-mixtures/flowering-lawn-mixture/>

Wildflower Meadow Mixture – EM3 Emorsgate Seeds

<https://wildseed.co.uk/product/mixtures/complete-mixtures/general-purpose-meadow-mixtures/special-general-purpose-meadow-mixture/>

Appendix F Examples of bird boxes

(images sourced from www.nhbs.com, www.habibat.co.uk, www.manthorpe.co.uk, www.barnowltrust.org.uk and www.greenwoodsecohabitats.co.uk)

<p>Small bird nesting box 1B Schwegler Nest Box</p> 	<p>Small bird nesting box 2H Schwegler Robin Box</p> 
<p>Integrated swift box Swift Block</p> 	<p>Integrated swift box Manthorpe Swift Brick</p> 
<p>Integrated sparrow terrace 1SP Schwegler Sparrow Terrace</p> 	<p>Integrated sparrow terrace Terraced Sparrow Box</p> 

Recommendations for installing bird boxes:

(Sourced from British Trust for Ornithology www.bto.org, Manthorpe www.manthorpe.co.uk and Barn Owl Trust www.barnowltrust.org.uk)

The highest priority when siting a nest box must be to provide a safe and comfortable environment in which birds can nest successfully.

Tips for putting up a nest box:

- Boxes should be sited 1-3m from the ground, ideally on tree trunks but can be placed on the side of a shed or wall. Avoid areas where foliage obscures the entrance hole.
- Don't place boxes too close to another nest box of the same type, as this may promote aggressive behaviour between neighbours.
- Shelter your nest box from prevailing wind, rain and strong sunlight. The box should face between north and east, and angled vertically or slightly downwards to prevent rain entering.
- Make sure cats cannot get into the box.
- Keep nest box away from bird feeders.
- Use galvanized or stainless steel screws or nails. If fixing boxes to trees, galvanised wire can be used to tie the box to the trunk or hang it from a branch. Make sure to regularly inspect these fittings (every two or three years) to ensure the box remains securely attached.

Tips for putting up house sparrow terraces and swift bricks/boxes:

- Locate $\geq 5\text{m}$ high on the gable wall of the property and above the level of the insulation zone.
- Where possible, install in locations that are unlikely to receive large amounts of direct sunlight during the hottest times of the day, ideal places include below the overhang of the verge and barge board.

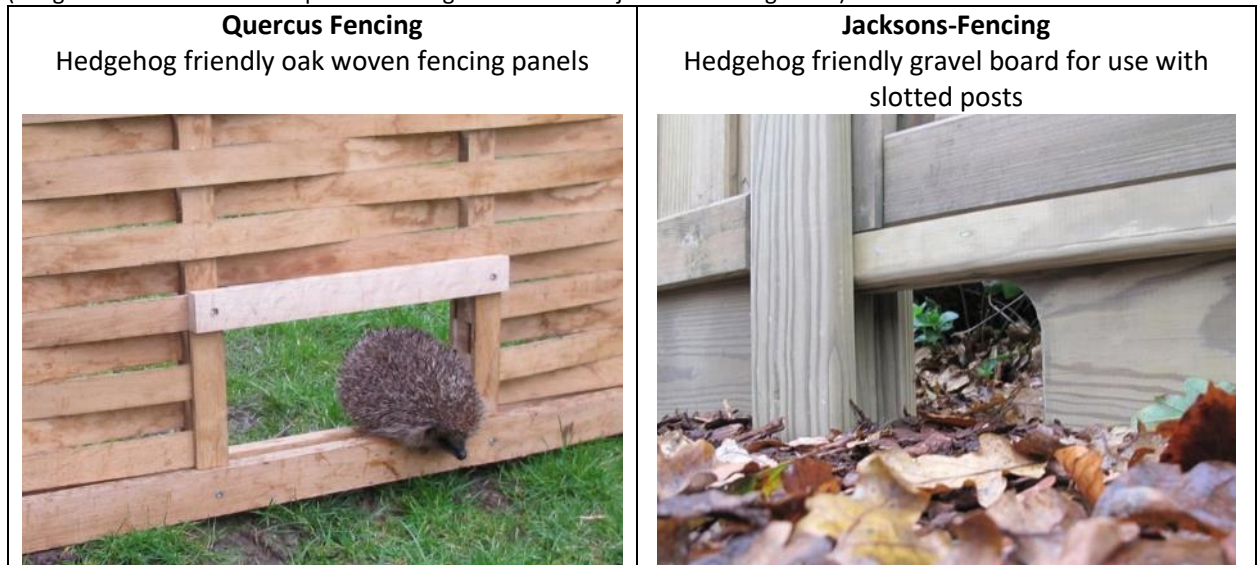
Tips for putting up barn owl boxes:

- The box should be installed on a building or tree in open farmland, on an isolated hedgerow or along the edge of a woodland.
- Boxes should be sited at least 3m from the ground, with a clear flight-path for entry and exit.
- Where possible, install boxes facing suitable habitat and ideally away from the prevailing wind.
- Nest boxes should ideally be installed in pairs.

Appendix G

Examples of hedgehog friendly fencing

(images sourced from www.quercusfencing.com and www.jackson-fencing.co.uk)



Recommendations for installing hedgehog friendly fencing:

(Sourced from Hedgehog Street www.hedgehogstreet.org)



A hedgehog friendly fence should have a gap measuring at least 13cm by 13cm in the gravel board. These gaps allow any hedgehog to pass through but are too small for nearly all pets.

At least one hedgehog friendly fence panel should be located on each side of your garden, to provide unimpeded access.

Almost all fencing materials can be made hedgehog friendly, but may require DIY adaptations. Please note that some concrete gravel boards contain metal rods running along the length of the boards to provide strength and rigidity, and cannot be cut. To overcome this, a gap can be left between the gravel board and post to provide the required gap.

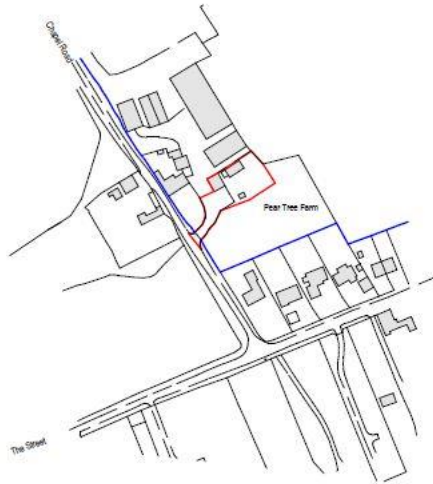
Appendix H Bee Bricks

(images sourced from www.nhbs.com and www.greenandblue.co.uk)

Bee post	Bee bricks
	
Recommended bee brick installation (Sourced from NHBS www.nhbs.com)	
<ul style="list-style-type: none">• Bee bricks will be installed on a south facing sunny spot of an external wall of the residential dwelling, at a minimum height of 1m. No vegetation should be obstructing the holes.• Bee posts will be positioned south facing in a sun exposed spot, with no vegetation covering the fascia. The posts must be set in a concrete base at a minimum of 30mm, similar to installing a fencepost.	

Appendix I

Proposed plans



Existing Location Plan
Scale 1:1250



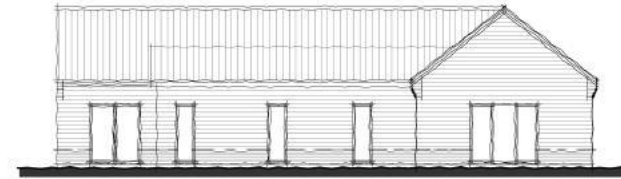
Proposed Site Plan
Scale 1:500

<p>SCALE BARS</p>	<p>DRAWING: The drawings are the copyright of Studio 35 Architecture Ltd. The drawings must not be reprinted. The contractor shall ensure that all dimensions on site before proceeding with any work. All dimensions shown on the drawings are for planning purposes only.</p> <p>NOTES: All works are to be carried out with the relevant current British Standard Codes of Practice and Building Research Report Figures, and to the approval of the local Authority and all statutory undertakers. All materials shall be suitable for the proposed intended end use and comply with the manufacturer's recommendations. All necessary calculations are to be submitted to the Local Authority for approval prior to the commencement of work on site. It is the owner's responsibility to ensure that the property and site is free from any covenants or unusual restrictions, easements or agreements.</p>	<p>TENANT ACT 1960: Attention is drawn to the Tenant Act 1960. The client or owner must give notice in writing to neighbours of the intended building operations and construction and receive approval of same.</p> <p>CONSUMER REGULATIONS: Attention is drawn to the client with regards to the CDM 2015 regulations. These drawings and specifications are intended for planning and building regulation purposes only. The scope of this does not go further. In the City of the client under the regulations is required to appoint a 'Principal Contractor'. There is no obligation on the client to appoint a 'Principal Contractor'. The Principal Contractor will be liable for the safety of the project. It is the client's responsibility to ensure that the construction and construction of the project under the CDM 2015 regulations when it goes into use, in order that a Health & Safety File and construction plan, is provided for the RICS, in order to reduce risk through the design process of construction etc.</p>	<p>PROJECT: NEW DWELLING LAND AT PEAR TREE FARM HINDERCLAY, SUFFOLK</p> <p>CLIENT: MR O. THOROLD</p> <p>DRAWING TITLE: SITE AND LOCATION PLAN</p>	<p>REVISION:</p> <p>Studio 35</p> <p>PLANNING</p> <table border="1"> <tr> <td>SCALE:</td> <td>1:500</td> <td>PAPER SIZE:</td> <td>A1</td> <td>DATE:</td> <td>OCT. 2023</td> <td>DRAWN BY:</td> <td></td> </tr> <tr> <td></td> <td>1:1250</td> <td>JOB:</td> <td>4008</td> <td>DRG NO:</td> <td>SL01</td> <td>REV:</td> <td></td> </tr> </table>	SCALE:	1:500	PAPER SIZE:	A1	DATE:	OCT. 2023	DRAWN BY:			1:1250	JOB:	4008	DRG NO:	SL01	REV:	
SCALE:	1:500	PAPER SIZE:	A1	DATE:	OCT. 2023	DRAWN BY:														
	1:1250	JOB:	4008	DRG NO:	SL01	REV:														

- DEVELOPMENT MATERIAL PALETTE**
- 1) Roof tile - Red pantiles
 - 2) Selected Red Muir facing brickwork to porch
 - 3) Timber horizontal cladding stained black
 - 4) Timber windows
 - 5) Timber doors
 - 6) Black guttering



Front Elevation



Rear Elevation



Floor Plan
Floor Area = 1528 sq. ft.



Side Elevation



Side Elevation

PLANNING - Dwelling Design

<p>SCALE BARS:</p>	<p>PROJECT: NEW DWELLING, LAND AT PEAR TREE FARM HINDERCLAY, SUFFOLK</p>	<p>Studio 35</p>			
	<p>CLIENT: MR D. THORROLD</p>	<p>PLANNING</p>			
<p>DRAWING TITLE: PROPOSED - FLOOR PLANS AND ELEVATIONS</p>	<p>SCALE: 1:100</p>	<p>PAPER SIZE: A2</p>	<p>DATE: SEPT 2023</p>	<p>DRAWN BY: [Red Dot]</p>	<p>REVISION:</p>
		<p>JOB: 4008</p>	<p>ORG NO: PL03</p>	<p>REV:</p>	