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# **Preliminary Ecological Appraisal**

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**Cousens Farm, Mickfield**

**for**

**Michael Dunn**

**13 May 2023**



**Client**

Michael Dunn

**Planning authority**

Mid Suffolk 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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***Signed disclosure***

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

*Nathan Duszynski, ACIEEM*

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## SUMMARY

- Greenlight Environmental Consultancy Ltd. has been commissioned to carry out a Preliminary Ecological Appraisal for a proposed development at Cousens Farm, Mickfield, Suffolk, IP14 5LQ (grid reference: TM 14002 62649).
- 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 single-story extension of the house, construction of a cart lodge and replacement of the roof of the outbuilding.
- 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 one non-statutory protected site within 2km.	No significant impacts on protected sites and their qualifying features.	None required.
Protected habitats and habitats subject to conservation designations	Small areas of modified grassland managed as lawn to be removed. 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	<b>Negligible</b> bat roosting potential in buildings one and two (house and outbuilding). Building three was not surveyed as no works are proposed as part of this planning application. <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 one standalone bat box installed on a suitable mature tree or building.
Breeding birds	Nesting habitats for hedgerow, tree and building nesting birds	Low scale loss of nesting habitat on site.	<u>Mitigation</u> Works to any hedgerows, trees and buildings on site to be conducted

Protected habitats/species	Status	Potential effect	Recommended mitigation and enhancements
	present on site, including potential breeding habitat for Amber listed species. No suitable barn owl foraging habitat on site.	Potential disturbance to breeding birds.	outside bird nesting season or under watching brief of ecologist if during nesting season. <u>Enhancement</u> Installation of one small bird box installed on a suitable mature tree.
Great crested newts	Predominantly unsuitable terrestrial habitats on site. One pond within 250m of the site assessed as <b>poor</b> suitability. Five GCN records within 2km.	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.
Reptiles	Habitats on site predominantly unsuitable. One reptile record within 2km.	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.
Other animals	N/A	Potential harm to animals.	<u>Mitigation</u> If fencing is required, this will be porous and provide openings for hedgehogs. Rough sawn planks will be placed inside any open excavations. Construction materials will be stored off the ground on pallets and waste materials in skips.

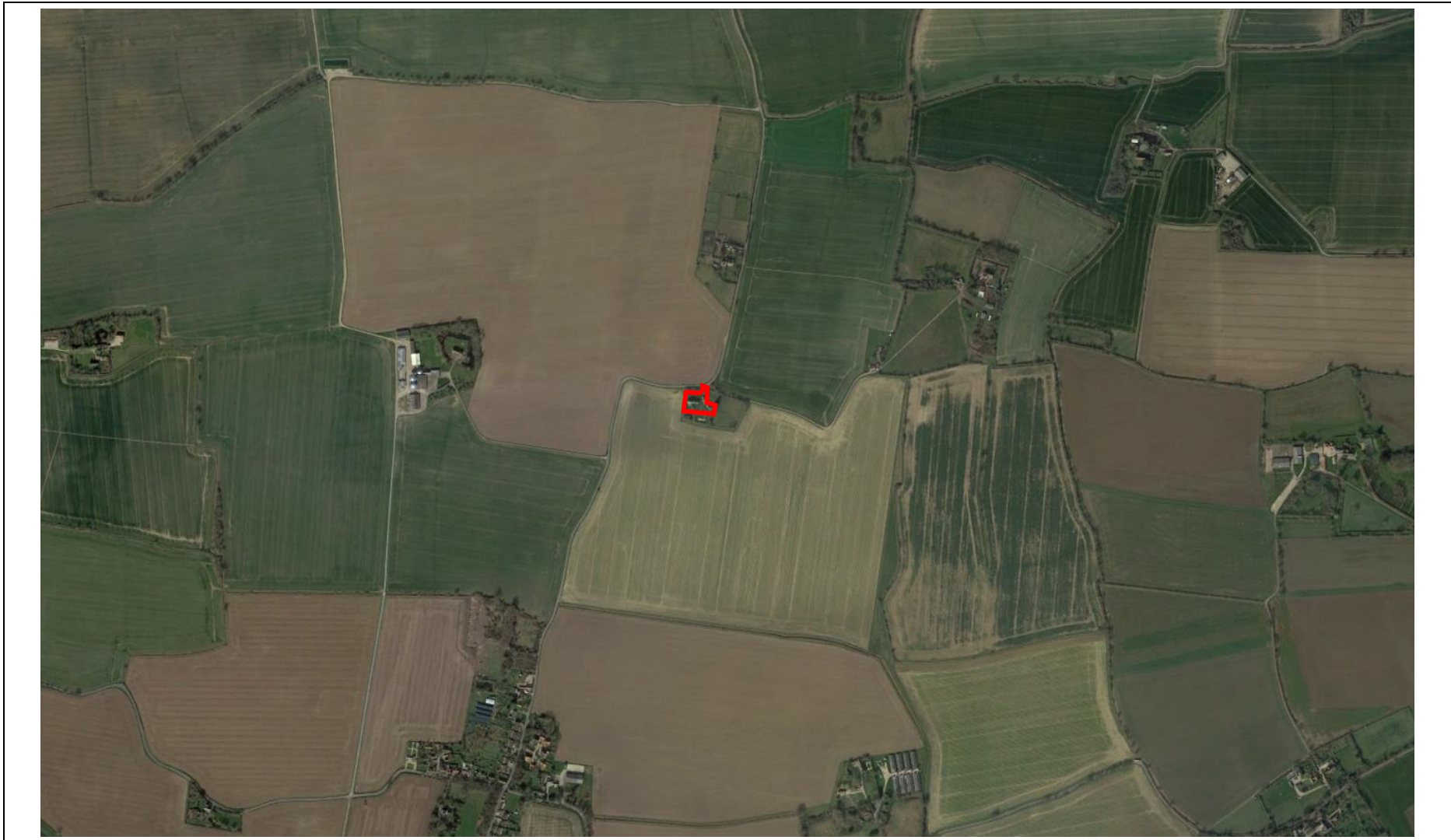
## 1. METHOD

- 1.1. A walkover of the site was conducted on 27<sup>th</sup> April 2023 by Lucy Reed and Daniel Howes – independent, qualified and experienced ecologists. Survey conditions were as follows: 11°C, 12mph wind, partly 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 0.7km north of the village of Mickfield, with the A140 located approximately 2km west. The closest town is Stowmarket, located approximately 8.4km southwest of the site.
- 2.3. The site is enclosed by Wetheringsett Road and modified grassland to the north, modified grassland to the east and south and an arable field to the west. The wider surroundings are comprised of a mixture of residential dwellings, agricultural premises 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 05/05/23

### 3. DESCRIPTION OF THE DEVELOPMENT

- 3.1. The proposals are for the single-story extension of the house, construction of a cart lodge and replacement of the roof of the outbuilding. 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 Site of Special Scientific Interest (“SSSI”). Please refer to Appendix C for the full citation.
  - i. Mickfield Meadow SSSI, approximately 0.6km northeast.

*“This site consists of a small meadow managed on traditional lines which supports a species-rich unimproved neutral grassland flora of a type formerly widespread in Suffolk before the advent of modern farming methods. There is a good variety of grasses and herbs, including Fritillaries Fritillaria meleagris.”*
- 4.2. The proposed development falls outside of all SSSI Impact Risk Zones relating to all planning applications.

#### Non-statutory

- 4.3. There is one non-statutory protected site located within 2km – one County Wildlife Site (“CWS”). Please refer to Appendix C for the full citations.
  - i. Tassel Stonewort Site CWS, approximately 1.3km west.

*“Only known Suffolk location for Tassel Stonewort, Tolypella intricata. The site is a ditch running along each side of a little used track known as Old Brook Lane.”*



## 5. HABITATS

### Desktop review

- 5.1. Priority Habitats to occur within 2km (identified using MAGIC – managed by Natural England), include Lowland Meadows, Deciduous Woodland, Traditional Orchards and Woodpasture and Parkland BAP Priority Habitat. The closest of which, is Traditional Orchards located approximately 450m west of the site.

### Field study

- 5.2. The habitats on the site are of **low** ecological value, being mainly modified grassland managed as lawn 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: 11 scattered trees, 66 frequently mown, 1160 introduced shrubs)*

- 5.5. The majority of the site is dominated by modified grassland managed as lawn. Species include: cleavers *Galium aparine*, clover sp. *Trifolium sp.*, cock's-foot *Dactylis glomerata*, cow parsley *Anthriscus sylvestris*, daisy *Bellis perennis*, dandelion *Taraxacum officinale*, dove's-foot cranesbill *Geranium molle*, fescue sp. *Festuca sp.*, perennial ryegrass *Lolium perenne*, red dead-nettle *Lamium purpureum*, silverweed *Argentina anserina*, spear thistle *Cirsium vulgare* and yarrow *Achillea millefolium*.
- 5.6. Scattered trees and introduced shrubs are present to the northwest of the site. Tree species include: blackthorn *Prunus spinosa* and Scot's pine *Pinus sylvestris*.

*Other native hedgerow (UK Habitat Classification h2a6; secondary code: 117 dry, 191 ditch) – Priority Habitat*

- 5.7. The site features a hedgerow to the east of the house comprised of cherry laurel *Prunus laurocerasus*, hawthorn *Crataegus monogyna* and ivy *Hedera helix* along the western boundary with an associated dry ditch.
- 5.8. These hedgerows do not qualify as “important” under The Hedgerow Regulations 1997, lacking the required number of native woody species or associated features.

*Buildings (UK Habitat Classification u1b5)*

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

*Other developed land (UK Habitat Classification u1b6)*

- 5.10. The site features a compacted gravel hardstanding driveway to the north of site.



**Figure 2**  
 Habitats on site.  
 Image © QGIS, date accessed 09/05/23



**Photo 1**, existing compact gravel hardstanding driveway, looking north.



**Photo 2**, modified grassland managed as lawn with introduced shrubs and scattered trees to the northwest of the site, looking west.



**Photo 3**, looking west across the site's southern boundary.



**Photo 4**, other native hedgerow along the western boundary, looking south.

## 6. PROTECTED AND NOTABLE SPECIES

### Desktop review

#### Data search

- 6.1. The biodiversity data search within 2km of the site indicated 386 records from 105 species.
- 6.2. Records of note within 2km and relevant to the proposed development works are:
  - 10 barn owl *Tyto alba* records, with the most recent from 2021.
  - Eight skylark *Alauda arvensis* records, with the most recent from 2013.
  - Nine swift *Apus apus* records, with the most recent from 2020.
  - Five GCN *Triturus cristatus* records, with the most recent from 2019. The closest record is located approximately 1km northeast.
  - One reptile record from 2014, located approximately 1.2km west. Species include: grass snake *Natrix Helvetica*.
  - 25 hedgehog *Erinaceus europaeus* records, with the most recent from 2021.
  - Eight bat records, with the most recent from 2009, including common pipistrelles *Pipistrellus pipistrellus*, soprano pipistrelles *Pipistrellus pygmaeus*, brown long-eared *Plecotus auratus* and Natterer's *Myotis nattereri*.

#### 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

- 6.4. There are three buildings located on site, as indicated in Figure 3 and Photos 5-8. Building three was not surveyed as no works are proposed as part of this planning application.



**Figure 3**

Location and numbering of buildings located on site.

Image © QGIS, date accessed 09/05/23

### *Building one - house*

- 6.5. The main section of the house is of brick construction with a dual-pitched thatched roof. There is an extension to the east which features a dual-pitched clay pantile roof and an extension to the southwest which features a single-pitched clay pantile roof. The tiles are tight fitting and the thatch is in good condition. The house features timber framed windows and doors and timber fascias which are close fitting to the brickwork and in good condition without any suitable gaps or crevices.
- 6.6. Internally, the bedrooms are built into the roof spaces of the main house and extension.
- 6.7. There were no signs of use by bats on the building exterior or interior and the structure provides an unsuitable roost environment, with no suitable cavities for roosting bats. The building is assessed as **negligible** (summer and hibernation) roost suitability for bats.



**Photo 5**, south aspect of building one, looking north.



**Photo 6**, north and east aspect of building one, looking southwest.



*Building two – outbuilding*

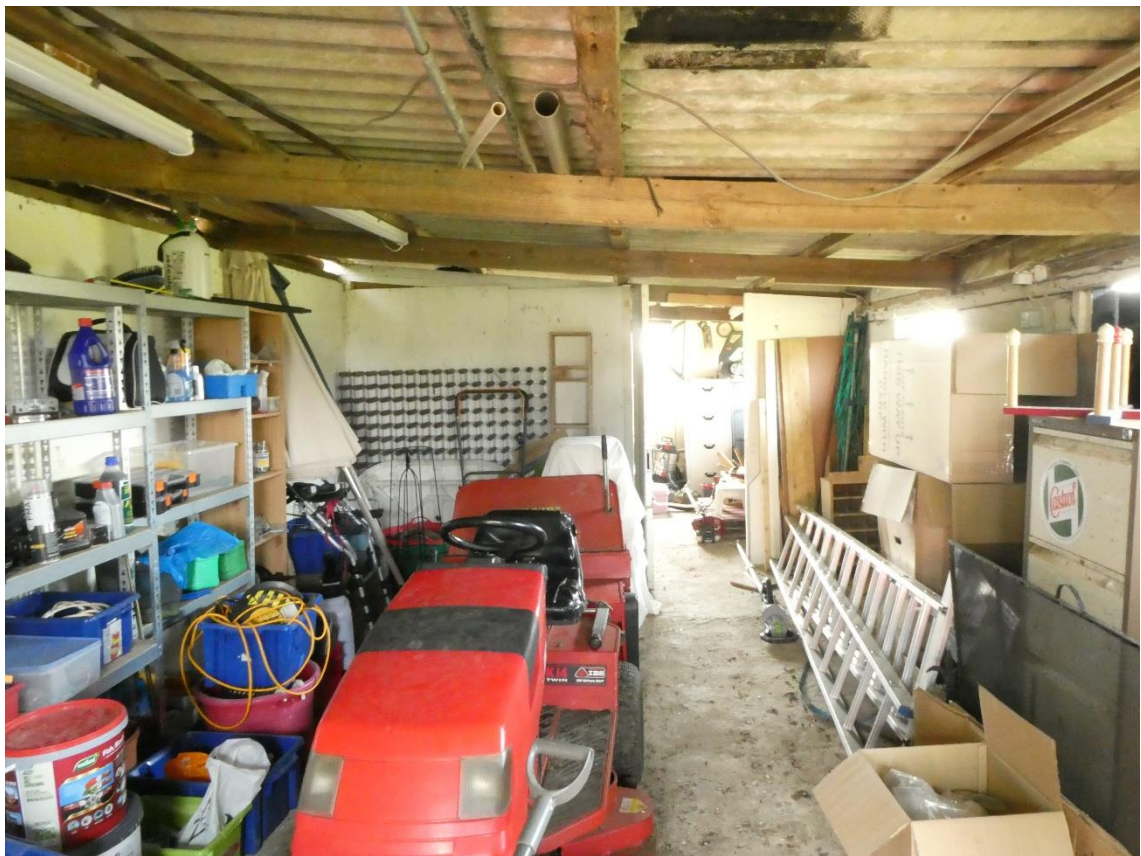
- 6.8. The outbuilding is of breezeblock and timber weatherboard construction with a corrugated asbestos roof. The weatherboarding is tight with no gaps present. The outbuilding features timber framed windows and doors.
- 6.9. Internally, the roof is unlined, with the building featuring several windows and doors, which provides a significant amount of natural light into the building.
- 6.10. There were no signs of use by bats on the building exterior or interior and the structure provides an unsuitable roost environment, with no suitable cavities for roosting bats. The outbuilding is assessed as **negligible** (summer and hibernation) roost suitability for bats.



**Photo 7**, north aspect of building two, looking southeast.



**Photo 8**, east and south aspects of building two, looking northwest.



**Photo 9**, internal view of building two, looking east.

### Trees

6.11. 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

6.12. The site itself provides **low** value foraging habitat for bats along the boundary hedgerows.

6.13. The landscape immediately adjacent to the site is considered of **low** to **moderate** value for foraging and commuting bats, with hedgerows and treelines providing links to the wider landscape. Residential dwellings within Mickfield (approximately 0.7km south) have the potential to provide roosting opportunities for bats.

### Birds

6.14. 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.

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

#### **Red listed:**

Skylark

*Alauda arvensis*

#### **Amber listed:**

Woodpigeon

*Columba palumbus*

Wren

*Troglodytes troglodytes*

#### **Green listed:**

Blackbird

*Turdus merula*

Blue tit

*Cyanistes caeruleus*

Goldfinch

*Carduelis carduelis*

Robin

*Erithacus rubecula*

6.16. The site provides suitable nesting habitats for hedgerow, tree and building nesting species.

6.17. The site provides potential breeding habitat for the following Amber listed species: woodpigeon.

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

**Great crested newts**

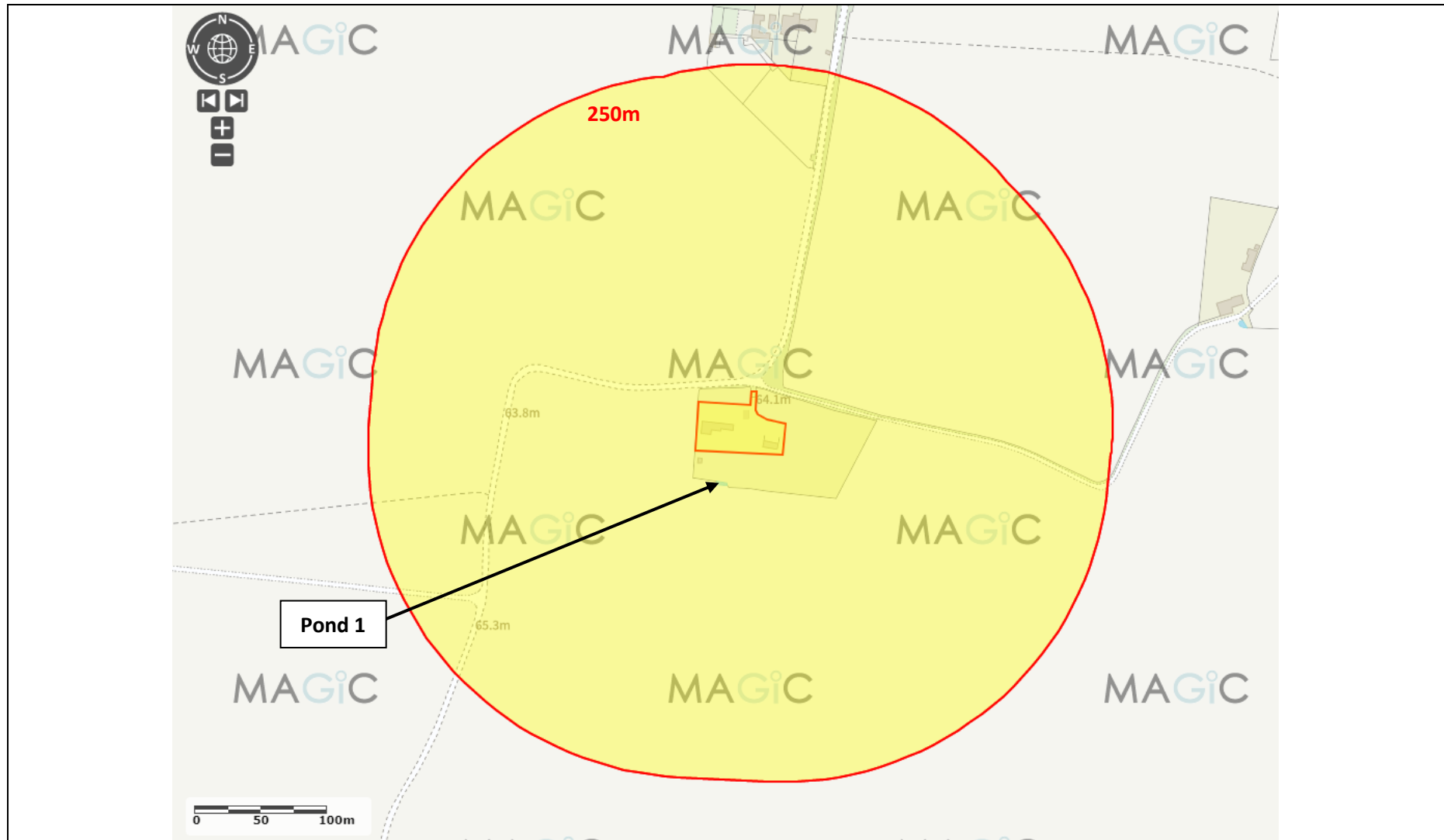
- 6.19. There are no ponds within the survey site and one further pond within 250m, which for the size of the development and nature of terrestrial habitat on the site, is a sufficient distance to consider for assessment (Figure 4). GCN are most likely to occupy good quality terrestrial habitat within 250m of a breeding pond (English Nature, 2001).
- 6.20. The terrestrial habitats on the site are considered predominantly unsuitable for GCN, consisting of modified grassland managed as lawn with suboptimal hedgerows on the boundaries.
- 6.21. Terrestrial habitats adjacent the site include a mixture of unsuitable (arable fields, roads and modified grassland managed as lawn) and suitable (hedgerows) GCN foraging, commuting and hibernating habitats.
- 6.22. Pond one was assessed as **poor** suitability for GCN (Table 1).
- 6.23. The site falls within the Green risk zone for GCN district level licensing, which is classified as *“containing sparsely distributed GCN and are less likely to contain important pathways of connecting habitat for this species”* (Natural England, 2021).

Pond	1
Geographic location	Zone A
	1.00
Pond surface area (m <sup>2</sup> )	<50m <sup>2</sup>
	0.05
Desiccation rate	Annually
	0.10
Water quality/ invert density	Poor
	0.33
Shoreline shade (%)	90%
	0.40
Waterfowl impacts	Absent
	1.00
Fish impacts	Absent
	1.00
Ponds within 1km	13+
	1.00
Terrestrial habitat quality	Poor
	0.33
Macrophyte cover (%)	10%
	0.40
HSI Score	<b>Poor</b>
	0.39

**Table 1**, HSI score for ponds within 250m of the proposed site.



**Photo 10**, pond one, looking south.



**Figure 4**  
Ponds within 250m of the proposed site.  
Image © MAGIC, date accessed 10/05/23

## **Reptiles**

- 6.24. The habitats on the site are considered predominantly unsuitable for reptiles, consisting of modified grassland managed as lawn with suboptimal hedgerows on the boundaries.
- 6.25. Habitats located on the site boundaries including the base of the hedgerows and the dry ditch could be used as commuting habitats by reptiles if they were present in the area.
- 6.26. Terrestrial habitats adjacent the site include a mixture of unsuitable (arable fields, roads and modified grassland managed as lawn) and suitable (hedgerows) reptile foraging, commuting and hibernating habitats.

## 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 one non-statutory protected site located within 2km of the site.
- The closest statutory protected site (Mickfield Meadow SSSI), is located approximately 0.6km northeast and designated for its species-rich unimproved neutral grassland flora.
  - The closest non-statutory protected site (Tassel Stonewort Site CWS), is located approximately 1.3km west of the site and designated as the only known Suffolk location for Tassel Stonewort.
- 7.2. The proposed development falls outside of any SSSI Impact Risk Zones relating to all planning applications.
- 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 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 the single-story extension, replacement of the roof of the outbuilding, 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°. Lighting must be directional away from the boundary 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 standalone bat box installed on a suitable tree or building on or adjacent the site (Greenwood's Ecohabitats three crevice bat box – 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 single-story extension, replacement of the roof of the outbuilding and clearance of vegetation.
- 7.12. As a precautionary measure, the following mitigation will be implemented to avoid impacts on birds from the proposed works:
- i. Any works affecting bird nesting habitat such as management of 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 1<sup>st</sup> March and 31<sup>st</sup> 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 small bird box installed on a suitable tree on or adjacent the site (Schwegler 1B or 2H Nest Box – Appendix E).

### **Great crested newts**

7.14. The proposed works are not expected to result in a loss of suitable terrestrial habitats, with the works limited to small areas (<120m<sup>2</sup>) of modified grassland managed as lawn.

7.15. GCN are most likely to use suitable terrestrial habitat within only 250m of a breeding pond (English Nature, 2001) and we consider it highly unlikely that GCN would be present on site due to a lack of suitable ponds within 250m.

7.16. 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.

7.17. 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**

7.18. The proposed works are not expected to result in a loss of reptile habitat, with the works limited to small areas of modified grassland managed as lawn (<120m<sup>2</sup>).

7.19. 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.

7.20. 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**

7.21. 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).

7.22. 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.

## 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/>
- Butcher, B., Carey, P., Edmonds, R., Norton, L., Treweek, J. (2023). *UK Habitat Classification V2.0 – Advance publication of selected Habitat Definitions* 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).

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

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

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

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

- **Negligible roost suitability for bats.** These buildings have no potential roosting features for bats, or very few or minor features in an isolated or unsuitable location such that the presence of a bat roost is considered highly unlikely. Such buildings usually fall into two main types: generally, well maintained without cracks and crevices, no gaps between bargeboard or soffit and wall, or without an attic space; or those which contain some or all of the above features, but are both draughty and thick in cobwebs

or contain strong odours such as solvents, diesel etc. It must be borne in mind that a building from this latter group can become suitable for bats following refurbishment. This often happens to houses once the attic space has been cleaned and under-felted prior to timber treatment. When no suitable habitats for bats are found, no further surveys or European Protected Species (“EPS”) mitigation licence are required.

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

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 2.

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 2**, 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.

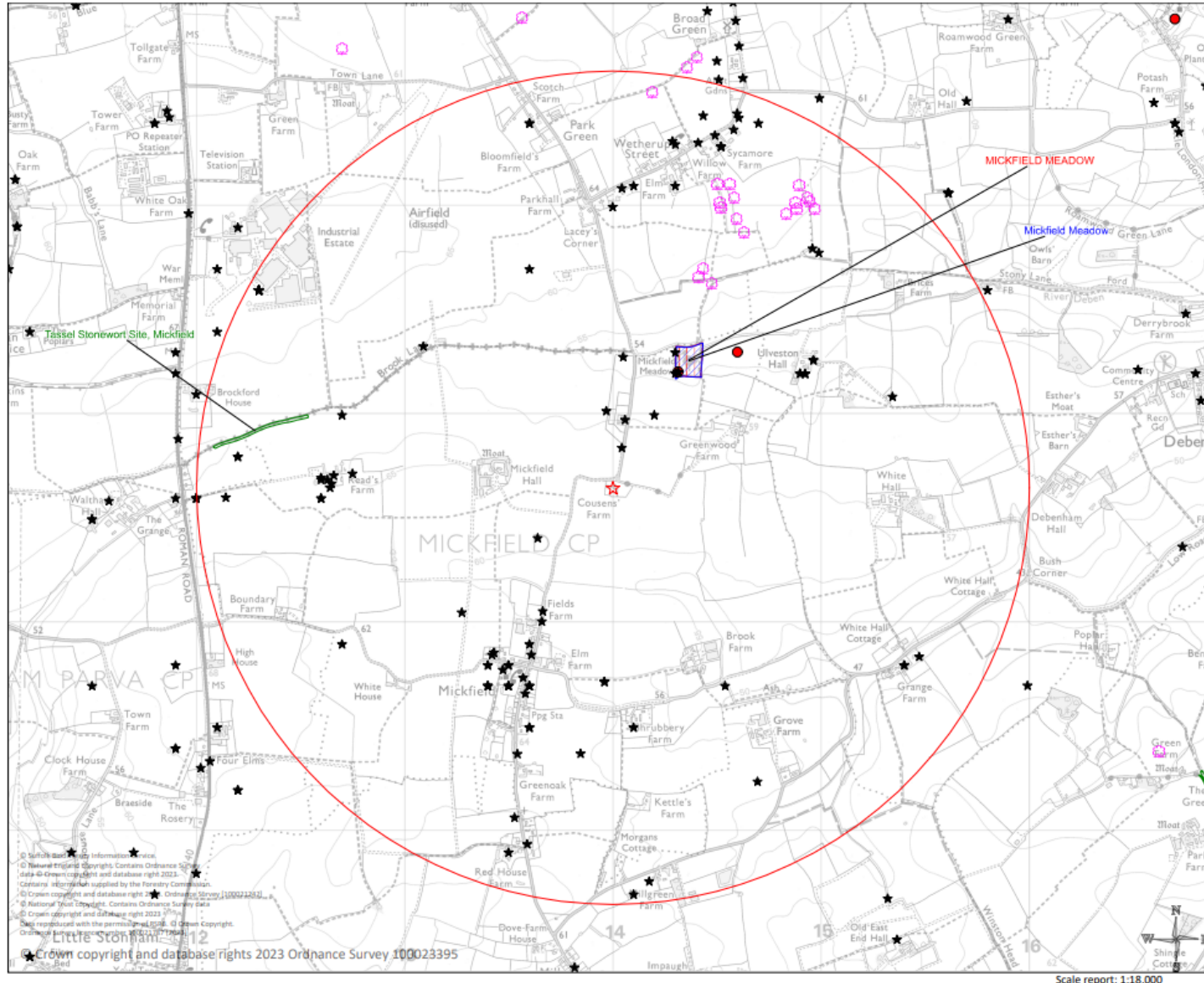
### **Other protected species**

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.

**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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**Greenlight (Cousens Farm, Mickfield TM14002 62649) 2km Data Enquiry**



Date: 24/03/2023 | Drawn by: Andy Mercer

## Appendix C

### Protected sites citations

#### SSSI citations

COUNTY: SUFFOLK      SITE NAME: MICKFIELD MEADOW

DISTRICT: MID SUFFOLK

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

Local Planning Authority: MID SUFFOLK DISTRICT COUNCIL

National Grid Reference: TM 143632      Area: 1.72 (ha.) 4.25 (ac.)

Ordnance Survey Sheet 1:50,000: 156      1:10,000: TM 16 SW

Date Notified (Under 1949 Act): 1961      Date of Last Revision: N/A

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

**Other Information:**

Nature Reserve owned by Royal Society for Nature Conservation and managed by Suffolk Trust for Nature Conservation.

**Description and Reasons for Notification:**

This site consists of a small meadow managed on traditional lines which supports a species-rich unimproved neutral grassland flora of a type formerly widespread in Suffolk before the advent of modern farming methods. There is a good variety of grasses and herbs, including Fritillaries *Fritillaria meleagris*.

The grass sward is species-rich with Meadow Foxtail *Alopecurus pratensis*, Cocksfoot *Dactylis glomerata*, False Oat-Grass *Arrhenatherum elatius*, Timothy *Phleum pratense* and Yorkshire Fog *Holcus lanatus* as the dominant grasses. Meadowsweet *Filipendula ulmaria* is frequent together with other herb species including Pepper Saxifrage *Silaum silaus*, Cowslip *Primula veris*, Cuckooflower *Cardamine pratensis*, Ragged Robin *Lychnis flos-cuculi* and Meadow Vetchling *Lathyrus pratensis*. The meadow is noted for its population of Fritillaries which are frequent in the northern part of the meadow (about 4,000 plants in 1979). They are increasing in number.

**County Wildlife Sites citations**

<b>CWS Number</b>	Mid Suffolk 161
<b>Site Name</b>	TASSEL STONEWORT SITE
<b>Parish</b>	MICKFIELD
<b>District</b>	Mid Suffolk
<b>NGR</b>	TM122628
<b>Description</b>	Only known Suffolk location for Tassel Stonewort, <i>Tolypella intricata</i> . The site is a ditch running along each side of a little used track known as Old Brook Lane. The ditch is cleared out every 10 years by the owner, which results in openings supporting the Tassel Stonewort. It is likely that there are dormant spores over a wide stretch of the ditch. Where vegetation opens out there is also some <i>Callitriche platycarpa</i> (a Starwort).
<b>Area</b>	0.60

## 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
Beech	<i>Fagus sylvatica</i>
Blackthorn	<i>Prunus spinosa</i>
Black medick	<i>Medicago lupulina</i>
Broad-leaved dock	<i>Rumex obtusifolius</i>
Cherry laurel	<i>Prunus laurocerasus</i>
Cleavers	<i>Galium aparine</i>
Clover	<i>Trifolium sp.</i>
Cock's-foot	<i>Dactylis glomerata</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Cow slip	<i>Primula veris</i>
Daffodil	<i>Narcissus sp.</i>
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum officinale</i>
Dove's-foot cranesbill	<i>Geranium molle</i>
Fescue	<i>Festuca sp.</i>
Hawthorn	<i>Crataegus monogyna</i>
Honeysuckle	<i>Lonicera sp.</i>
Ivy	<i>Hedera helix</i>
Nettle	<i>Urtica dioica</i>
Perennial ryegrass	<i>Lolium perenne</i>
Privet	<i>Ligustrum sp.</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Red dead-nettle	<i>Lamium purpureum</i>
Scot's pine	<i>Pinus sylvestris</i>
Silverweed	<i>Argentina anserina</i>
Spear thistle	<i>Cirsium vulgare</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>

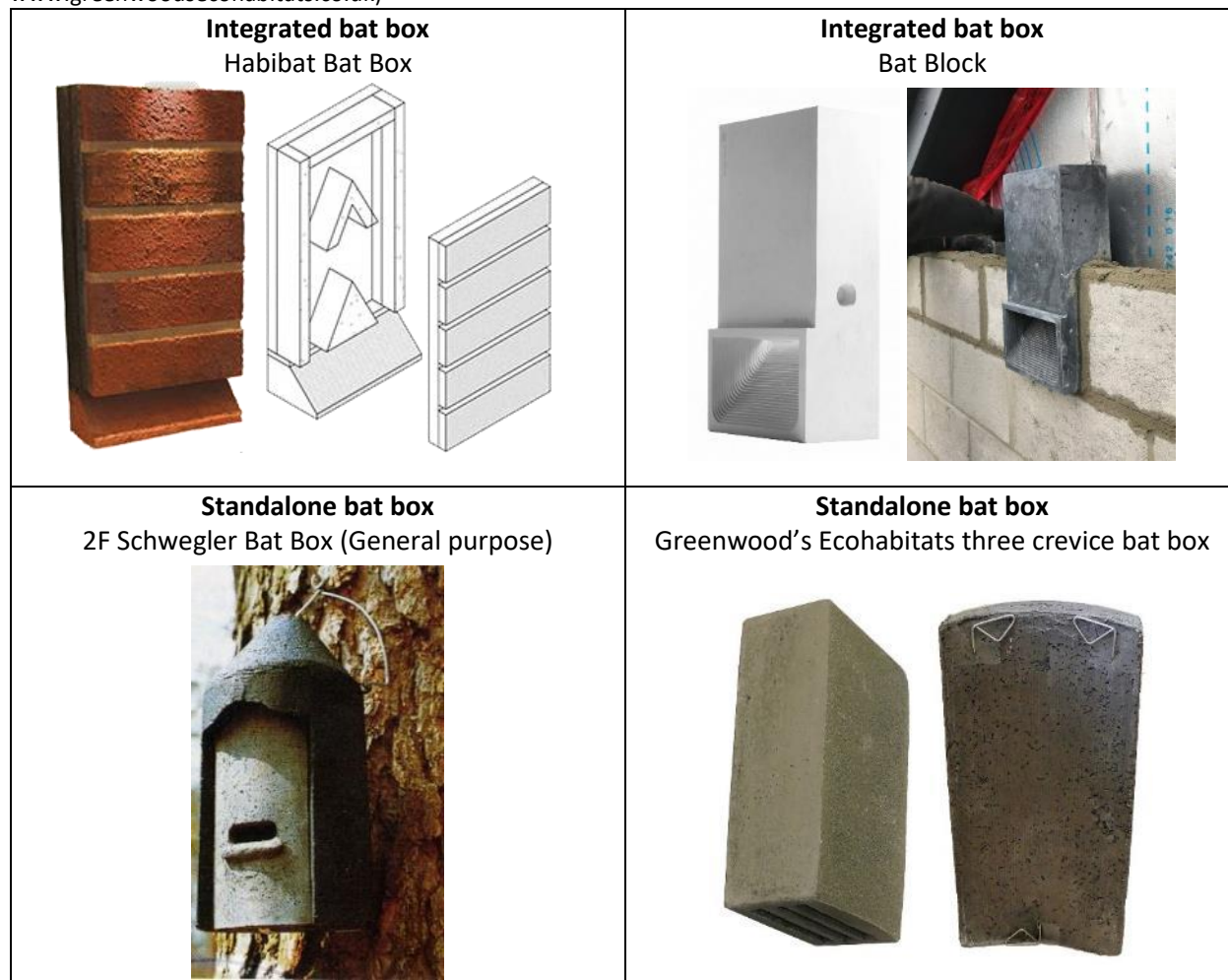
Flowering plants	
Bird's-foot trefoil	<i>Lotus corniculatus</i>
Black knapweed	<i>Centaurea nigra</i>
Common cat's-ear	<i>Hypochoeris radicata</i>
Common sorrel	<i>Rumex acetosa</i>
Common vetch	<i>Vicia sativa</i>
Cowslip	<i>Primula veris</i>
Field scabious	<i>Knautia arvensis</i>
Foxglove	<i>Digitalis 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](http://www.nhbs.com), [www.habibat.co.uk](http://www.habibat.co.uk), [www.manthorpe.co.uk](http://www.manthorpe.co.uk), [www.barnowltrust.org.uk](http://www.barnowltrust.org.uk) and [www.greenwoodsecohabitats.co.uk](http://www.greenwoodsecohabitats.co.uk))



#### 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> Swift Block</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), Manthorpe [www.manthorpe.co.uk](http://www.manthorpe.co.uk) and Barn Owl Trust [www.barnowltrust.org.uk](http://www.barnowltrust.org.uk))

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

Tips for putting up a nest box:

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

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

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



Tips for putting up barn owl boxes:

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

## Appendix H

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

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

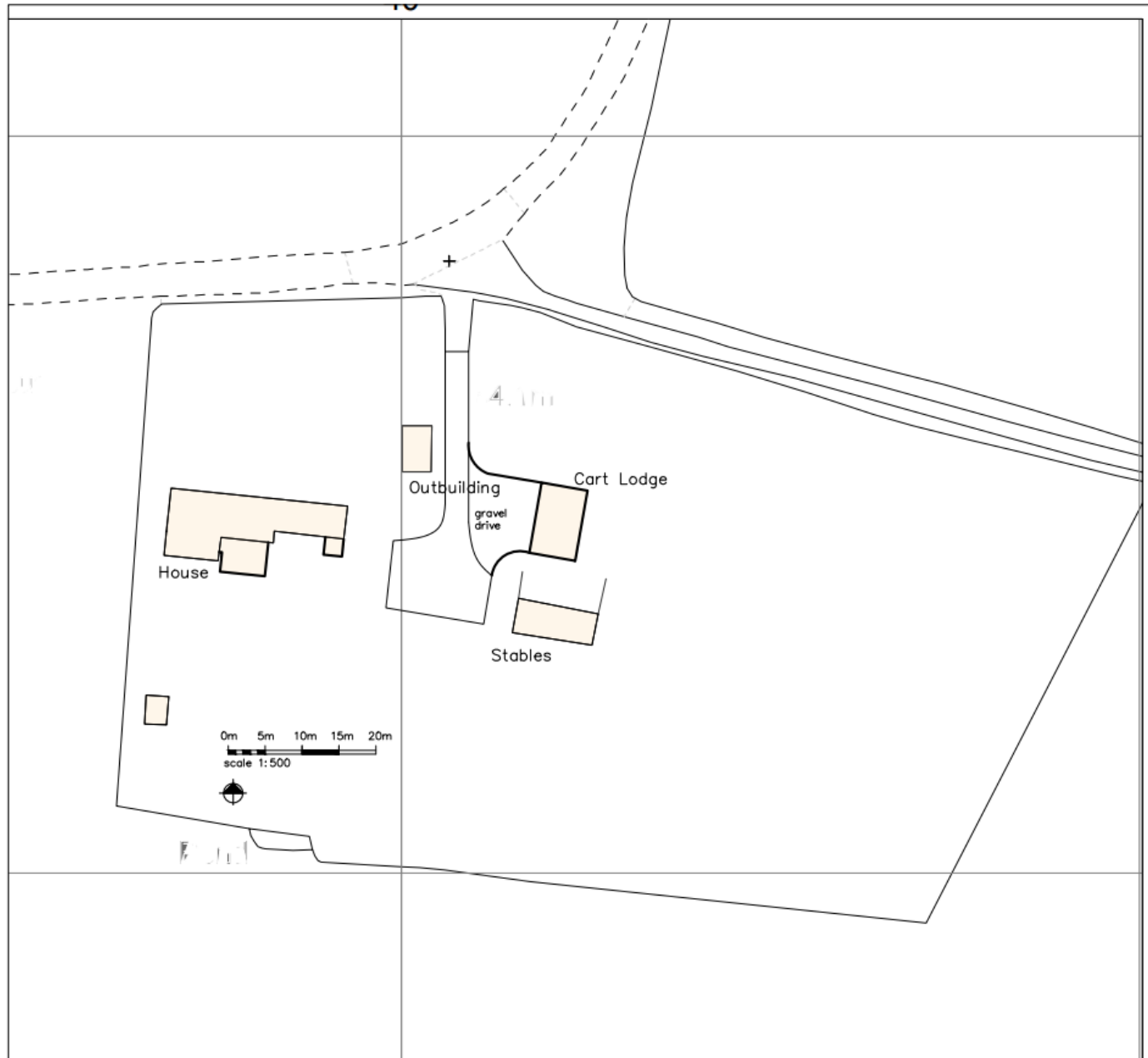
A hedgehog friendly fence should have a gap measuring at least 13cm by 13cm in the gravel board. These gaps allow any hedgehog to pass through but are too small for nearly all pets.

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 I Proposed plans**



revision	description	date

Client: Mr M Dunn & Ms G Turpie

Job Title: \_\_\_\_\_

**Cousens Farm**

Drawing Title: \_\_\_\_\_

**Proposed Block Plan**

Scale: \_\_\_\_\_ Drawn By: \_\_\_\_\_ Date: \_\_\_\_\_

**1:500 @ A3 MS Feb 2023**

Job Number: \_\_\_\_\_ Drawing Number: \_\_\_\_\_ Status: \_\_\_\_\_

**6842 15.0 Planning**

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NOTE:  
 Do not scale from this drawing. Confirm all dimensions on site. Refer any discrepancies to the Architect before work is put in hand. Read this drawing in conjunction with the relevant sections of the specification, schedule of works and other drawings.

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