
Preliminary Ecological Appraisal

Cherrywood, The Tye, Kersey

for

Daking Designs Ltd.

29 November 2023



Client

Daking Designs Ltd.

Planning authority

Babergh District Council

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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Author	Daniel Howes B.Sc (Hons), Natural England licences (Great crested newt level 1 2023-11530-CL08-GCN)
Reviewers	Lucy Reed M.Sc, B.Sc (Hons), Natural England licences (Bat level 1 2019-43094-CLS-CLS, Great crested newt level 1 2020-44647-CLS-CLS, Barn owl level 1 2023-11281-CL29-OWL) Nathan Duszynski M.Sc, B.Sc (Hons), ACIEEM, Natural England licences (Bat level 2 2017-31943-CLS-CLS, Great crested newt level 1 2016-24303-CLS-CLS, Barn owl level 1 2023-11104-CL29-OWL)
<i>Signed disclosure</i>	
<i>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.</i>	
<i>Nathan Duszynski, ACIEEM</i>	
Greenlight Environmental Consultancy Limited Diss Business Hub Hopper Way Diss Norfolk IP22 4GT www.greenlightco.co.uk	

Table of Contents

SUMMARY	4
1. METHOD	6
2. SITE CONTEXT	6
3. DESCRIPTION OF THE DEVELOPMENT	8
4. PROTECTED SITES	8
5. HABITATS	9
6. PROTECTED AND NOTABLE SPECIES	15
7. DISCUSSION AND CONCLUSIONS	22
8. BIBLIOGRAPHY	26
APPENDIX A	METHODS
APPENDIX B	MAP OF PROTECTED SITES WITHIN 2KM
APPENDIX C	PROTECTED SITES CITATIONS
APPENDIX D	LEGISLATION
APPENDIX E	PLANT SPECIES RECORDED ON SITE
APPENDIX F	NATIVE SPECIES SUITABLE FOR PLANTING AND SOWING
APPENDIX G	EXAMPLES OF BAT AND BIRD BOXES
APPENDIX H	EXAMPLES OF HEDGEHOG FRIENDLY FENCING
APPENDIX I	PROPOSED PLANS

SUMMARY

- Greenlight Environmental Consultancy Ltd. has been commissioned to carry out a Preliminary Ecological Appraisal for a proposed development at Cherrywood, The Tye, Kersey, Suffolk, IP7 6HB (grid reference: TL 98491 43132).
- This report outlines the habitat features on site, the likelihood of protected species 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 construction of a barn and cartlodge.
- 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 the habitats on the site are of **low** ecological value and that there are no significant ecological constraints that would prevent the proposed works.
- **Under the proposed plans, no further surveys/licences are required to inform an ecological impact assessment or 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	One statutory and two non-statutory protected sites within 2km.	No significant impacts on protected sites and their qualifying features.	None required.
Protected habitats and habitats subject to conservation designations	Bare ground and small area of modified grassland managed as lawn will be removed as part of the proposed works. No Priority Habitats will be affected.	Low scale of habitat loss predicted for wildlife.	<u>Mitigation</u> Construction work to be carried out in accordance with BSI (2012), BS 5837:2012, to protect trees and their root protection areas.
Bats	Buildings 1-6 were not surveyed as no works are proposed as part of this planning application. Low value commuting and foraging habitat on site.	Low scale loss and potential light disturbance of commuting and foraging habitats on site.	<u>Mitigation</u> Any lighting schemes will comply with Bat Conservation Trust (GN08/23) and CIE 150:2017 guidance. <u>Enhancement</u> Installation of one integrated bat box installed on the new barn.
Breeding birds	Nesting habitats for scrub, tree, hedgerow and building nesting birds present on site, including potential breeding habitat for	Potential disturbance to breeding birds.	<u>Mitigation</u> Works to any scrub, trees, hedgerows and buildings on site to be conducted outside bird nesting season or under

Protected habitats/species	Status	Potential effect	Recommended mitigation and enhancements
	Red and Amber listed species. No suitable barn owl foraging habitat on site.		watching brief of ecologist if during nesting season. <u>Enhancement</u> Installation of one integrated sparrow terrace on the new barn.
Great crested newts	Predominantly unsuitable terrestrial habitats on site. Six ponds within 250m of the site, three assessed as poor to below average suitability and three could not be accessed for detailed assessment. Site falls within Amber risk zone for district level licensing. 30 GCN records within 2km.	Potential harm to GCN if present on site during works. No impacts on potential GCN aquatic habitat.	<u>Precautionary mitigation</u> Cut and maintain vegetation short (maximum height of 10cm) on and around the site until the start of works. The removal of all suitable GCN refuges affected by the works cleared by hand. In the highly unlikely event that any GCN are found, work will cease immediately, and a licenced ecologist contacted to remove any GCN to safety and advice on how to proceed. Rough sawn planks placed inside any open excavations. Construction materials will be stored off the ground on pallets and waste materials in skips.
Reptiles	Habitats on site predominantly unsuitable. One reptile record within 2km.	Reptiles unlikely to be found on site due to small quantities of suitable habitats present. No impacts predicted.	<u>Precautionary mitigation</u> Mitigation for GCN above will be implemented to avoid impacts on reptiles from the proposed work.
Other animals	N/A	Potential harm to animals.	<u>Mitigation</u> If fencing is required, this will be porous and provide openings for hedgehogs.

1. METHOD

- 1.1. A walkover of the site was conducted on 17th November 2023 by Daniel Howes – an independent, qualified and experienced ecologist. Survey conditions were as follows: 8°C, 7mph wind, sunny 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. The habitats on and directly adjacent the site were considered unsuitable for the following protected species, with no evidence or signs of use observed. No further surveys or mitigation for these species are detailed in this report:
 - Water vole *Arvicola amphibius*
 - Otter *Lutra lutra*
 - White-clawed crayfish *Austropotamobius pallipes*
 - Badger *Meles meles* (setts)
 - Hazel dormouse *Muscardinus avellanarius*
 - Natterjack toad *Epidalea calamita*

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 hamlet of Kersey Tye, with the A1071 located approximately 2.1km southeast. The closest town is Hadleigh, located approximately 3.5km east of the site.
- 2.3. The site is enclosed by grazed grassland to the north, roads to the east and south and a residential dwelling and associated garden to the west. The wider surroundings are comprised of a mixture of residential dwellings, large blocks 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 21/11/23

3. DESCRIPTION OF THE DEVELOPMENT

- 3.1. The proposals are for the construction of a barn and cartlodge. Please refer to Appendix I for the proposed plans.

4. PROTECTED SITES

Statutory

- 4.1. There is one statutory protected site located within 2km – one Sites of Special Scientific Interest (“SSSI”). Please refer to Appendix C for the full citation.
 - i. Groton Wood SSSI, approximately 0.6km west.

*“Groton Wood is an ancient coppice woodland on a boulder clay plateau overlain by a surface deposit of loess. The site consists of a primary core with later additions of post-medieval secondary woodland. The wood contains the finest stand known in Suffolk of the Small-leaved Lime *Tilia cordata*, a community of great ecological interest. There is a diverse ground flora that includes a number of species that are confined to ancient woodlands.”*
- 4.2. The proposed development falls outside of all SSSI Impact Risk Zones.

Non-statutory

- 4.3. There are two non-statutory protected sites located within 2km – two County Wildlife Sites (“CWS”). Please refer to Appendix C for the full citations.
 - i. Howe Wood CWS, approximately 1.5km northeast.

“Howe Wood is situated between the villages of Kersey Tye and Lindsey Tye and not far from Groton Wood, a large wood of high conservation value which is designated as a Site of Special Scientific Interest. Howe Wood is listed in English Nature’s Inventory of Ancient Woodland for Suffolk.”
 - ii. Bower House Woods and Hedgerows CWS, approximately 1.5km southwest.

“The woodlands included in this County Wildlife Site are Stony Down Grove and Whinnyfield Woods, both of which are listed in Natural England’s Inventory of Ancient Woodland (Stony Down Grove is listed as Stony Grove).”

5. HABITATS

Desktop review

- 5.1. Priority Habitats to occur within 2km (identified using MAGIC – managed by Natural England), include Coastal and Floodplain Grazing Marsh, Good Quality Semi-Improved Grassland, Deciduous Woodland, Traditional Orchards and Woodpasture and Parkland BAP Priority Habitat. The closest of which, is Traditional Orchards located approximately 550m southeast of the site.

Field study

- 5.2. The habitats on the site are of **low** ecological value, being mainly modified grassland managed as lawn, bare ground, hardstanding and hedgerows (Priority Habitat) on the site peripheries.
- 5.3. Priority Habitats, as listed under the NERC Act 2006 Section 41 Habitats of Principal Importance found on site include: Hedgerows.
- 5.4. Figure 2 provides a map of the habitats present on the site. NERC Act 2006 Section 41 habitats have been identified where relevant. A full list of plant species recorded on site is attached in Appendix E.

Modified grassland (UK Habitat Classification g4; secondary code: 10 scattered scrub, 32 scattered trees, 108 frequently mown, 510 bare ground, 828 vegetated garden)

- 5.5. The majority of the site is comprised of modified grassland managed as lawn with flower beds around the buildings and site boundary and patches of bare ground to the east. Species include: black medick *Medicago lupulina*, common chickweed *Stellaria media*, cow parsley *Anthriscus sylvestris*, daisy *Bellis perennis*, dandelion *Taraxacum officinale*, dove's-foot cranesbill *Geranium molle*, fescue *Festuca sp.*, forget-me-not *Myosotis sp.*, nettle *Urtica dioica*, perennial ryegrass *Lolium perenne*, speedwell *Veronica sp.* and yarrow *Achillea millefolium*.
- 5.6. The site features scattered apple *Malus sp.*, hawthorn *Crataegus monogyna* and willow *Salix sp.* trees and a small area of bramble *Rubus fruticosus* scrub to the northeast.

Other native hedgerow (UK Habitat Classification h2a6) – Priority Habitat

- 5.7. The site features two predominantly native hedgerows on the southern and eastern boundaries. The eastern hedgerow is comprised of cotoneaster *Cotoneaster sp.* and hawthorn and the southern hedgerow is comprised of bramble, hawthorn and ivy *Hedera helix*.

- 5.8. These hedgerow does not qualify as “important” under The Hedgerow Regulations 1997, lacking the required number of native woody species and associated features.

Buildings (UK Habitat Classification u1b5)

- 5.9. There are several buildings on site that are used as a residential dwelling and associated outbuildings. Please refer to the bat section detailed below for further information.

Other developed land (UK Habitat Classification u1b6; secondary code: 846 flower bed)

- 5.10. The site features a compacted gravel hardstanding driveway to the southwest with flower beds along the western boundary.

Artificial unvegetated, unsealed surface (UK Habitat Classification u1c; secondary code: 510 bare ground)

- 5.11. An area of bare ground is present to the northeast of the site where clearance has begun ready for construction.

Built linear features (UK Habitat Classification u1e; secondary code: 612 fence)

- 5.12. The site features a mixture of chain link, post and rail and closeboard fencing around the site boundaries, with heras fencing also present separating the area of construction from the rest of the site.

Target note	Comments
A	Construction materials and machinery.
B	Log pile.
C	Aggregate pile.
D	Soil pile.

Table 1, target notes.



Figure 2
 Habitats on site.
 Image © QGIS, date accessed 21/11/23



Photo 1, existing southern compacted gravel hardstanding access to the site, looking southwest.



Photo 2, modified grassland managed as lawn with bare ground to the north of the site, looking northwest.



Photo 3, Artificial unvegetated, unsealed surface (bare ground) to the northeast of the site, looking northwest.



Photo 4, construction materials and machinery (target note A) to the east of the site, looking south.



Photo 5, scattered trees and flowerbeds to the southeast of the site, looking southeast.



Photo 6, other native hedgerow along the site's southern boundary, looking east.

6. PROTECTED AND NOTABLE SPECIES

Desktop review

Data search

- 6.1. The biodiversity data search within 2km of the site indicated 883 records from 167 species.
- 6.2. Records of note within 2km and relevant to the proposed development works are:
 - 29 barn owl *Tyto alba* records, with the most recent from 2021.
 - 13 skylark *Alauda arvensis* records, with the most recent from 2020.
 - 14 swift *Apus apus* records, with the most recent from 2020.
 - 30 GCN *Triturus cristatus* records, with the most recent from 2020. The closest record is located approximately 0.75km west.
 - One reptile record from 2012, located approximately 1.9km northeast. Species include: common lizard *Zootoca vivipara*.
 - 13 hedgehog *Erinaceus europaeus* records, with the most recent from 2022.
 - 25 bat records, with the most recent from 2022, including common pipistrelles *Pipistrellus pipistrellus*, soprano pipistrelles *Pipistrellus pygmaeus*, brown long-eared *Plecotus auritus*, serotines *Eptesicus serotinus*, noctules *Nyctalus noctula*, Leisler's *Nyctalus leisleri*, Natterer's *Myotis nattereri*, barbastelles *Barbastella barbastellus* and other unidentified bat species.

Protected species licences

- 6.3. A 2km search on <http://www.magic.gov.uk/> indicated one record of a granted European Protected Species ("EPS") Mitigation Licence relating to:
 - Other mammal (case reference: 2018-34034-EPS-MIT) from 2018, approximately 1.6km southwest. Species on the licence include: hazel or common dormouse.

Bats

- 6.4. Although there are six buildings located on site, the buildings were not surveyed as no works are proposed as part of this planning application. Please note, the building present within the construction area is comprised of a shed on a wheeled trailer, which will be moved prior to development.

Trees

- 6.5. The trees around the site boundary were assessed for bat roosting potential and were considered unsuitable due to their age and/or lack of features.

Foraging and commuting links

- 6.6. The site itself provides **low** value foraging habitat for bats along the boundary hedgerows and trees, with bats mainly using nearby woodlands for foraging.
- 6.7. 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 Kersey Tye have the potential to provide roosting opportunities for bats.

Birds

- 6.8. 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.
- 6.9. The following bird species were observed during the site visit:

Red listed:

House sparrow	<i>Passer domesticus</i>
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Amber listed:

Mallard	<i>Anas platyrhynchos</i>
Rook	<i>Corvus frugilegus</i>

Green listed:

Blackbird	<i>Turdus merula</i>
Great tit	<i>Parus major</i>
Robin	<i>Erithacus rubecula</i>

- 6.10. The site provides suitable nesting habitats for scrub, hedgerow, tree and building nesting species.
- 6.11. The site has the potential to support nests for the following Red listed species: house sparrow.
- 6.12. The site has the potential support nests for the following Amber listed species: woodpigeon *Columba palumbus*.

- 6.13. Please note, the species listed in the paragraphs above are not exhaustive, as birds can nest in unexpected locations. Additionally nesting parameters may change between years and following building/habitat management.
- 6.14. No signs of barn owl were found on the site and no foraging habitat is present.

Great crested newts

- 6.15. There are no ponds within the survey site and six further ponds within 250m, which for the size of the development and nature of terrestrial habitat on the site, is a sufficient distance to consider for assessment (Figure 4). GCN are most likely to occupy good quality terrestrial habitat within 250m of a breeding pond (English Nature, 2001).
- 6.16. The terrestrial habitats on the site are considered predominantly unsuitable for GCN, consisting of modified grassland managed as lawn, bare ground and hardstanding, with suboptimal scrub and hedgerows on the boundaries.
- 6.17. Terrestrial habitats adjacent the site include a mixture of unsuitable (short grazed grassland, roads and residential dwellings with associated gardens and hardstanding) and suitable (hedgerows) GCN foraging, commuting and hibernating habitats.
- 6.18. Ponds one, two and six were assessed as **poor** to **below average** suitability for GCN (Table 2). Ponds 3-5 were not assessed in detail, as authorised access to the ponds was not available.
- 6.19. The site falls within the Amber risk zone for GCN district level licensing, which is classified as *“containing main population centres for GCN and comprise important connecting habitat that aids natural dispersal”* (Natural England, 2021).

Pond	1	2	6
Geographic location	Zone A	Zone A	Zone A
	1.00	1.00	1.00
Pond surface area (m ²)	50m ²	<50m ²	150m
	0.10	0.05	0.30
Desiccation rate	Annually	Annually	Annually
	0.10	0.10	0.10
Water quality/ invert density	Poor	Poor	Poor
	0.33	0.33	0.33
Shoreline shade (%)	0%	70%	80%
	1.00	0.80	0.60
Waterfowl impacts	Absent	Absent	Absent
	1.00	1.00	1.00
Fish impacts	Absent	Absent	Absent
	1.00	1.00	1.00
Ponds within 1km	13+	13+	13+
	1.00	1.00	1.00
Terrestrial habitat quality	Moderate	Moderate	Moderate
	0.67	0.67	0.67
Macrophyte cover (%)	0%	60%	10
	0.30	0.90	0.40
HSI Score	Poor	Poor	Below average
	0.48	0.49	0.53

Table 2, HSI score for ponds within 250m of the proposed site.



Photo 7, pond one, looking northeast.



Photo 8, pond two, looking southwest.



Photo 9, pond six, looking southwest.

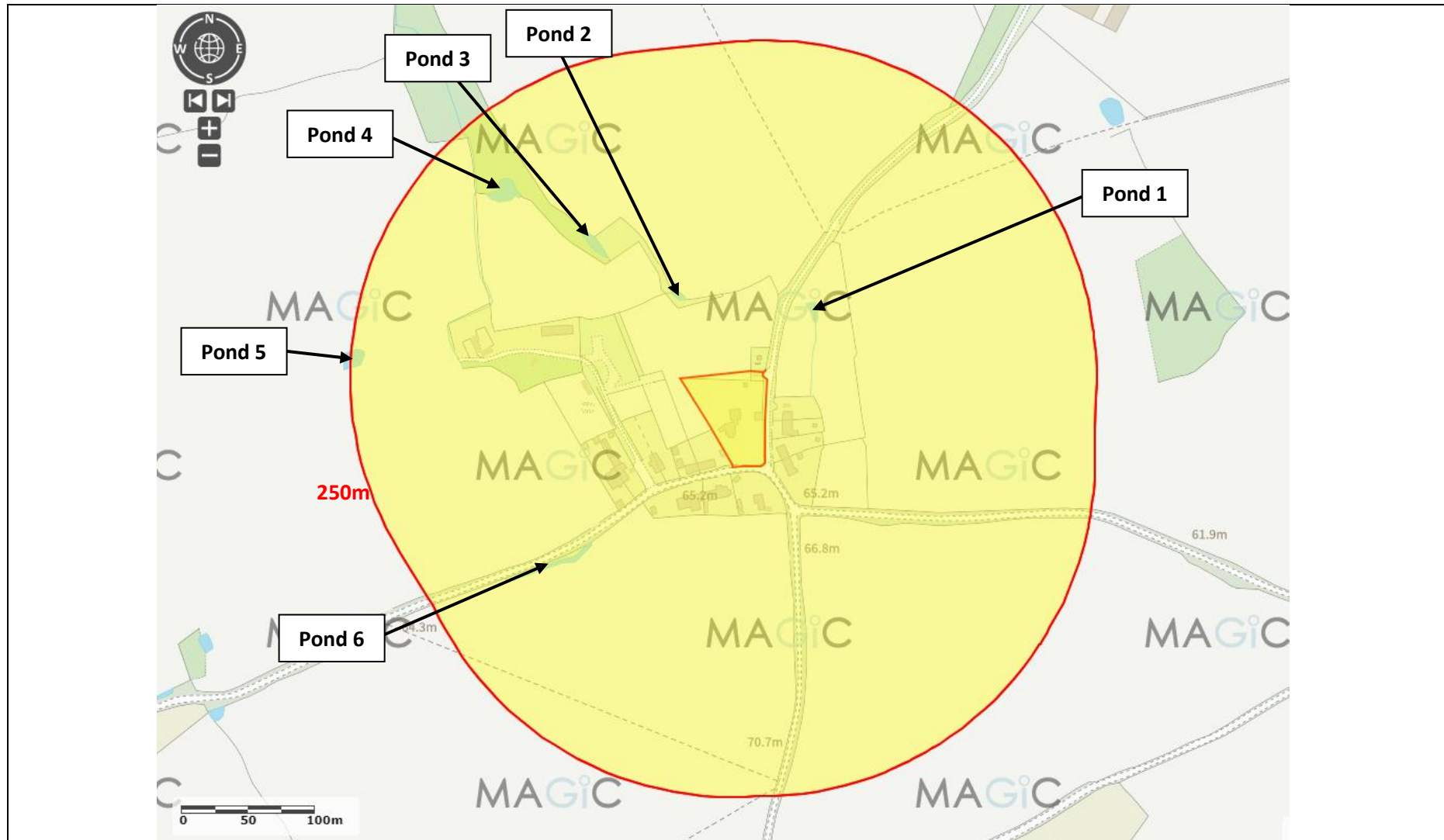


Figure 4
Ponds within 250m of the proposed site.
Image © MAGIC, date accessed 22/11/23

Reptiles

- 6.20. The habitats on the site are considered predominantly unsuitable for reptiles, consisting of modified grassland managed as lawn, bare ground and hardstanding, with suboptimal hedgerows on the boundaries.
- 6.21. Habitats located on the site boundaries including the base of the hedgerows could be used as commuting habitats by reptiles if they were present in the area.
- 6.22. Terrestrial habitats adjacent the site are predominately unsuitable for reptiles consisting of short grazed grassland, roads and residential dwellings with associated gardens and hardstanding with some suitable hedgerows.

7. DISCUSSION AND CONCLUSIONS

Protected sites

- 7.1. The development footprint falls outside all identified protected sites (statutory and non-statutory). There is one statutory protected site and two non-statutory protected sites located within 2km of the site.
- The closest statutory protected site (Groton Wood SSSI) is located approximately 0.6km west and designated for its ancient coppice woodland.
 - The closest non-statutory protected site (Howe Wood CWS) is located approximately 1.5km northeast of the site and designated for its ancient woodland.
- 7.2. The proposed development falls outside of all SSSI Impact Risk Zones.
- 7.3. The proposed development is expected to have no effects on statutory or non-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.

Habitats

- 7.4. The proposed works will require little clearance of vegetated habitats on site, with the works limited to small areas of bare ground and modified grassland managed as lawn.
- 7.5. As a precautionary measure, the following mitigation will be implemented to avoid impacts on habitats from the proposed works:
- i. Construction works carried out in accordance with British Standards Institution (2012), BS 5837:2012, Trees in relation to design, demolition and construction – recommendations, to protect trees which are to be retained and their root protection areas.

Bats

- 7.6. The proposed works are expected to result in a low scale loss of potential roosting, foraging and commuting habitats for bats through increased noise and light levels.
- 7.7. As a precautionary measure, the following mitigation will be implemented to avoid impacts on bats from the proposed works:
- i. 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. Lighting must be directional away from the boundary trees and hedgerows.

- 7.8. 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.
- 7.9. As enhancements, the following will be implemented:
- i. One integrated bat box on the new barn onsite (Bat Block – Appendix G).
- 7.10. After these precautionary mitigation measures, we predict no impact on bats as a result of the development plans. We consider that a European Protected Species Licence will not be required, and no further surveys are necessary.

Birds

- 7.11. The proposed works are not expected to result in a loss of bird nesting habitat through the construction of a barn and cart lodge.
- 7.12. Any works affecting bird nesting habitat such as management of scrub, hedgerows, trees or 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.
- 7.13. As enhancements, the following will be implemented:
- i. One integrated sparrow terrace on the new barn (1SP Schwegler Sparrow Terrace – Appendix G).

Great crested newts

- 7.14. The proposed works are not expected to result in a loss of terrestrial habitats, with the works predominately consisting of areas of modified grassland managed as lawn and bare ground.
- 7.15. Taking a worst-case scenario of 0.1-0.5ha of land being lost or damaged within 100m of a breeding pond (ponds one and two), the risk assessment calculation (set out in the GCN method statement template provided by Natural England) indicates an “*offence likely*”, although goes on to state:
- “This generic risk assessment will over- or under-estimate some risks because it cannot take into account site-specific details. In particular, the exact location of the development in relation to resting places, dispersal areas and barriers should be critically examined.”*
- 7.16. The majority of works are limited to an area (approximately 150m²) of predominately bare ground, with only very small quantities of unsuitable managed modified grassland being affected.
- 7.17. Ponds within 250m of the site are predominately located to the north and west of the site with only suboptimal habitats on the site boundaries. Therefore, we consider it unlikely that GCN would forage and/or commute across the proposed areas of works.
- 7.18. As a precautionary measure, the following mitigation will be implemented to avoid impacts on GCN from the proposed works:
- i. Vegetation on site will be cut and maintained short (maximum height of 10cm) until the start of works, to discourage animals from using these areas.
 - ii. The removal of all suitable GCN refuges affected by the works (i.e. construction materials/log pile) cleared by hand, with special care to ensure that no animals are harmed, between March and September (outside the hibernating season for GCN). In the highly unlikely event that any GCN are found, work will cease immediately and a licenced ecologist contacted to remove any GCN to safety and advice on how to proceed.
 - iii. 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.
 - iv. 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.
- 7.19. After these precautionary mitigation measures, we predict no impact on GCN as a result of the development plans, and no further surveys are necessary.

Reptiles

- 7.20. The proposed works are not expected to result in a loss of reptile habitat, with the works limited to areas of bare ground and modified grassland managed as lawn.
- 7.21. As a precautionary measure, the mitigation for GCN above will ensure there are no impacts on reptiles from the proposed development.
- 7.22. After these precautionary mitigation measures, we predict no impact on reptiles as a result of the development plans, and no further surveys are necessary.

Other animals

- 7.23. 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 H for examples).
- 7.24. 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.

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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 with the Suffolk Biodiversity Information Service ("SBIS").

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.

Habitats

The habitats on site have been defined using the UK Habitat Classification Version 2.0 (UKHab Ltd, 2023). Natural Environment and Rural Communities (NERC) Act (2006) habitats listed under section 41 have been identified where appropriate.

Bats

An assessment of the habitats on and surrounding the site for bat interest was made, in accordance with latest bat survey guidelines (Collins, 2023).

The permanent structures on site are not going to be affected by this planning application and therefore did not need to be assessed for their potential to support roosting bats. The site is comprised predominantly of bare ground, modified grassland, hedgerows, scattered trees and hardstanding.

Trees on and around the site were assessed for their suitability to support roosting bats. The assessment involved a ground level inspection of the exterior of the trees to search for features offering roosting potential to bats such as split limbs, woodpecker holes, cavities, lifted bark, dense thick-stemmed ivy, etc.

An evaluation system was applied to the trees using the following criteria:

- **Suitability - none.** Either no potential roosting features in the tree or highly unlikely to be any. Trees highly unlikely to be used by roosting bats.
- **Further Assessment Required.** Further assessment required to establish if potential roosting features are present in the tree.
- **Potential Roosting Feature – Individual ("PRF-I").** Potential roosting features only suitable for individual bats or very small numbers of bats, either due to the size of lack of suitable surrounding habitats i.e. trees with limited roosting potential.
- **Potential Roosting Feature – Multiple ("PRF-M").** Potential roosting features suitable for multiple bats and may therefore be used by a maternity colony.

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.

- **Suitability – none.** No habitat features on site likely to be used by any commuting or foraging bats at any time of 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 commuting and foraging potential for bats.** Habitat features unlikely to be used by commuting or foraging bats i.e. no obvious flight-paths or foraging opportunities. However, a small element of uncertainty remains in order to account for non-standard bat behaviour.
- **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.

Great crested newts

Habitats on and near the site were assessed for their suitability for great crested newts (“GCN”).

Water features on and near the site were assessed for their suitability for occupation by GCN, according to a Habitat Suitability Index (“HSI”). The HSI is a theoretical index of a waterbody’s suitability to support a breeding population of GCN and is calculated from a series of ten variables recorded on site, as detailed in Table 3.

Indices	Name	Description
SI1	Geographic Location	Lowland England or upland England, Scotland and Wales
SI2	Pond area	To the nearest 50m ²
SI3	Permanence	Number of years' pond dry out of ten
SI4	Water quality	Measured by invertebrate diversity
SI5	Shade	Percentage shading of pond edge at least 1m from shore
SI6	Fowl	Level of waterfowl use
SI7	Fish	Level of fish population
SI8	Pond count	Number of ponds within 1km divided by 3.14
SI9	Terrestrial habitat	Quality of surrounding terrestrial habitat
SI10	Macrophytes	Percentage extent of macrophyte cover on pond surface

Table 3, HSI indices.

The HSI score is the geometric mean of the ten suitability indices calculated:

$$HSI = (SI1 \times SI2 \times SI3 \times SI4 \times SI5 \times SI6 \times SI7 \times SI8 \times SI9 \times SI10)^{1/10}$$

Once calculated, the HSI score for a waterbody can be categorised as follows:

Excellent (>0.8)

Good (0.7 – 0.79)

Average (0.6 – 0.69)

Below Average (0.5 – 0.59)

Water voles, otters and white-clawed crayfish

Water features on and adjacent to the site were assessed for use by water vole, otter and white-clawed crayfish. Otters in England typically use areas of fresh water and streams and ditches for moving between habitats. Otter holts are usually located underneath tree roots, in tunnels. Field signs of presence include spraints on prominent features such as bridges, tree bases or boulders, and footprints.

Water voles inhabit burrows in the banks of ponds, ditches, streams and rivers. Field signs include droppings left in latrine spots, burrow entrances or feeding remains.

White-clawed crayfish inhabit streams and rivers with a moderate flow rate, and lakes. Clear, well-oxygenated water is preferred. Typical habitat features include crevices in rocks, gaps between stones, submerged plants and tree roots.

Reptiles

The habitats on the site and within the proposed area of works were assessed for suitability for reptiles.

Reptiles rely on conditions that allow them to maintain their body temperature through basking. They require access to direct sunlight, shelter from the elements, sufficiently large populations of prey species and hibernation sites.

Reptiles typically favour a habitat mosaic with a diverse vegetation structure, which could include grassland, scrub and woodland.

Badgers

An inspection of all habitats with the potential to support badger *Meles meles* sett construction and foraging activities on the application site was undertaken. Any incidental observations of badger signs were also recorded. The survey comprised searching for evidence of badger activity in the form of setts, droppings, pathways, snuffle holes, hair and footprints.

Dormice

Dormice habitats include deciduous woodland, hedgerows and scrub. Dormice are found mainly in the south of England, including Kent and Sussex, with sporadic populations elsewhere. An assessment of the suitability of site habitats for occupation by dormice was made.

Other protected species

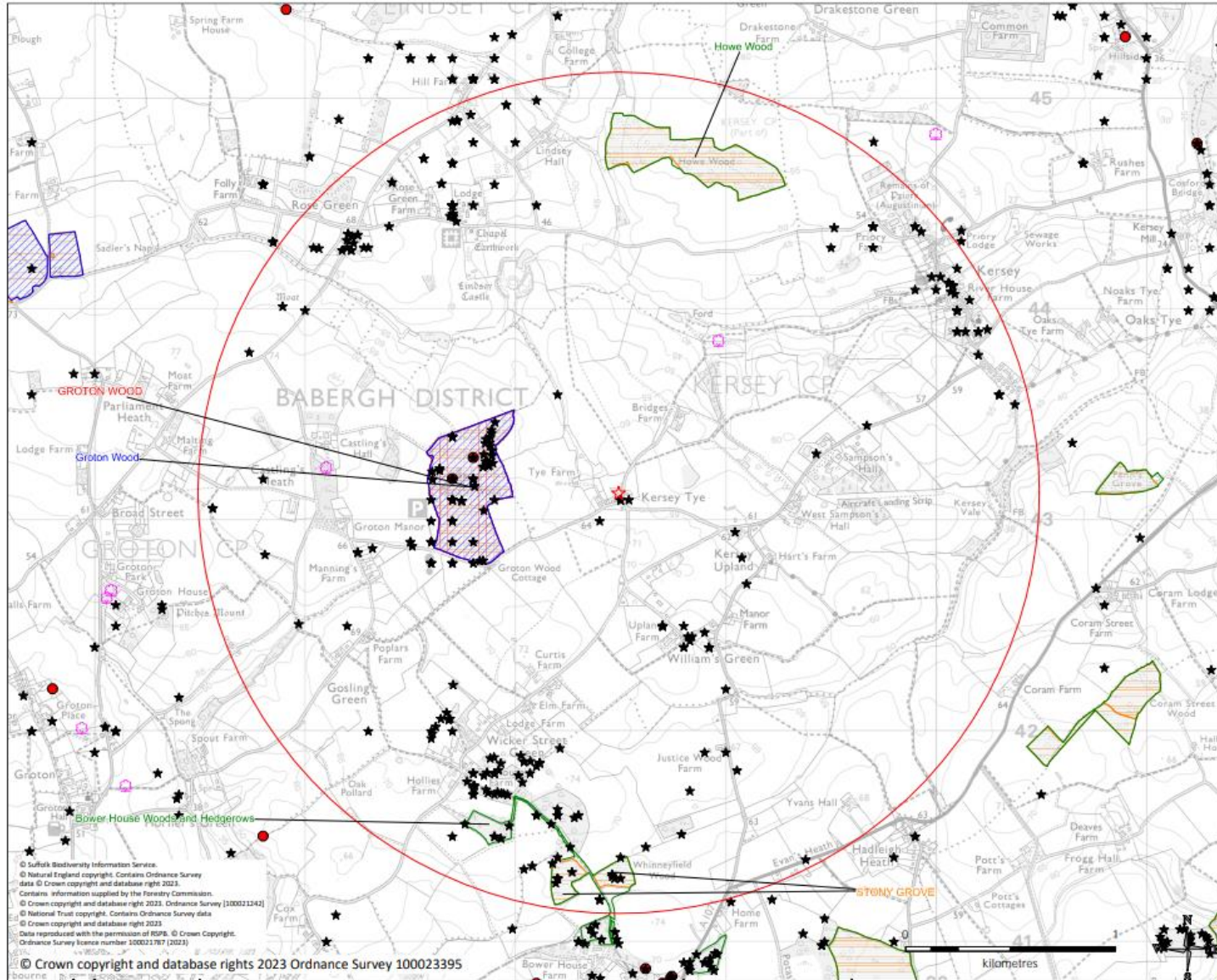
Particular regard was made to the nature of the proposed development and the potential of impact upon any other protected species, species which are nationally or locally scarce, or species subject to other conservation designations such as Red Data Book or Priority S41 species, from the development work, should these be present in the area.

Constraints

The field survey was conducted outside of the optimal survey period for flowering plants. Although the habitats recorded on site are unlikely to change to those described in this report, flora biodiversity is likely to be under recorded.

Ponds 3-5 were not accessible and could not be surveyed for GCN suitability.

Appendix B
Map of protected sites within 2km



- Data Enquiry**
- ☆ Search Point
- Search Area
- Protected, Locally Scarce and Rare Species**
- ★ Record Locations (for grids of 6 fig. or greater)
- Schedule 9 Species**
- Record Locations (for grids of 6 fig. or greater)
- Ancient/Veteran/Notable Trees**
-
- Roadside Nature Reserve**
-
- County Wildlife Sites**
-
- County GeoSites**
-
- SSSI**
-
- LNR**
-
- SPA**
-
- SAC**
-
- RAMSAR**
-
- NNR**
-
- SWT Reserve**
-
- Ancient Woodland Inventory**
-
- Other Public or Conservation Ownership/Management**
- Foresty Commission, National Trust (public access), RSPB (public access)
- National Park**
- The Broads
- AONB**
- Suffolk Coast and Heaths or Dedham Vale

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Date: 13/10/2023 | Drawn by: Andy Mercer

Greenlight (Cherrywood, The Tye, Kersey TL98491 43132) 2km Data Enquiry

Appendix C

Protected sites citations

SSSI citations

COUNTY: SUFFOLK SITE NAME: GROTON WOOD

DISTRICT: BABERGH

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

Local Planning Authority: BABERGH DISTRICT COUNCIL

National Grid Reference: TL 978431 Area: 19.4 (ha.) 47.8 (ac.)

Ordnance Survey Sheet 1:50,000: 155 1:10,000: TL 94 SE

Date Notified (Under 1949 Act): 1971 Date of Last Revision: N/A

Date Notified (Under 1981 Act): 1985 Date of Last Revision: –

Other Information:

This site is a nature reserve belonging to the Suffolk Trust for Nature Conservation.

Reasons for Notification:

Groton Wood is an ancient coppice woodland on a boulder clay plateau overlain by a surface deposit of loess. The site consists of a primary core with later additions of post-medieval secondary woodland. The wood contains the finest stand known in Suffolk of the Small-leaved Lime *Tilia cordata*, a community of great ecological interest. There is a diverse ground flora that includes a number of species that are confined to ancient woodlands.

Acid birch-ash-lime woodland dominates the medieval core of Groton Wood. Lime is present as both coppiced stools and standard trees and forms an almost pure stand in many areas. The post-medieval areas are generally acid pedunculate oak-hazel-ash woodland with frequent Wild Cherry *Prunus avium* and fragments of other stand-types. The wood is still managed in a traditional way with annual coppicing.

Bramble *Rubus fruticosus* agg. dominates the ground flora over much of the wood with patches of Dog's Mercury *Mercurialis perennis*. The flora is rich and includes several uncommon species such as Violet Heleborine *Epipactis purpurata*, Stinking Iris *Iris foetidissima*, Herb Paris *Paris quadrifolia*, Wood Spurge *Euphorbia amygdaloides* and Woodruff *Galium odoratum*. A series of rides have been created in the wood. These have a distinctive flora and are dominated by Great Willow-herb *Epilobium hirsutum* and Meadowsweet *Filipendula ulmaria*.

There is an active badger sett on the site.

County Wildlife Sites citations

CWS Number	Babergh 83
Site Name	HOWE WOOD
Parish	LINDSEY
District	Babergh
NGR	TL988447
Description	<p>Howe Wood is situated between the villages of Kersey Tye and Lindsey Tye and not far from Groton Wood, a large wood of high conservation value which is designated as a Site of Special Scientific Interest. The sinuous outline of Howe Wood is a characteristic feature of ancient woods as is the ditch and wood bank which surrounds it. Howe Wood is listed in English Nature's Inventory of Ancient Woodland for Suffolk. Howe Wood is a coppice with standards woodland. The tree canopy is composed of ash and oak standards with large amounts of field maple coppice. Abundant small-leaved lime, a species strongly associated with ancient woods, is also present. The shrub layer is composed of neglected hazel coppice with frequent elder, hawthorn and holly. The floor of the wood is colonised by dog's mercury, bluebell, primrose and in wetter areas by tufted hair-grass. At the time of survey, Howe Wood had not been managed for some time.</p>
Area	15.52

CWS Number	Babergh 103
Site Name	BOWER HOUSE WOODS AND HEDGEROWS
Parish	POLSTEAD
District	Babergh
NGR	TL982413
Description	<p>The woodlands included in this County Wildlife Site are Stony Down Grove and Whinnyfield Woods, both of which are listed in Natural England's Inventory of Ancient Woodland (Stony Down Grove is listed as Stony Grove). Stony Down Grove is a small woodland enclosed by a medieval woodbank and ditch, surrounded by arable fields. A large proportion of the southern half of the wood consists of old lime coppice, some of which are very large. The remainder of the wood contains a range of native woodland trees such as ash, field maple, oak and wild service tree. The ground flora supports a mosaic of bramble, dog's mercury and bluebell interspersed with small quantities of ancient woodland indicator plants such as wood sorrel, wood anemone, moschatel and hairy St John's- wort. A small stream runs along the edge of the wood and drains into a large pond which is fringed with marshy vegetation including abundant mosses, rushes and brooklime and provides good habitat for woodland invertebrates, particularly dragonflies. A further pond can be found in the eastern corner of the site. Whinnyfield Wood is what remains of what was once a much larger wood. A medieval ditch and bank encloses most of the wood and a number of internal earthworks can be seen that are also possibly medieval in origin. The wood contains small areas of ash and hazel coppice with oak standards, particularly on the margins, whilst the northern section is dominated by mature oak, with sparse ground flora due to the dense shade cast by the tree canopy. A range of native species are present in the rest of the wood, including cherry, birch, aspen, hazel and hawthorn. Where there is sufficient light, typical woodland flora can be found including some ancient woodland indicator species such as wood spurge and hairy wood-rush. These two areas of ancient woodland, along with two blocks of secondary woodland, an adjacent ancient green lane and linking hedgerows all support a breeding population of dormice. Stony Down Grove (Babergh 103) and Whinnyfield Wood (Babergh 104) were previously separate CWS which have</p>

been amalgamated to form this CWS, with the addition of the hedgerows and areas of secondary woodland.

Area

9.42

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.

The Protection of Badgers Act 1992 consolidates previous badger legislation by providing comprehensive protection for badgers and their setts, with a requirement that any authorised sett disturbance or destruction be carried out under licence.

The Hedgerows Regulations 1997 aim to protect important hedgerows in the countryside. They make it illegal to remove most countryside hedges without first notifying the local planning authority, and provide protection for 'important hedgerows'.

County Wildlife Site is a non-statutory designation used to identify high quality wildlife habitats in a county context. Local Authorities have a responsibility as part of their planning function to take account of sites of substantial nature conservation value and to consider them alongside other material planning considerations. The location of County Wildlife Sites will be included in Local Plans and Development Documents.

National Planning Policy - National Planning Policy Framework (NPPF)

Section 15 of the National Planning Policy Framework 2023 (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.

Great Crested Newts

Great crested newts are protected under both English and European law. It is an offence to kill, injure, disturb or take great crested newts or to damage or destroy their places of shelter, whether the animals are present or not.

Water Vole

The water vole received limited legal protection in April 1998 through its inclusion in Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) for some offences. Legal protection makes it an offence to:

- intentionally kill, injure or take (capture) a water vole;

- possess or control a dead or live water vole, or any part of a water vole;
- intentionally or recklessly damage or destroy access to any structure or place which water voles use for shelter or protection or disturb Water Voles while they are using such a place;
- sell, offer for sale or advertise for sale live or dead Water Voles

Water voles, their breeding sites and resting places are protected by law. In most cases, work can be planned to avoid harming water voles. If works cannot avoid disturbing them or damaging their habitats, you may be able to get a licence from Natural England.

Otters

Otters are protected under Section 9 of the Wildlife and Countryside Act 1981 (as amended) and revised by the Countryside and Rights of Way Act 2004, making it an offence to:

- intentionally kill, injure or take an otter;
- possess or control any (live or dead) otter, or any part of or anything derived from an otter;
- intentionally or recklessly damage or destroy or obstruct access to any structure or place used for shelter or protection by an otter;
- intentionally or recklessly disturb an otter while it is occupying a structure or place for that purpose;
- to sell, offer for sale, possess or transport for the purpose of sale any (live or dead) otter or part or derivative of an otter;
- to advertise for buying and selling such things.

Furthermore, otters are included on Schedule 2 of the Conservation (Habitats &c.) Regulations (1994), making it an offence to:

- deliberately to capture or kill a wild animal of a European protected species;
- deliberately to disturb any such animal;
- deliberately to take or destroy the eggs of such an animal; or
- damage or destroy a breeding site or resting place of such an animal.

Otters are also listed as a priority species on the UK and Biodiversity Action Plans.

White-Clawed Crayfish

This crayfish is listed under Annex II of the habitats directive and areas are designated as Special Areas of Conservation to protect this species. Outside of this a licence is required to capture this species. It is listed as a priority species under the Biodiversity Action Plan and is a Species of Principal Importance under section 41 of the NERC Act 2006.

Reptiles

Reptiles such as common lizard, slowworm, grass snake or adder are protected under Section 9 of the Wildlife & Countryside Act (1981) as amended. The legislation makes it illegal to deliberately or recklessly kill or injure

any native reptile. This protection therefore requires that reasonable effort be made to avoid harm to reptiles during developments on land occupied by reptiles.

Badger

The Wildlife and Countryside Act (1981) and its subsequent amendment in 1985 made it an offence to take, kill, injure or ill-treat a badger. The badger gained further protection under the auspices of The Protection of Badgers Act (1992) which consolidates all former protective legislation in relation to badgers, except their inclusion on Schedule 6 of the Wildlife and Countryside Act 1981.

Under the 1992 Act, the badger sett is protected against obstruction, destruction, and damage; furthermore, the animal's access to and from the sett must not be impeded. It should be noted that the concept/definition of the sett extends beyond the main sett to include annexe, subsidiary and outlying setts. However, although the badger and its sett are protected (including access to the sett), the wider habitat and foraging ground is not.

Dormice

Dormice are protected from being killed, injured, captured or disturbed and their resting and breeding places should not be damaged or destroyed.

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

Plant species recorded on site

English name	Scientific name
Apple	<i>Malus sp.</i>
Black medick	<i>Medicago lupulina</i>
Bramble	<i>Rubus fruticosus</i>
Buddleja	<i>Buddleja sp.</i>
Cherry	<i>Prunus sp.</i>
Clover	<i>Trifolium sp.</i>
Cock's-foot	<i>Dactylis glomerata</i>
Common chickweed	<i>Stellaria media</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Creeping buttercup	<i>Ranunculus repens</i>
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum officinale</i>
Dove's-foot cranesbill	<i>Geranium molle</i>
Fescue	<i>Festuca sp.</i>
Forget-me-not	<i>Myosotis sp.</i>
Groundsel	<i>Senecio vulgaris</i>
Hawthorn	<i>Crataegus monogyna</i>
Ivy	<i>Hedera helix</i>
Nettle	<i>Urtica dioica</i>
Perennial ryegrass	<i>Lolium perenne</i>
Spear thistle	<i>Cirsium vulgare</i>
Speedwell	<i>Veronica sp.</i>
White dead-nettle	<i>Lamium album</i>
Willow	<i>Salix sp.</i>
Willowherb	<i>Epilobium sp.</i>
Yarrow	<i>Achillea millefolium</i>

Appendix F

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>

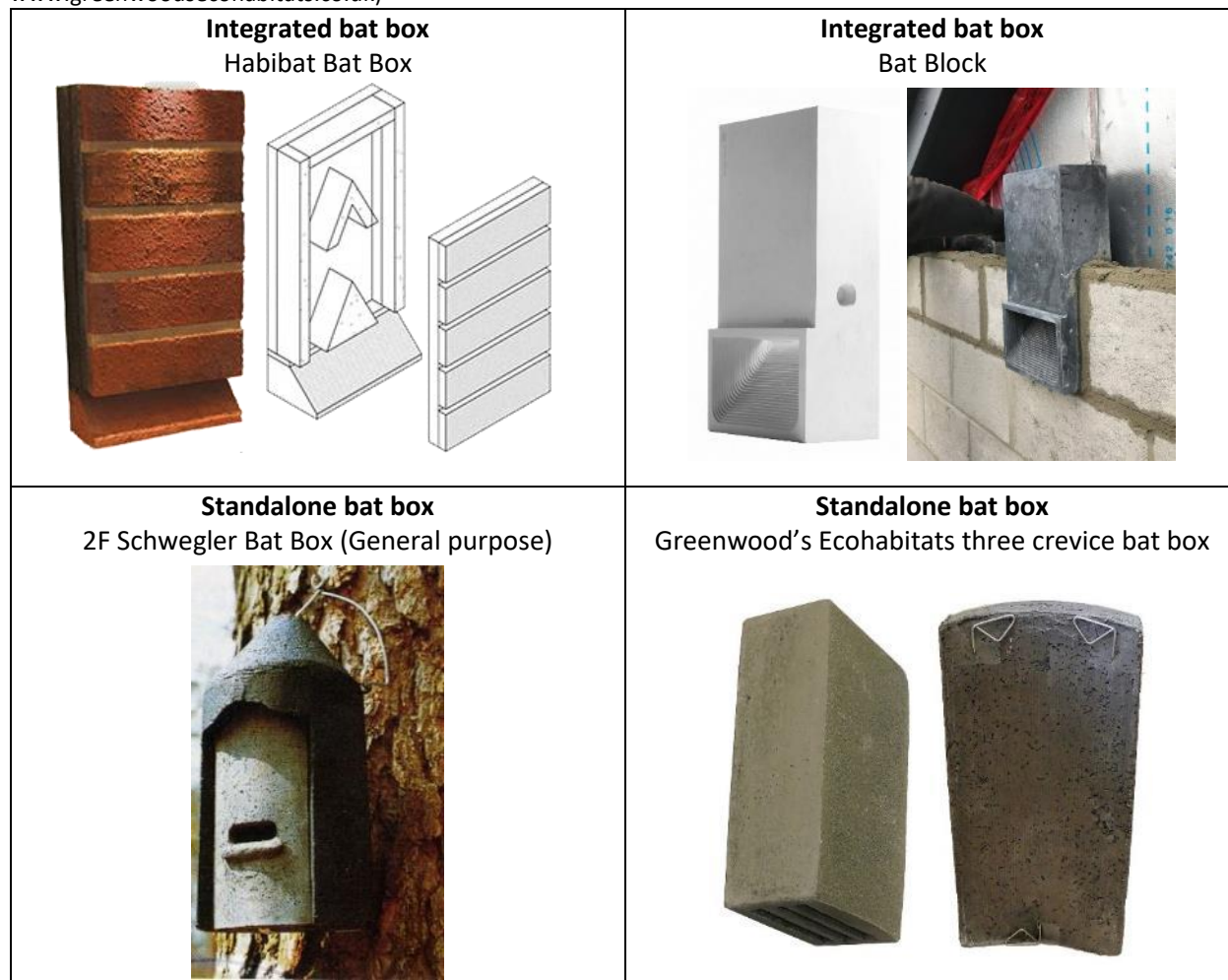
Flowering plants	
Bird's-foot trefoil	<i>Lotus corniculatus</i>
Black knapweed	<i>Centaurea nigra</i>
Common cat's-ear	<i>Hypochoeris radicata</i>
Common sorrel	<i>Rumex acetosa</i>
Common vetch	<i>Vicia sativa</i>
Cowslip	<i>Primula veris</i>
Field scabious	<i>Knautia arvensis</i>
Foxglove	<i>Digitalis 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>

Appendix G

Examples of bat and 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)



Recommendations for installing bat boxes:

(Sourced from Bat Conservation Trust www.bct.org)

Ideally, several boxes should be put up facing in different directions to provide a range of conditions.

Locate boxes:

- Where bats are known to feed close to hedges and treelines (some bats use a treeline or hedgerow for navigation, putting boxes near these features may help the bats find the box).
- On trees: boxes should be placed on the trunk of a mature tree, where there is a clear flight line/accessible entrance.
- On buildings: boxes should be placed as close to the eaves as possible.
- As high as possible (ideally, at least 3 to 4m above the ground, where safe installation is possible).
- In sunny places, sheltered from strong winds (usually between south-west and south-east).

Make sure the boxes are secured.

Boxes can be installed on trees using adjustable ties to avoid damaging the trees. Otherwise, timber screw bolts or nails can be used. Aluminium alloy nails are less likely to damage saws and chipping machinery.

Bats need time to find and explore new homes, and it may be several months or even years before boxes have residents. Once bats find a place they want to live they can return over and over again. Droppings on the landing area, urine stains around the lower parts of the box and chittering noises from inside on warm afternoons and evenings are signs of occupation.

<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:

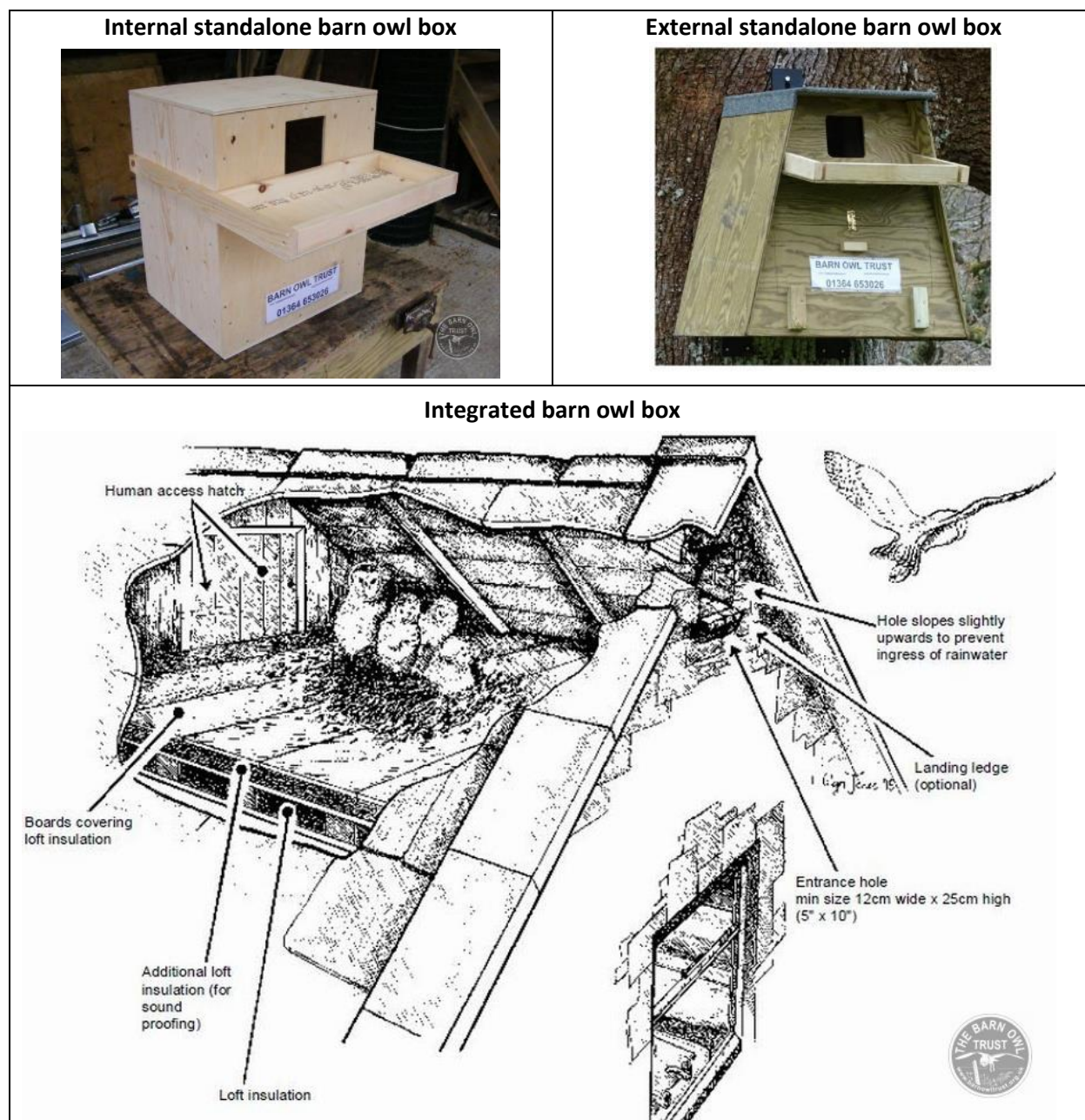
- Boxes should be sited 1-3m from the ground, ideally on tree trunks but can be placed on the side of a shed or wall. Avoid areas where foliage obscures the entrance hole.
- Don't place boxes too close to another nest box of the same type, as this may promote aggressive behaviour between neighbours.
- 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 ≥ 5 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.



Recommendations for installing integrated barn owl box:

(Sourced from Barn Owl Trust www.barnowltrust.org.uk)

Standalone barn owl boxes:

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.

Integrated barn owl boxes:

Design requirements – entrance hole dimensions and ledge (exercise platform):

- Entrance hole minimum size: 100mm wide x 200mm high, optimum size: 130mm x 250mm, maximum size: 200mm x 300mm.
- The bottom of the hole must not have any sharp edges or narrow gaps in which a toe or talon could get caught.

- Where necessary there can be a 'tunnel', minimum 150mm wide x 200mm high, between the entrance hole and the nest space.
- A grippable ledge (e.g. stone or slatted timber) below the entrance hole provides an exercise platform for emerging owlets.
- In cases where the entrance hole goes directly into a nest space less than 700mm deep, an exercise platform is essential; the bigger the better, but not less than 250mm x 500mm wide with a grippable raised edge.

Design requirements – nest space & dimensions:

- Floor area of nest chamber: absolute minimum 0.4m² (e.g. 500mm wide x 800mm high or 400mm wide x 1m high), ideal size is 1m² (1m x 1m). These dimensions are bigger than those for nestboxes, because built-in provision usually lacks an external exercise platform that would permit maximum wing stretching prior to fledging.
- Where there is no external exercise platform the internal box depth from the bottom of the entrance hole to floor of nesting area must not be less than 700mm. Note: the ideal depth for Barn Owls is at least 1m, which should be achieved wherever space permits.
- Depth from the bottom of the entrance hole to floor of nesting area must be not less than 450mm provided that there will definitely be an easy-to-grip external exercise platform for fledglings to stand on outside the entrance hole.
- In a large loft simply partition off a section behind the owls' entrance hole.
- Stone, brick and timber are all suitable materials. Although owls are not destructive and seem unharmed by soft insulation materials, these are usually best avoided.
- In an unheated building, no insulation is required.
- Lining the space is not essential.
- An internal perch positioned as high or higher than the access hole may be beneficial as long as the space is big enough to accommodate one without resulting in one perched bird defecating on another underneath.

Design requirements – insulation:

- From the owls' point of view, insulation is not required.
- However, there should be some form of moisture insulation between the owl space and the building interior.
- Where space is at a premium, use a highly efficient heat insulation board (e.g. 50mm Celotex polyurethane foam).
- Where space allows, use a more environmentally sustainable (and thicker) heat insulation board (e.g. a wood fibre board like Pavatex) to which a sound insulation board can be added (e.g. 60mm Pavatherm) if required.



Design requirements – human access and cleaning out:

- Human access is essential as the nest space will need to be cleared out very occasionally.
- A generous removable inspection hatch or door in the back of the owl space (accessible from the building interior) is usually the preferred option but in some cases an external arrangement may be a practical option.
- In the case of a loft partition, create an integral crawl-through doorway.
- The access should permit all or most of the nest space floor to be reached by hand.

Appendix H

Examples of hedgehog friendly fencing

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

Quercus Fencing	Jacksons-Fencing
Hedgehog friendly oak woven fencing panels	Hedgehog friendly gravel board for use with slotted posts
	

Recommendations for installing hedgehog friendly fencing:

(Sourced from Hedgehog Street www.hedgehogstreet.org)

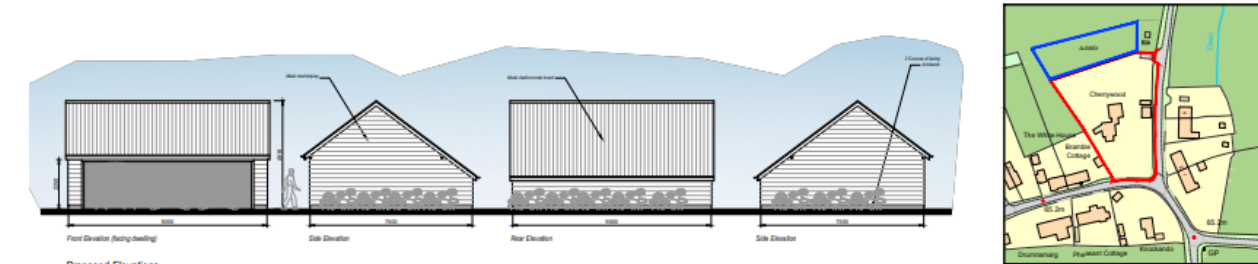
A hedgehog friendly fence should have a gap measuring at least 13cm by 13cm in the gravel board. These gaps allow any hedgehog to pass through but are too small for nearly all pets.

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.

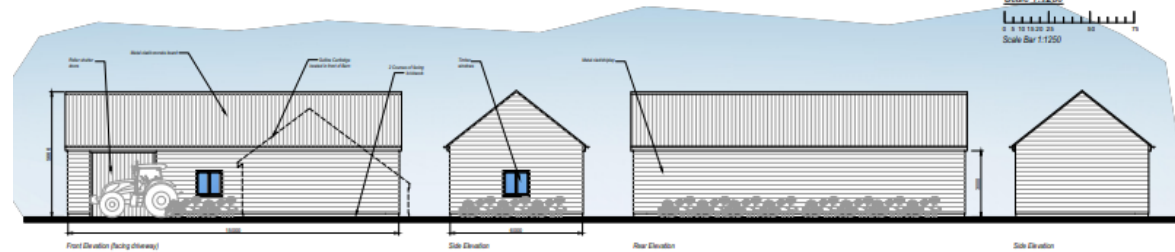
Appendix I

Proposed plans

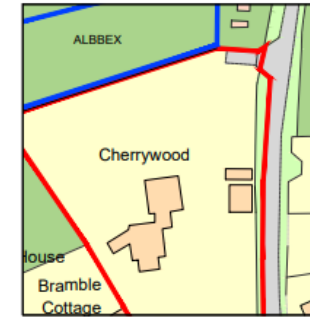


Proposed Elevations
Scale 1:100

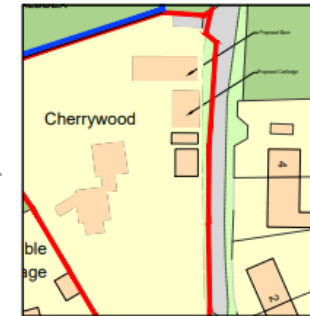
Location Plan
Scale 1:1250
0 5 10 15 20 25 30 35



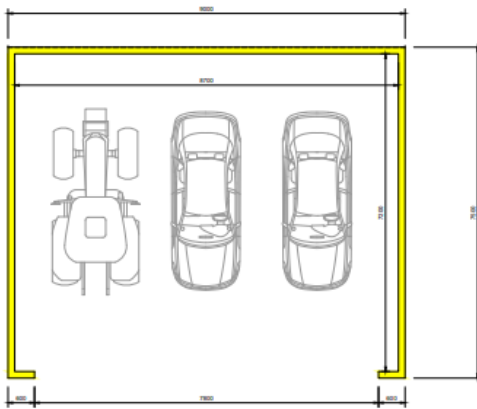
Proposed Elevations
Scale 1:100



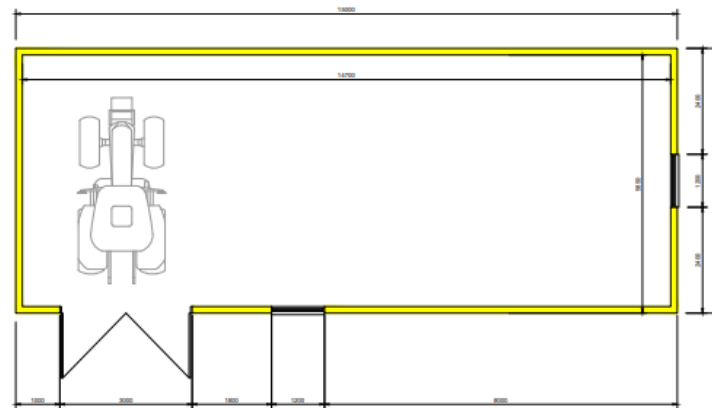
Existing Site Plan
Scale 1:500
0 5 10 15 20 25 30 35



Proposed Site Plan
Scale 1:500
0 5 10 15 20 25 30 35



Proposed Cartilage Floor Plan
Scale 1:50



Proposed Barn Floor Plan
Scale 1:50

- Notes**
1. Drawing not to be scaled
 2. All measurements to be checked on site
 3. Any construction work carried out prior to receiving all necessary approvals for planning and/or building regulations is entirely at the householders/clients risk
- Existing Walls
 Proposed Walls



REV B - MINOR CHANGES - 11/08/2023
REV A - MINOR CHANGES - 10/09/2023

Tel: 01473 876022
office@dakingdesigns.co.uk
www.dakingdesigns.co.uk

daking designs ltd
architectural designers

Project: Proposed Detached Cartilage & Barn at Cherrywood, The Tye, Kersey, Suffolk, IP11 0JH		
Drawing Details: Proposed Floor Plans, Elevations & Site Plans		
Date: August 2023	Scale: See Drawing @ A1	Drawn: BOW
Number: 514 - 001		Rev: B