

---

# **Preliminary Ecological Appraisal**

---

**Does Farm, Wallow Lane, Naughton**

**for**

**Planning Direct**

**30 August 2022**



**Client**

Planning Direct


**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).*

Document	Preliminary Ecological Appraisal
Version	1.0
Date	30 August 2022
Reference number	2874
Author	Ebonie Lambo-Hills M.Sc, B.Sc (Hons) (Bat survey level 1, Great crested newt level 1)
Reviewer	Nathan Duszynski M.Sc, B.Sc (Hons), ACIEEM, Natural England licences (Bat survey level 2, Great crested newt level 1)
<b><i>Signed disclosure</i></b>	
<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>Etienne Swarts, ACIEEM</i>	
<b>Greenlight Environmental Consultancy Limited</b> Diss Business Hub Hopper Way Diss Norfolk IP22 4GT www.greenlightco.co.uk	

## Table of Contents

<b>SUMMARY</b>	<b>4</b>
<b>1. METHOD</b>	<b>6</b>
<b>2. SITE CONTEXT</b>	<b>6</b>
<b>3. DESCRIPTION OF THE DEVELOPMENT</b>	<b>8</b>
<b>4. PROTECTED SITES</b>	<b>8</b>
<b>5. HABITATS</b>	<b>9</b>
<b>6. PROTECTED AND NOTABLE SPECIES</b>	<b>15</b>
<b>7. DISCUSSION AND CONCLUSIONS</b>	<b>21</b>
<b>8. BIBLIOGRAPHY</b>	<b>26</b>
<b>APPENDIX A</b>	<b>METHODS</b>
<b>APPENDIX B</b>	<b>MAP OF PROTECTED SITES WITHIN 2KM</b>
<b>APPENDIX C</b>	<b>PROTECTED SITES CITATIONS</b>
<b>APPENDIX D</b>	<b>LEGISLATION</b>
<b>APPENDIX E</b>	<b>PLANT SPECIES RECORDED ON SITE</b>
<b>APPENDIX F</b>	<b>EXAMPLES OF BAT AND BIRD BOXES</b>
<b>APPENDIX G</b>	<b>EXAMPLES OF HEDGEHOG FRIENDLY FENCING</b>
<b>APPENDIX H</b>	<b>NATIVE SPECIES SUITABLE FOR PLANTING AND SOWING</b>
<b>APPENDIX I</b>	<b>PROPOSED PLANS</b>

## SUMMARY

- Greenlight Environmental Consultancy Ltd. has been commissioned to carry out a Preliminary Ecological Appraisal for a proposed development at Does Farm, Wallow Lane, Naughton, Suffolk, IP7 7DA (grid reference: TM 03102 49375).
- 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 two residential dwellings.
- 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.
- **Further surveys for great crested newts 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	No statutory and four 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	Modified grassland, horticulture and sections of hedgerow (Priority Habitat) will be removed as part of the proposed works.	Low scale of habitat loss predicted for wildlife.	<u>Mitigation</u> Soft landscaping scheme to include the planting of new native species-rich hedgerows and trees between plots and around the site.  Construction work to be carried out in accordance with BSI (2012), BS 5837:2012, to protect trees and their root protection areas.
Bats	<b>Negligible</b> bat roosting potential in trees located on site.  <b>Low</b> 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 and CIE 150:2003 guidance.  <u>Enhancement</u> Installation of two integrated bat boxes on new dwellings on site and one standalone bat box on a mature tree.
Breeding birds	Nesting habitats for hedgerow and tree nesting birds present on site, including	Low scale loss of nesting habitat on site.	<u>Mitigation</u> Works to any hedgerow or trees on site to be conducted outside bird nesting

Protected habitats/species	Status	Potential effect	Recommended mitigation and enhancements
	potential breeding habitat for Red and Amber listed species. Suitable barn owl foraging habitat on site.	Potential disturbance to breeding birds.	season or under watching brief of ecologist if during nesting season. <u>Enhancement</u> Installation of two integrated swift boxes and two small bird boxes, installed on new buildings and trees respectively.
Great crested newts	A mixture of suitable and unsuitable habitats on site. Three ponds within 250m of the site, three assessed as <b>below average</b> suitability, one dry and one could not be accessed for detailed assessment. Site falls within Amber risk zone for district level licensing. Five GCN records within 2km.	Loss of GCN terrestrial habitat not considered significant to a local population of GCN, if present. No impacts on potential GCN aquatic habitat.	<u>Further surveys required</u> Further surveys for GCN required. This can be in the form of presence/likely absence surveys conducted between mid-March and mid-June, eDNA surveys conducted between mid-April and June, or applying to join a district level licensing scheme which can be conducted at any time of year. The outcome of the surveys will inform a detailed mitigation strategy and whether an EPS Mitigation Licence will be required from Natural England.
Reptiles	A mixture of suitable and unsuitable habitats on site. 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> Cut and maintain vegetation short (maximum height of 10cm) on and around the site until the start of works.
Hazel dormice	Suboptimal habitats on site suitable, but ecologically separated from nearby woodland. No dormouse records within 2km.	No impacts predicted.	No mitigation required.
Other animals	N/A	Potential harm to animals.	<u>Mitigation</u> Porous hedgehog friendly fencing will be used within and around the site. Rough sawn planks placed inside any open excavations. Night lighting of the construction site will be minimised as far as possible. Construction materials will be stored off the ground on pallets and waste materials in skips.

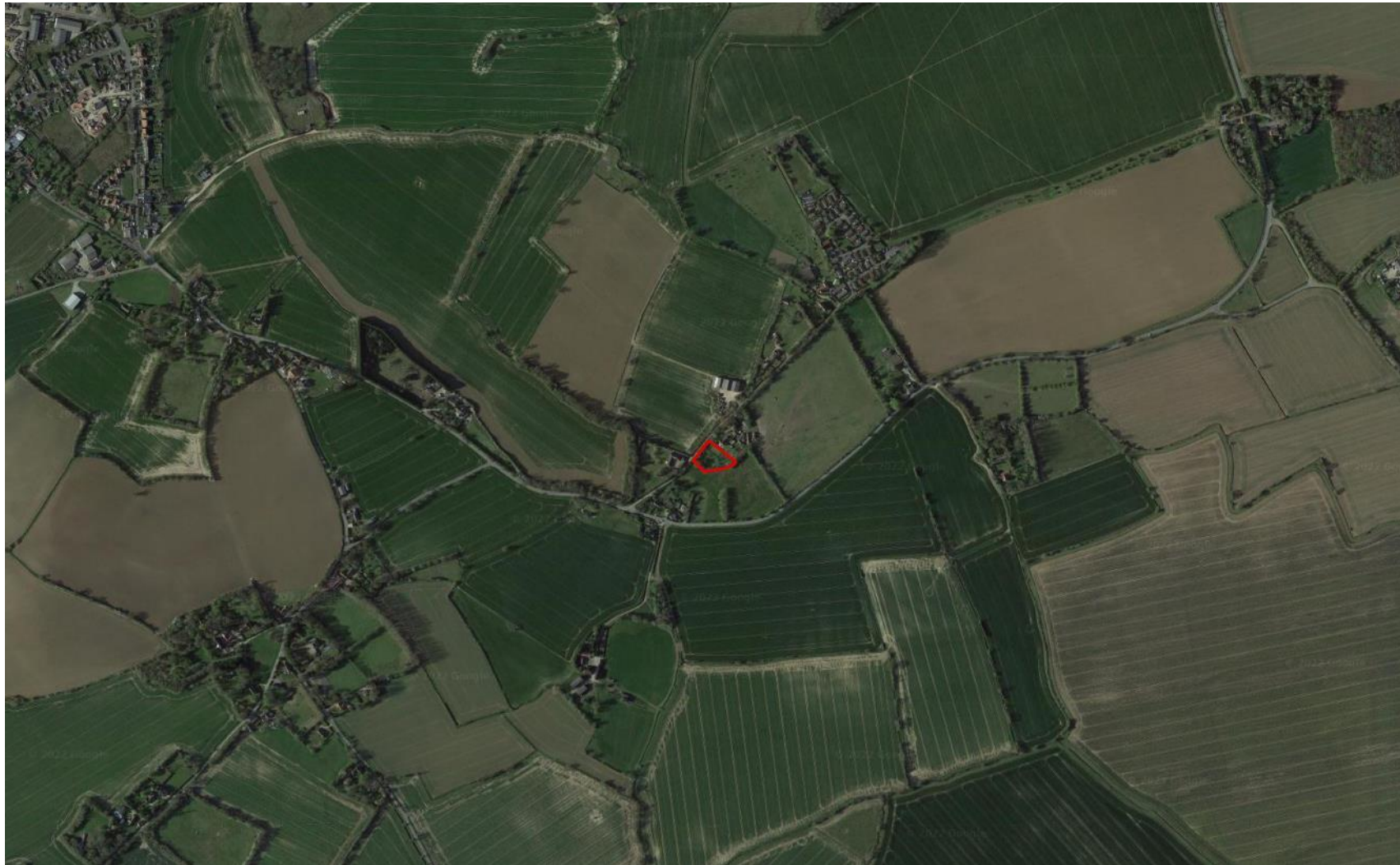
## 1. METHOD

- 1.1. A walkover of the site was conducted on 9<sup>th</sup> August 2022 by Ebonie Lambo-Hills and Mathew Ashley – independent, qualified and experienced ecologists. Survey conditions were as follows: 24°C, 9mph wind, sunny intervals 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)
  - 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 approximately 0.8km northwest of the village of Naughton, with the B1076 located approximately 0.1km southwest. The closest town is Hadleigh, located approximately 5.6km south of the site.
- 2.3. The site is enclosed by residential dwellings and an arable field to the north, a residential dwelling with associated garden to the east, and grassland to the south and west. The wider surroundings are comprised of a mixture of residential dwellings, small 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 25/08/22

### 3. DESCRIPTION OF THE DEVELOPMENT

- 3.1. The proposals are for the construction of two residential dwellings. Please refer to Appendix I for the proposed plans.

### 4. PROTECTED SITES

#### Statutory

- 4.1. There are no statutory protected sites located within 2km.
- 4.2. The proposed development falls outside of all Sites of Special Scientific Interest (“SSSI”) Impact Risk Zones relating to rural residential developments.

#### Non-statutory

- 4.3. There are four non-statutory protected sites located within 2km – four County Wildlife Sites (“CWS”). Please refer to Appendix C for the full citations.

- i. RAF Wattisham Woodlands CWS, approximately 1km northwest.

*“This County Wildlife Site consists of two areas of woodland, namely Park Wood situated to the south of the airfield and Ten Wood located immediately to the north of the main airfield building.”*

- ii. Langham Close Wood CWS, approximately 1.2km southeast.

*“This small linear-shaped area of woodland is a remnant of a much larger ancient wood which has been grubbed for conversion to arable farming.”*

- iii. Calves Wood CWS, approximately 1.4km southeast.

*“Calves Wood, situated in the parish of Whatfield is listed in English Nature's Inventory of Ancient Woodland. A large proportion of the wood has been felled and the land converted to arable farming.”*

- iv. Borley's Qood CWS, approximately 1.5km southeast.

*“Borley's Wood is a small unusually shaped ancient woodland situated in the parish of Elmsett, in close proximity to Elmsett Park Wood which has been scheduled as a Site of Special Scientific Interest.”*



## 5. HABITATS

### Desktop review

- 5.1. Priority Habitats to occur within 2km (identified using MAGIC – managed by Natural England), include Deciduous Woodland and Traditional Orchards. The closest of which, is Traditional Orchards located approximately 600m southwest of the site.

### Field study

- 5.2. The habitats on the site are of **low** ecological value, being modified grassland which varies in management, horticulture, cereal crop 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: scattered trees 11 and frequently managed 66)*

- 5.5. The site is dominated by modified grassland, which varies in management (regularly-irregularly managed). Species include: annual meadow grass *Poa annua*, chickweed *Stellaria media*, cock's-foot *Dactylis glomerata*, creeping buttercup *Ranunculus repens*, dove's-foot cranesbill *Geranium molle*, false oat-grass *Arrhenatherum elatius*, field bindweed *Convolvulus arvensis*, perennial ryegrass *Lolium perenne*, ragwort *Jacobaea vulgaris*, selfheal *Prunella vulgaris*, white clover *Trifolium repens* and yarrow *Achillea millefolium*. Within the grassland, there are several scattered trees, species include: cherry *Prunus avium*, holly *Ilex aquifolium*, horse chestnut *Aesculus hippocastanum*, tulip tree *Liriodendron sp.* and weeping beech *Fagus sylvatica* 'Pendula'.

*Hedgerow (UK Habitat Classification h2a, secondary code: hedgerow with trees 190) – Priority Habitat*

- 5.6. The site features native hedgerows with trees which along the eastern, western and southern periphery. Species include field elm *Ulmus minor*, field maple *Acer campestre* and hawthorn *Crataegus monogyna*, with tree species of ash *Fraxinus excelsior*, English oak *Quercus robur* and sycamore *Acer pseudoplatanus*. These hedgerows do not qualify as “important” under The

Hedgerow Regulations 1997, lacking the required number of native woody species or associated features.

*Built-up areas and gardens (UK Habitat Classification u1, secondary code: 900 small scale food growing)*

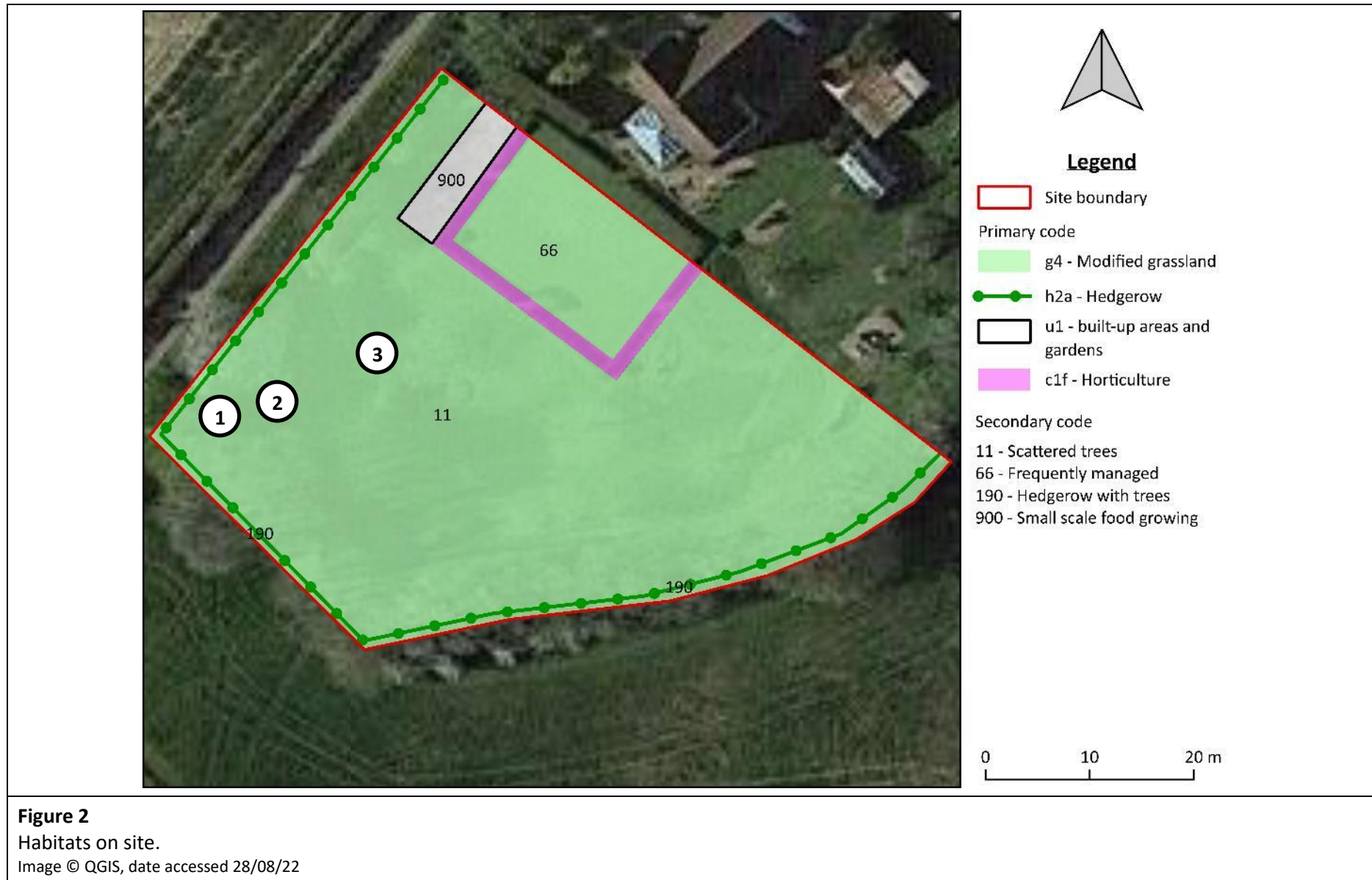
- 5.7. Within the northern quarter of the site, there is a vegetable plot. Species include: broccoli *Brassica oleracea*, corn *Zea mays*, spinach *Spinacia oleracea* and sweat pea *Lathyrus odoratus*.

*Horticulture (UK Habitat Classification c1f)*

- 5.8. The site featured ornamental planting of box hedge *Buxus sp.* and rose *Rosa sp.* to the north of the site.

Target note number	Comments
1	Compost heap.
2	Brash pile.
3	Earth bund with ornamental planting.

**Table 1**, target notes.





**Photo 1**, built-up areas and gardens, horticulture and managed modified grassland, looking southeast.



**Photo 2**, modified grassland with scattered trees, looking northwest.





**Photo 3**, hedgerow along the western periphery and modified grassland, looking north.



**Photo 4**, modified grassland and target notes one (compost heap) and two (brash pile), looking east.





**Photo 5**, modified grassland and scattered trees, looking east.



**Photo 6**, earth bund and scattered trees, looking south.

## 6. PROTECTED AND NOTABLE SPECIES

### Desktop review

#### Data search

- 6.1. The biodiversity data search within 2km of the site indicated 392 records from 73 species.
- 6.2. Records of note within 2km and relevant to the proposed development works are:
  - Ten barn owl *Tyto alba* records, with the most recent from 2011.
  - Nine skylark *Alauda arvensis* records, with the most recent from 2010.
  - Five swift *Apus apus* records, with the most recent from 2010.
  - Five GCN *Triturus cristatus* records, with the most recent from 2010. The closest record is located approximately 1.2km southeast.
  - One reptile record from 2002, located approximately 1.3km northwest. Species include: grass snake *Natrix helvetica*.
  - 17 hedgehog *Erinaceus europaeus* records, with the most recent from 2017.
  - 13 bat records, with the most recent from 2020, including common pipistrelles *Pipistrellus pipistrellus*, soprano pipistrelles *Pipistrellus pygmaeus*, Nathusius' pipistrelle *Pipistrellus nathusii*, brown long-eared *Plecotus auritus*, noctules *Nyctalus noctula*, and other unidentified bat species.

#### Protected species licences

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

### Bats

#### Trees

- 6.4. 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

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

## Birds

6.7. 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.

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

### **Red listed:**

House sparrow	<i>Passer domesticus</i>
Starling	<i>Sturnus vulgaris</i>

### **Amber listed:**

Dunnock	<i>Prunella modularis</i>
Rook	<i>Corvus frugilegus</i>
Stock dove	<i>Columba oenas</i>
Woodpigeon	<i>Columba palumbus</i>

### **Green listed:**

Blackbird	<i>Turdus merula</i>
Blue tit	<i>Cyanistes caeruleus</i>
Goldfinch	<i>Carduelis carduelis</i>
Great spotted woodpecker	<i>Dendrocopos major</i>
Green woodpecker	<i>Picus viridis</i>
Jackdaw	<i>Corvus monedula</i>
Magpie	<i>Pica pica</i>
Robin	<i>Erithacus rubecula</i>
Swallow	<i>Hirundo rustica</i>

6.9. The site provides suitable nesting habitats for hedgerow and tree nesting species.

6.10. The site provides potential breeding habitat for the following Red listed species: house sparrow *Passer domesticus* and yellowhammer *Emberiza citrinella*.

6.11. The site provides potential breeding habitat for the following Amber listed species: dunnock *Prunella modularis* and woodpigeon *Columba palumbus*.

6.12. Although no barn owl nests were identified on site, the site provides suitable foraging habitat within the irregularly managed modified grassland.



### Great crested newts

- 6.13. There are no ponds within the survey site and three 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 3). GCN are most likely to occupy good quality terrestrial habitat within 250m of a breeding pond (English Nature, 2001).
- 6.14. The terrestrial habitats on the site are considered a mixture of suitable (irregularly managed modified grassland and hedgerows) and unsuitable (manged modified grassland, ornamental planting and vegetable plots) GCN habitats.
- 6.15. Terrestrial habitats adjacent the site include a mixture of unsuitable (arable fields and residential dwellings with associated gardens and hardstanding) and suitable (grassland and hedgerows) GCN foraging, commuting and hibernating habitats.
- 6.16. Pond one was assessed as **below average** suitability for GCN (Table 2). Pond two has been dry for a prolonged period of time and pond three was not assessed in detail, as authorised access to the pond was not available.

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	3
Geographic location	Zone A	Dry	Authorised access unavailable
	1.00		
Pond surface area (m <sup>2</sup> )	50m <sup>2</sup>		
	0.10		
Desiccation rate	Never		
	0.90		
Water quality/ invert density	Poor		
	0.33		
Shoreline shade (%)	40%		
	1.00		
Waterfowl impacts	Absent		
	1.00		
Fish impacts	Possible		
	0.67		
Ponds within 1km	13+		
	1.00		
Terrestrial habitat quality	Poor		
	0.33		
Macrophyte cover (%)	10%		
	0.40		
HSI Score	<b>Below average</b>		
	0.55		

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

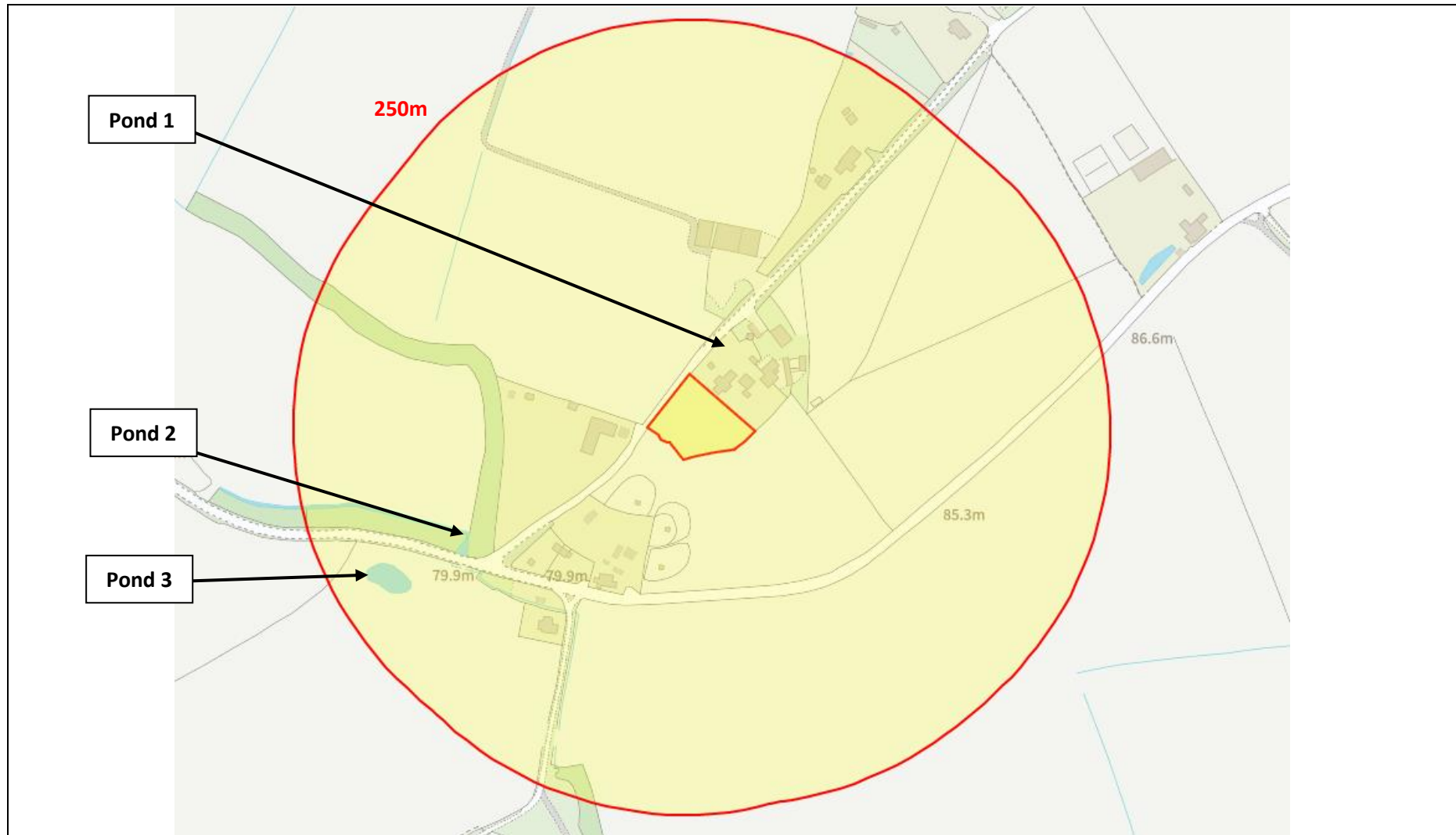


**Photo 7**, pond one, looking northwest.



**Photo 8**, pond two, looking west.





**Figure 3**  
Ponds within 250m of the proposed site.  
Image © MAGIC, date accessed 25/08/22

### **Reptiles**

- 6.17. The habitats on the site are considered a mixture of suitable (irregularly managed modified grassland and hedgerows) and unsuitable (managed modified grassland, ornamental planting and vegetable plots) reptile habitats.
- 6.18. 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.
- 6.19. Terrestrial habitats adjacent the site include a mixture of unsuitable (arable fields and residential dwellings with associated gardens and hardstanding) and suitable (grassland and hedgerows) reptile foraging, commuting and hibernating habitats.

### **Dormice**

- 6.20. The hedgerows on site are considered suboptimal for hazel dormice.
- 6.21. The closest deciduous woodland (identified using MAGIC) is 800m north of the site, greater than a hazel dormouse home range ( $\approx 70\text{m}$ , Bright *et al.*, 2006) and ecologically separated by arable fields.

### **Other animals**

- 6.22. The site is considered unsuitable for stag beetles *Lucanus cervus*, with the no deadwood located on site.

## 7. DISCUSSION AND CONCLUSIONS

### Protected sites

- 7.1. The development footprint falls outside all identified protected sites (statutory and non-statutory). There are no statutory protected sites and four non-statutory protected sites located within 2km of the site.
- The closest non-statutory protected site (RAF Wattisham Woodlands CWS) is located approximately 1km northwest of the site and designated for two woodlands.
- 7.2. The proposed development falls outside of any SSSI Impact Risk Zones relating to rural residential developments.
- 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 the clearance of vegetated habitats on site, including ≈0.1ha of modified grassland, ≈0.01ha of horticulture, ≈0.01ha of vegetable plots and ≈10m of hedgerow (Priority Habitat) to allow for the new access track. This is expected to result in a low scale loss of nesting habitat for hedgerow and tree nesting birds, and a low scale loss of foraging features for bats.
- 7.5. As a precautionary measure, the following mitigation will be implemented to avoid impacts on habitats from the proposed works:
- i. A soft landscaping scheme to include the planting of new native species-rich (≥5 species), hedgerows and trees between plots and around the site (see Appendix H for suggested species).
  - ii. 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 foraging and commuting habitats for bats through the clearance of vegetation and 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 and CIE 150:2003. Warm-white (long wavelength) lights with UV filters will be fitted as close to the ground as possible. Lighting units will be angled below 70° and equipped with movement sensors, baffles, hoods, louvres and horizontal cut off units at 90°.
  - ii. A soft landscaping scheme to include the planting of new native species-rich ( $\geq 5$  species), hedgerows and trees between plots and around the site (see Appendix H for suggested species).
- 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. These 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 traditional type 1F bitumen is used.
- 7.9. As enhancements, the following will be implemented:
- i. One integrated bat box for every new dwelling on site, totalling two boxes (Schwegler 1FR Bat Tube – Appendix F).
  - ii. One standalone bat box (Schwegler 1FF Bat Box with built-in wooden rear panel – Appendix F).
- 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 expected to result in a low scale loss of bird nesting habitat through the clearance of vegetation, including several scattered trees.
- 7.12. Any works affecting bird nesting habitat such as management of hedgerows or trees would ideally need to be conducted outside the main nesting season, which lasts from March to August. If work is planned during the bird nesting season, 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 swift box for every new dwelling on site, totalling two boxes (Schwegler Brick Nest Box Type 25 – Appendix F).
- ii. One small bird box for every new dwelling on site, totalling two boxes (Schwegler 1B or 2H Nest Box – Appendix F).
- iii. A soft landscaping scheme to include the planting of new native species-rich ( $\geq 5$  species), hedgerows and trees between plots and around the site (see Appendix H for suggested species).

7.14. 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.

### **Great crested newts**

7.15. The proposed works are expected to result in a loss of terrestrial habitat ( $\approx 0.1$ ha of modified grassland and  $\approx 10$ m of hedgerow), with aquatic habitats unaffected.

7.16. Taking a worst-case scenario of 0.1-0.5ha of land being lost or damaged within 100m of a breeding pond, 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.”*

7.17. As GCN may commute across the site to reach ponds in the local vicinity, further surveys for GCN are required to determine the likeliness of GCN being present on the site. This can be in form of the following methods:

- i. Presence/likely absence surveys on ponds within 250m of the site which contain sufficient levels of water during the GCN breeding season (can only be conducted between mid-March and mid-June). Please note, a number of visits are required in the peak season (mid-April to mid-May).
- ii. eDNA surveys on ponds within 250m of the site which contain sufficient levels of water during the GCN breeding season (can only be conducted between mid-April and June).

- iii. Apply to join a district level licensing scheme (conducted year round). Please note, all ponds will be assumed to contain GCN unless presence/likely absence surveys or eDNA tests have confirmed likely absence.
- 7.18. The outcomes of the presence/likely absence, eDNA surveys or district level licensing will inform a detailed mitigation strategy for GCN and whether a EPS Mitigation Licence will be required from Natural England for the proposed development to proceed.

### **Reptiles**

- 7.19. The proposed works are expected to result in a low scale loss of reptile habitat through the clearance of ≈0.1ha of modified grassland and ≈10m of hedgerow.
- 7.20. Although suitable reptile habitats are present on site, they are in small quantities (<0.2ha) and would be unable to support a population in isolation. As a precautionary measure, the following mitigation will be implemented to avoid impacts on reptiles 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.
- 7.21. After these precautionary mitigation measures, we predict no impact on reptiles as a result of the development plans, and no further surveys are necessary.

### **Dormice**

- 7.22. No impacts are expected on this species from the proposed development and no mitigation is required.

### **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 G for examples).
- 7.24. General mitigation to protect wildlife during the construction period are as follows:
- 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.
  - Lighting of the construction site at night will be minimised as far as practicable, to reduce the risk of possible disruption to nocturnal animals such as bats and badgers.



- 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.

## 8. BIBLIOGRAPHY

- Baker, J., Beebee, T., Buckley, J. Gent, T., Orchard, D. (2011). *Amphibian Habitat Management Handbook*. Amphibian and Reptile Conservation: Bournemouth
- Barn Owl Trust (2012). *Barn Owl Conservation Handbook*. Pelagic Publishing: Exeter.
- Butcher, B., Carey, P., Edmonds, R., Norton, L., Treweek, J. (2020). *The UK Habitat Classification User Manual Version 1.1* at <http://www.ukhab.org/>
- Bright, P., Morris, P., Mitchell-Jones, T. (2006). *The dormouse conservation handbook*. English Nature
- British Standard BS 42020:2013 *Biodiversity - Code of Practice for planning and development*.
- British Standards Institution (2012). BS 5837:2012, *Trees in relation to design, demolition and construction – Recommendations*.
- CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal*.
- Collins, J. (Ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> edn.)*. The Bat Conservation Trust, London.
- Eaton, M.A., Aebischer, N.J., Brown, A.F., Hearn, R., Lock, L. Musgrove, A., Noble, D., Stroud, D., Richard, G. (2015). *Birds of conservation concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man*. *British Birds* 108, 708-746.
- Edgar, P., Foster, J., Baker, J. (2010). *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation: Bournemouth
- English Nature (2001). *Great Crested Newt Mitigation Guidelines*. Peterborough.
- Gent, A.H. and Gibson, S.D. eds. (1998). *Herpetofauna Workers' Manual*. Peterborough, Joint Nature Conservation Committee.
- Griffiths, R.A., Raper, S.J., Brady, L.D. (1996). *Evaluation of a standard method for surveying common frogs (Rana temporaria) and newts (Triturus cristatus, T. helveticus, and T. vulgaris)*. Joint Nature Conservation Committee Report No. 259.
- International Commission on Illumination (2003). CIE 150:2003, *Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations*.
- Langton, T., Beckett, C., Foster, J. (2001). *GCN Conservation handbook*. Froglife.
- McLean, I.F.G., JNCC (Drafted by) on behalf of the Inter-agency Translocations Working Group (2003). *A Habitats Translocation Policy for Britain*.
- Mitchell-Jones (2004). *Bat mitigation guidelines*. English Nature: Peterborough
- Natural England (2021). *GCN Risk Zones*. Available: <https://naturalengland-defra.opendata.arcgis.com/search?q=GCN%20risk%20zone>.
- Oldham, R.S., Keeble, J., Swan, M.J.S., Jeffcote, M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. *Herpetological Journal* 10 (4), 143-155.
- Pearce, G.E. (2011). *Badger behaviour, conservation and rehabilitation*. Pelagic Publishing: Exeter.
- Sewell, D., Griffiths, R.A., Beebee, T.J.C., Foster, J., Wilkinson, J.W. (2013). *Survey protocols for the British herpetofauna*. ARC, DICE University of Kent and University of Sussex.
- Stone, E.L. (2013). *Bats and lighting: Overview of current evidence and mitigation*. University of Bristol.
- Strachan R., Moorhouse T., Gelling, M. (2011). *Water Vole Conservation Handbook Third Edition*. University of Oxford: Abingdon

## 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 (Butcher *et al.*, 2020). 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, 2016).

There were no permanent structures on site to be assessed for their potential to support roosting bats. The site is comprised modified grassland, scattered trees and hedgerow.

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 and dense thick-stemmed ivy.

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

- **Negligible roost suitability for bats.** Trees unlikely to be used by roosting bats.
- **Low roost suitability for bats.** A tree of sufficient size and age to contain Potential Roosting Features (“PRFs”), but with none seen from the ground or features seen with only very limited roosting potential.
- **Moderate roost suitability for bats.** A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.
- **High roost suitability for bats.** A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection and surrounding habitat.

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.

### 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 <sup>2</sup>
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:

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

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.

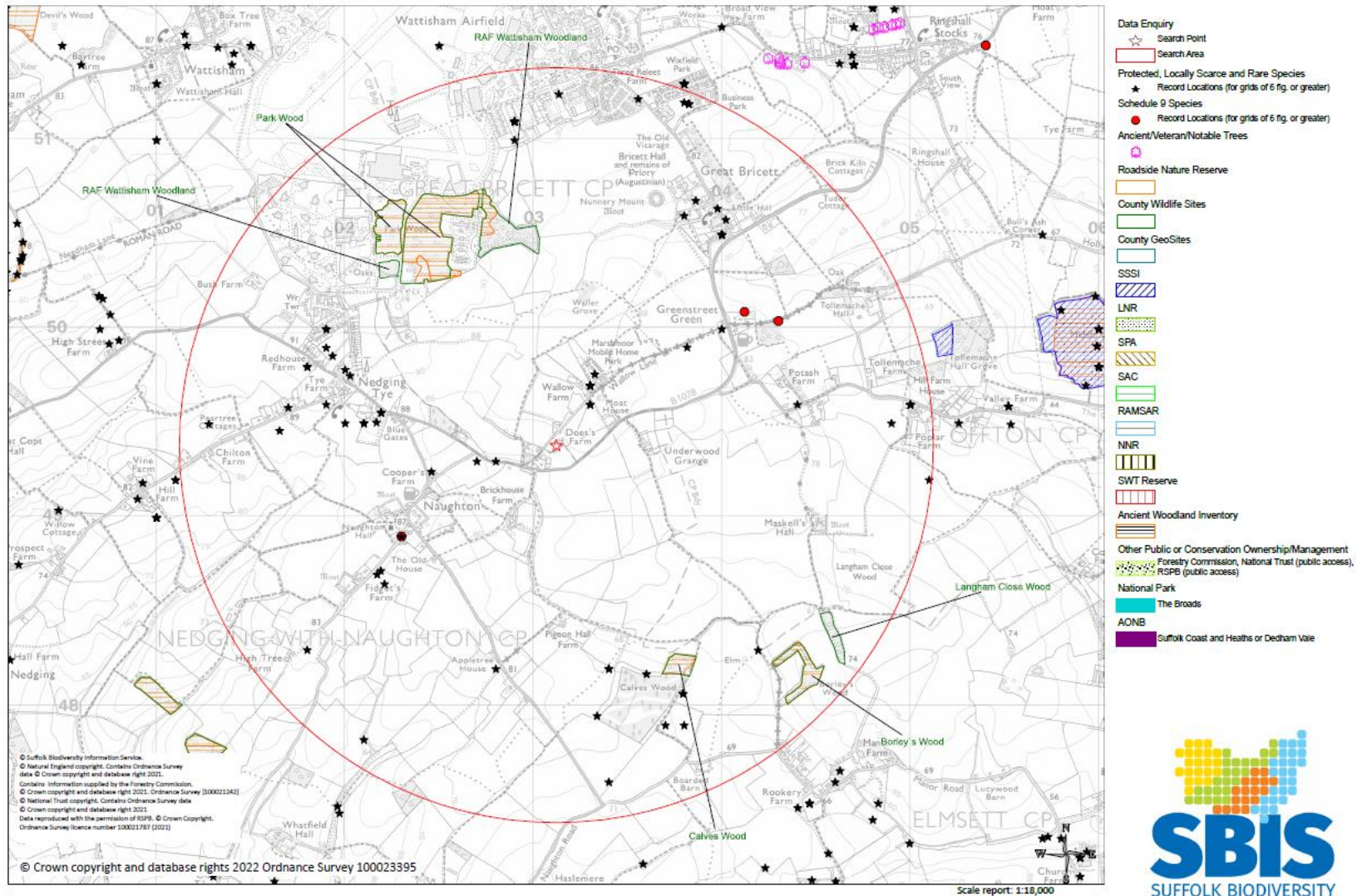
### **Other protected species**

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.

**Appendix B**  
**Map of protected sites within 2km**



**Greenlight (Does Farm, Wallow Lane, Naughton TM03121 49383) 2km Data Enquiry**

Date: 05/08/2022 | Drawn by: Andy Mercer





## Appendix C

### Protected sites citations

#### County Wildlife Sites citations

CWS Number	Name	Description	Area (ha)
Babergh 131	CALVES WOOD	Calves Wood, situated in the parish of Whatfield is listed in English Nature's Inventory of Ancient Woodland. A large proportion of the wood has been felled and the land converted to arable farming. The ditch and bank which forms the western boundary of the wood is considered to be a fragment of a medieval bank which at one time enclosed the whole wood. The tree canopy is composed of ash and field maple coppice with scattered oak standards, beneath which is a layer of hazel coppice and dense hawthorn scrub. A small area of diseased elm is present in the north west corner of the wood. The ground flora is variable. Parts of the wood are covered with dog's mercury and primrose, the remainder with bluebell, bramble and bracken. Yellow archangel, an uncommon ancient woodland indicator is also present in small numbers. Tangles of honeysuckle and clematis are abundant amongst the woody vegetation. Numerous pheasant pens can be seen and the wood is used extensively for the rearing of game birds.	1.44
Babergh 50	BORLEY'S WOOD	Borley's Wood is a small unusually shaped ancient woodland situated in the parish of Elmsett, in close proximity to Elmsett Park Wood which has been scheduled as a Site of Special Scientific Interest. A woodbank separates Borley's Wood from arable fields along the north western boundary. The remainder of the wood adjoins farmland. The majority of the wood consists of ash, field maple and hazel coppice with mature standards of oak. More uncommon woody species, for example spindle, holly and small-leaved lime are also present scattered throughout the wood. The shrub layer is colonised by dense hawthorn, elm and blackthorn scrub which provides good habitat for nesting birds. Patches of diseased elm have been cleared leaving open glades. These areas have been colonised by a range of common woodland plants, for example, ivy, bramble and dog's mercury. In addition, spurge laurel and wood millet, two scarce plants and indicators of ancient woodland, are also present. A pond situated on the edge of the southern part of the	2.42

		wood, although rather overgrown provides additional habitat diversity.	
Babergh 51	LANGHAM CLOSE WOOD	This small linear-shaped area of woodland is a remnant of a much larger ancient wood which has been grubbed for conversion to arable farming. Langham Close Wood has a fairly uniform structure throughout. It consists of oak and ash standards with a coppice layer of ash, field maple and hazel. Other woody species include elder, hawthorn, spindle and silver birch. In addition there is a dense clump of blackthorn scrub in the centre of the wood which provides valuable habitat for nesting birds. Bramble and dog's mercury dominate the field layer, with small quantities of a few ancient woodland indicator plants, for example hairy St John's-wort. Langham Close Wood is used for pheasant rearing and shooting.	1.34
Mid Suffolk 71	RAF WATTISHAM WOODLANDS	This County Wildlife Site consists of two areas of woodland, namely Park Wood situated to the south of the airfield and Ten Wood located immediately to the north of the main airfield buildings. Both woodlands are listed in English Nature's Inventory of Ancient Woodland and consist of a wet ash-field maple stand type. Ash is the dominant species, with frequent hazel and field maple coppice and occasional oak standards. Other tree species include crab apple, silver birch, goat willow and elm. The ground flora is dominated by bramble and dog's mercury with smaller quantities of bugle, violet and primrose. The central area of Park Wood and the northern half of Ten Wood is occupied by an ash and elm woodland community. Many of the elms are diseased and ash is now becoming the dominant species. The remainder of the woodlands, particularly the north-eastern corner of Park Wood and the central part of Ten Wood consists of oak and ash standards with hazel, silver birch and aspen also present. A number of scarce ancient woodland indicator plants, for example pendulous sedge can be found in small quantities. Following a survey carried out in 1988, English Nature provided management guidelines which if implemented, would increase the conservation value of these woods.	25.28

## 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 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 30<sup>th</sup> 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

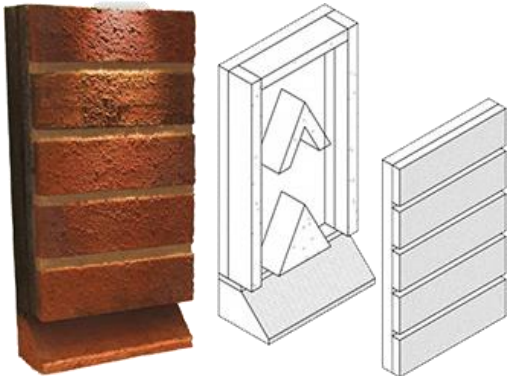
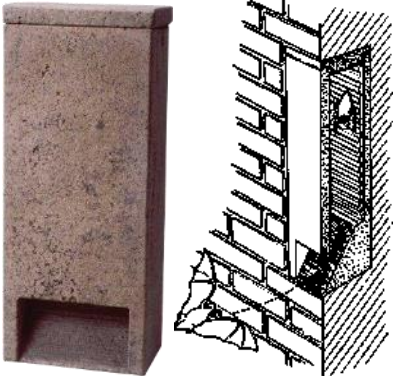


English name	Scientific name
Annual meadow grass	<i>Poa annua</i>
Ash	<i>Fraxinus excelsior</i>
Box	<i>Buxus sp.</i>
Broccoli	<i>Brassica oleracea</i>
Cherry	<i>Prunus avium</i>
Chickweed	<i>Stellaria media</i>
Cock's-foot	<i>Dactylis glomerata</i>
Corn	<i>Zea mays</i>
Creeping buttercup	<i>Ranunculus repens</i>
Dove's-foot cranesbill	<i>Geranium molle</i>
Elm	<i>Ulmus minor</i>
English oak	<i>Quercus robur</i>
False oat-grass	<i>Arrhenatherum elatius</i>
Field bindweed	<i>Convolvulus arvensis</i>
Field maple	<i>Acer campestre</i>
Hawthorn	<i>Crataegus monogyna</i>
Holly	<i>Ilex aquifolium</i>
Horse chestnut	<i>Aesculus hippocastanum</i>
Perennial ryegrass	<i>Lolium perenne</i>
Ragwort	<i>Jacobaea vulgaris</i>
Rose	<i>Rosa sp.</i>
Selfheal	<i>Prunella vulgaris</i>
Spinach	<i>Spinacia oleracea</i>
Sweet pea	<i>Lathyrus odoratus</i>
Sycamore	<i>Acer pseudoplatanus</i>
Tulip tree	<i>Liriodendron sp.</i>
Weeping beech	<i>Fagus sylvatica 'Pendula'</i>
White clover	<i>Trifolium repens</i>
Yarrow	<i>Achillea millefolium</i>



## Appendix F

### Examples of bat and bird boxes

(images sourced from [www.nhbs.com](http://www.nhbs.com), [www.habibat.co.uk](http://www.habibat.co.uk) and [www.manthorpe.co.uk](http://www.manthorpe.co.uk))

<p style="text-align: center;"><b>Integrated bat box</b> Habibat Bat Box</p> 	<p style="text-align: center;"><b>Integrated bat box</b> 1FR Schwegler Bat Tube</p> 
<p style="text-align: center;"><b>Standalone bat box</b> 2F Schwegler Bat Box (General purpose)</p> 	<p style="text-align: center;"><b>Standalone bat box</b> 1FF Schwegler Bat Box with built-in wooden rear panel</p> 

**Recommendations for installing bat boxes:**

(Sourced from Bat Conservation Trust [www.bct.org](http://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><b>Small bird nesting box</b> 1B Schwegler Nest Box</p> 	<p><b>Small bird nesting box</b> 2H Schwegler Robin Box</p> 
<p><b>Integrated swift box</b> Schwegler Brick Nest Box Type 25</p>  <p>Type 25</p>	<p><b>Integrated swift box</b> Manthorpe Swift Brick</p> 
<p><b>Integrated sparrow terrace</b> 1SP Schwegler Sparrow Terrace</p> 	<p><b>Integrated sparrow terrace</b> Terraced Sparrow Box</p> 

**Recommendations for installing bird boxes:**

(Sourced from British Trust for Ornithology [www.bto.org](http://www.bto.org) and Manthorpe [www.manthorpe.co.uk](http://www.manthorpe.co.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  $\geq 5$ 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.

## Appendix G

### Examples of hedgehog friendly fencing

(images sourced from [www.quercusfencing.com](http://www.quercusfencing.com) and [www.jackson-fencing.co.uk](http://www.jackson-fencing.co.uk))

<p style="text-align: center;"><b>Quercus Fencing</b></p> <p style="text-align: center;">Hedgehog friendly oak woven fencing panels</p> 	<p style="text-align: center;"><b>Jacksons-Fencing</b></p> <p style="text-align: center;">Hedgehog friendly gravel board for use with slotted posts</p> 
---	--

**Recommendations for installing hedgehog friendly fencing:**

(Sourced from Hedgehog Street [www.hedgehogstreet.org](http://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

### 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

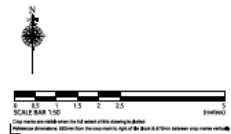
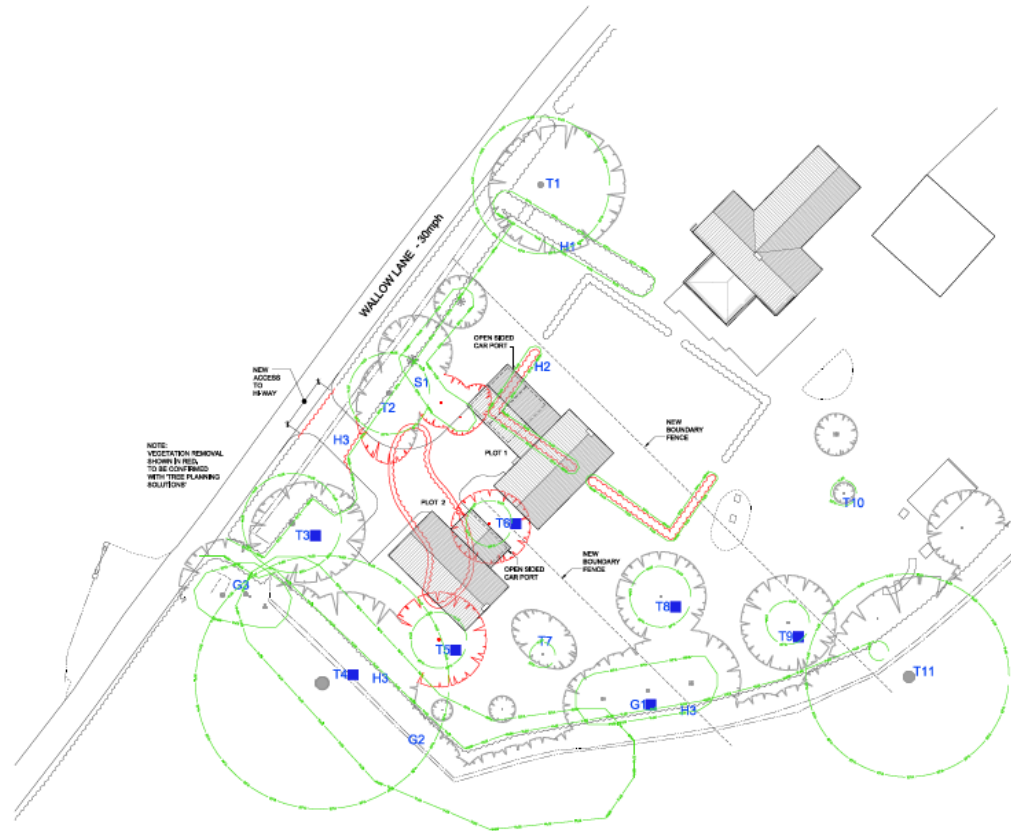
Trees	
Alder (d)	<i>Alnus glutinosa</i>
Apples (f; d)	<i>Malus spp.</i> (local varieties)
Ash (d)	<i>Fraxinus excelsior</i>
Beech (d)	<i>Fagus sylvatica</i>
Bird cherry (f; d)	<i>Prunus padus</i>
Elder (f; d)	<i>Sambucus nigra</i>
Elm (d)	<i>Ulmus procera</i>
Field maple (d)	<i>Acer campestre</i>
Pedunculate 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 I Proposed plans**



**IF IN DOUBT ABOUT ANY INFORMATION CONTAINED IN THIS DRAWING AND, DO NOT SOLICIT ANY ADVICE OR OPINION FROM THE ARCHITECT.**

**CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015**

**CONSTRUCTION PHASE INFORMATION FOR CONSTRUCTION**

1. If you do not fully understand the information contained in this drawing, you should contact the architect before the construction of the work commences.
2. Suitable precautions should be taken to ensure that the work is carried out in accordance with the design and specifications.
3. Any material handling shall be done in a safe and secure manner in accordance with the relevant regulations.
4. The contractor shall ensure that the work is carried out in accordance with the relevant regulations and that the work is carried out in a safe and secure manner.
5. The contractor shall ensure that the work is carried out in accordance with the relevant regulations and that the work is carried out in a safe and secure manner.
6. When working with live products which are capable of being used in a safe and secure manner, the contractor shall ensure that the work is carried out in accordance with the relevant regulations.

**THIS INFORMATION MUST BE CHECKED CAREFULLY AND ANY ERRORS IDENTIFIED BY OTHER PARTIES REPORTED TO THE ARCHITECT IMMEDIATELY.**

MR	MR	MR	MR
MR	MR	MR	MR
MR	MR	MR	MR
MR	MR	MR	MR



Drawn for:

**PRELIMINARY**

Client Name:  
MR R ROMER LEE & MISS L PLUMB  
DOES FARM, NAUGHTON

Drawing Title:  
**PROPOSED  
SITE PLAN**

Project Number	Drawing Number	Revision
19052	03	P3
Scale:	Client Ref:	Checked By:
1:200	@A1 NP	SS
		NOV 2019