
Preliminary Ecological Appraisal

Prospect Cottage, Worlingworth Road, Wilby

for

Samantha Gautama

10 January 2024



Client

Samantha Gautama

Planning authority

Babergh 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 Prospect Cottage, Worlingworth Road, Wilby, Suffolk, IP21 5LG (grid reference: TM 23262 71459).

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 extension of the existing dwelling and demolition of the garage and garden shed.

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, an endoscope survey/watching brief is required on building one (dwelling) prior to works commencing.

A pre-construction survey for badgers is required post-planning and prior to works commencing to inform an appropriate mitigation strategy if necessary.

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 one 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	Other developed land and modified grassland will be removed as part of the proposed works. No Priority Habitats will be affected.	Low scale of habitat loss predicted for wildlife.	<u>Mitigation</u> Soft landscaping scheme to include: The planting of new native species-rich hedgerows and trees on and around site. Flowering lawn mixtures in open areas, rich in nectar and pollen. Construction work to be carried out in accordance with BSI (2012), BS 5837:2012, to protect trees and their root protection areas
Bats	Building one (dwelling) has moderate summer and negligible hibernation bat roosting potential. Please note, proposed works limited to soffit	Potential disturbance/ destruction of bat roosts if present in buildings and trees. Low scale loss and potential light	<u>Mitigation</u> On the first day works are proposed to commence, any potential roosting features around the area of works will be surveyed for bats using a torch and endoscope.

Protected habitats/species	Status	Potential effect	Recommended mitigation and enhancements
	<p>boxes and a small number of tiles on single-storey west aspect.</p> <p>Building two (garage) and three (garden shed) has negligible summer and hibernation bat roosting potential.</p> <p>Building four (storage shed) has none summer and hibernation bat roosting potential.</p> <p>PRF-I bat roosting potential in two trees located on site.</p> <p>Low value commuting and foraging habitat on site.</p>	<p>disturbance of commuting and foraging habitats on site.</p>	<p>A soft strip of the soffits and a small number of tiles will be undertaken with care and under the supervision of a licenced bat ecologist.</p> <p>The new extension will be lined with traditional type 1F bitumen felt or NBCRM that has passed the snagging propensity test.</p> <p>If proposed works change to affect additional roosting features, at least two activity surveys will be undertaken on building one (dwelling) between May-September, with one conducted between May-August.</p> <p>If proposed works change to affect trees with PRF-I bat roosting potential, a soft-fell approach will be adopted and one standalone bat box installed for every PRF-I tree felled prior to removal to compensate for loss of potential roosting features.</p> <p>Any lighting schemes will comply with Bat Conservation Trust (GN08/23) and CIE 150:2017 guidance.</p> <p><u>Enhancement</u></p> <p>Installation of one integrated bat box on the new extension.</p>
Breeding birds	<p>Nesting habitats for hedgerow, tree and building nesting birds present on site, including potential breeding habitat for Red and Amber listed species.</p> <p>No suitable barn owl foraging habitat on site.</p>	<p>Low scale loss of nesting habitat on site.</p> <p>Potential disturbance to breeding birds.</p>	<p><u>Mitigation</u></p> <p>Works to any hedgerow, trees and buildings on site to be conducted outside bird nesting season or under watching brief of ecologist if during nesting season.</p> <p><u>Enhancement</u></p> <p>Installation of one integrated swift box and one small bird box, installed on extended dwelling and appropriate tree respectively.</p>
Great crested newts	<p>Suboptimal terrestrial habitats on site.</p> <p>Six ponds within 250m of the site, two assessed as below average to good suitability, one had been filled in and three could not be accessed for detailed assessment.</p> <p>Ten GCN records within 2km.</p>	<p>Potential harm to GCN if present on site during works.</p> <p>Loss of GCN terrestrial habitat not considered significant to a local population of GCN and no impacts on aquatic habitats.</p> <p>Rapid Risk Assessment indicates</p>	<p><u>Precautionary mitigation</u></p> <p>Cut and maintain vegetation short (maximum height of 10cm) on and around the site until the start of works.</p> <p>Rough sawn planks will be placed inside any open excavations.</p> <p>Construction materials will be stored off the ground on pallets and waste materials in skips.</p>

Protected habitats/species	Status	Potential effect	Recommended mitigation and enhancements
		"offence highly unlikely".	
Reptiles	Habitats on site suboptimal. Two reptile records 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.
Other animals	N/A	Potential harm to animals.	<u>Mitigation</u> If fencing is required, this will be porous and provide openings for hedgehogs. <u>Enhancement</u> Installation of one bee brick on extended dwelling.

1. METHOD

- 1.1. A walkover of the site was conducted on 8th November 2023 by Miranda Proctor – an independent, qualified and experienced ecologist. Survey conditions were as follows: 10°C, 28mph wind, overcast with occasional light rain.
- 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*

Hazel dormouse *Muscardinus avellanarius*

Natterjack toad *Epidalea calamita*

2. SITE CONTEXT

Location

- 2.1. The general location of the site is shown in Figure 1 below.
- 2.2. The site is situated within the rural village of Wilby, with a small river located approximately 0.9km southwest and the B1118 located approximately 1.1km northeast. The closest town is Eye, located approximately 8.7km northwest of the site.
- 2.3. The site is enclosed by Worlingworth Road to the north, arable fields to the south and residential dwellings with associated developed land and garden space to the east and west. The wider surroundings are comprised of scattered settlements, pockets of woodland, grassland and arable fields lined with mature trees and hedgerows.

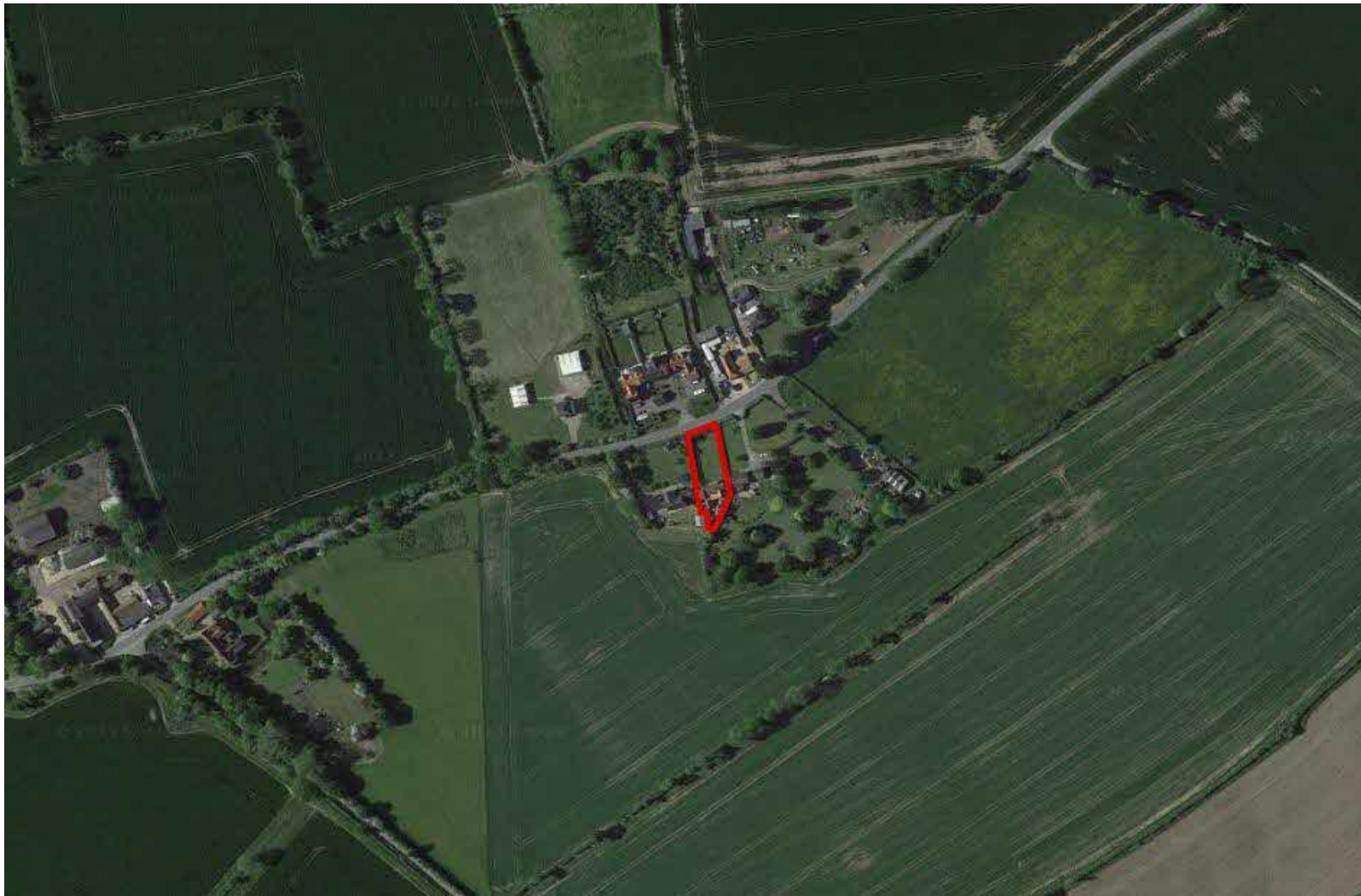


Figure 1
Satellite image of site surroundings, site indicated by red line.
Image © Google, date accessed 08/11/23

3. DESCRIPTION OF THE DEVELOPMENT

- 3.1. The proposals are for the extension of the existing dwelling and demolition of the garage and garden shed. Please refer to Appendix J 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 residential developments.

Non-statutory

- 4.3. There is one non-statutory protected sites located within 2km – one County Wildlife Sites (“CWS”). Please refer to Appendix C for the full citations.
 - i. RNR 199 CWS, approximately 1.9km west.
“Sulphur clover. This is also a Roadside Nature Reserve.”

5. HABITATS

Desktop review

- 5.1. Priority Habitats to occur within 2km (identified using MAGIC – managed by Natural England), include Good Quality Semi-Improved Grassland, Deciduous Woodland and Traditional Orchards. The closest of which, is Deciduous Woodland located approximately 290m south of the site.

Field study

- 5.2. The habitats on the site are of low ecological value, comprised of buildings, other developed land and modified grassland managed as lawn, with 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: 16 tall forbs, 32 scattered trees, 106 mown, and 1150 flowerbed)

- 5.5. Irregularly mown modified grassland was present to the north and south of the buildings on site, with white clover *Trifolium repens* abundant and <9 species per m². Species include: annual meadow grass *Poa annua*, bent *Agrostis* sp., cock's-foot *Dactylis glomerata*, common mouse-ear *Cerastium fontanum*, cranesbill *Geranium* sp., creeping buttercup *Ranunculus repens*, creeping cinquefoil *Potentilla reptans*, daisy *Bellis perennis*, dandelion *Taraxacum officinale*, fescue *Festuca* sp., ribwort plantain *Plantago lanceolata*, self-heal *prunella vulgaris*, thistle *Cirsium* sp., white clover, yarrow *Achillea millifolium* and Yorkshire fog *Holcus lanatus*.
- 5.6. Tall forb vegetation occurred toward the site boundaries including: cleavers *Galium aparine*, herb-robert *Geranium robertianum*, mallow *Malva* sp. nettle *Urtica dioica*, white campion *Silene latifolia* and white dead-nettle *Lamium album*.
- 5.7. Several scattered trees were present including: birch *Betula* sp. and cherry *Prunus* sp.
- 5.8. A flowerbed was present toward the northern boundary. Species include: acer *Acer* sp., buddleia *Buddleja* sp, ceanothus *Ceanothus* sp. and cherry laurel *Prunus laurocerasus*.

Other native hedgerow (UK Habitat Classification h2a6: secondary codes: 11 hedgerow with trees) – Priority Habitat

- 5.9. The site features a hedgerow with trees along the eastern site boundary, which is actively managed. Hedgerow species include: bramble *Rubus fruticosus*, hawthorn *Crataegus monogyna* and ivy *Hedera helix*. Tree species include: hawthorn.
- 5.10. This hedgerow does not qualify as “important” under The Hedgerow Regulations 1997, lacking the required number of native woody species or associated features.

Non-native and ornamental hedgerow (UK Habitat Classification h2b)

- 5.11. A Leyland cypress *Cupressus x leylandii* dominated hedgerow occurs along the western site boundary, west of the access driveway.

Buildings (UK Habitat Classification u1b5)

- 5.12. There are several buildings on site. Please refer to the bat section detailed below for further information.

Other developed land (UK Habitat Classification u1b6)

- 5.13. The site features areas of concrete, patio and compact stone hardstanding across the site, with encroaching vegetation.

Built linear features (UK Habitat Classification u1e: secondary codes: 112 earthbank and 612 fence)

- 5.14. A mixture of fencing encloses the site on all boundaries.
- 5.15. South of the site an earth bank is present.

Target note	Comments
A	Earth bank directly south of the southern site boundary.

Table 1, target notes.



Figure 2
Habitats on site.
Image © QGIS, date accessed 08/11/23



Photo 1, road frontage and existing northern access to the site, looking southeast.



Photo 2, actively managed hedgerow with trees along the eastern site boundary.



Photo 3, hedgerow along the western site boundary, west of the access driveway.



Photo 4, looking northeast across the modified grassland north of the buildings on site.



Photo 5, looking north across the modified grassland south of the buildings on site, enclosed by hedgerow and fencing.



Photo 6, earthbank directly adjacent the southern site boundary.

6. PROTECTED AND NOTABLE SPECIES

Desktop review

Data search

6.1. The biodiversity data search within 2km of the site indicated 612 records from 107 species.

6.2. Records of note within 2km and relevant to the proposed development works are:

11 swift *Apus apus* records, with the most recent from 2016.

10 GCN *Triturus cristatus* records, with the most recent from 2021. The closest record is located approximately 350m west of the site.

Two reptile records (two grass snake *Natrix Helvetica* records), with the most recent from 2009. The closest record is located approximately 1km southeast.

One badger *Meles meles* record from 2021.

33 hedgehog *Erinaceus europaeus* records, with the most recent from 2020.

61 bat records, with the most recent from 2021, including common pipistrelles *Pipistrellus pipistrellus*, soprano pipistrelles *Pipistrellus pygmaeus*, Nathusius' pipistrelle *Pipistrellus nathusii*, unidentified pipistrelle *Pipistrellus* sp., brown long-eared *Plecotus auritus*, serotines *Eptesicus serotinus*, Daubenton's *Myotis daubentonii*, *Myotis Myotis* sp., Natterer's *Myotis nattereri*, barbastelles *Barbastella barbastellus* and other unidentified bat species.

Protected species licences

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

Bats

6.4. There are four buildings located on site, as indicated in Figure 3 and photos 7-15.



Building one

- 6.5. The dwelling is constructed of rendered brick, with a pitched concrete pantile roof. The building features timber soffit boxes and fascias, with a mixture of timber and PVC framed windows and doors.
- 6.6. Internally, the building features two loft spaces which were closed and dark. The roof featured a mix of breathable and bitumen lining, a ridge beam, timber trusses and fibreglass insulation on the loft floor. Moderate cobwebs and mouse droppings were observed throughout. Please note, access to the loft space was limited due to health and safety precautions, with the joists obscured by insulation.
- 6.7. Whilst no bats or evidence of bats were observed, roosting opportunities were present within the loft space between brick walls and timber trusses, within gaps in the soffit boxes and beneath lifted lead flashing. As the building is suitable for crevice dwelling bats that typically

roost in these locations, evidence may be obscured by the roofing/wall linings and the lack of evidence cannot be used to confirm the absence of roosting bats.

- 6.8. The building is assessed as moderate summer, but negligible hibernation roost suitability for bats due to its location, roosting features and signs of bats. Please note, the building is intermittently occupied during winter months and features central heating, which would create fluctuations in temperature and humidity.



Photo 7, north and west aspects of building one, looking southeast.



Photo 8, south aspect of building one, looking north.



Photo 9, internal view of building one, looking west.



Photo 10, large gap within the soffit box at the southeast corner of building one.

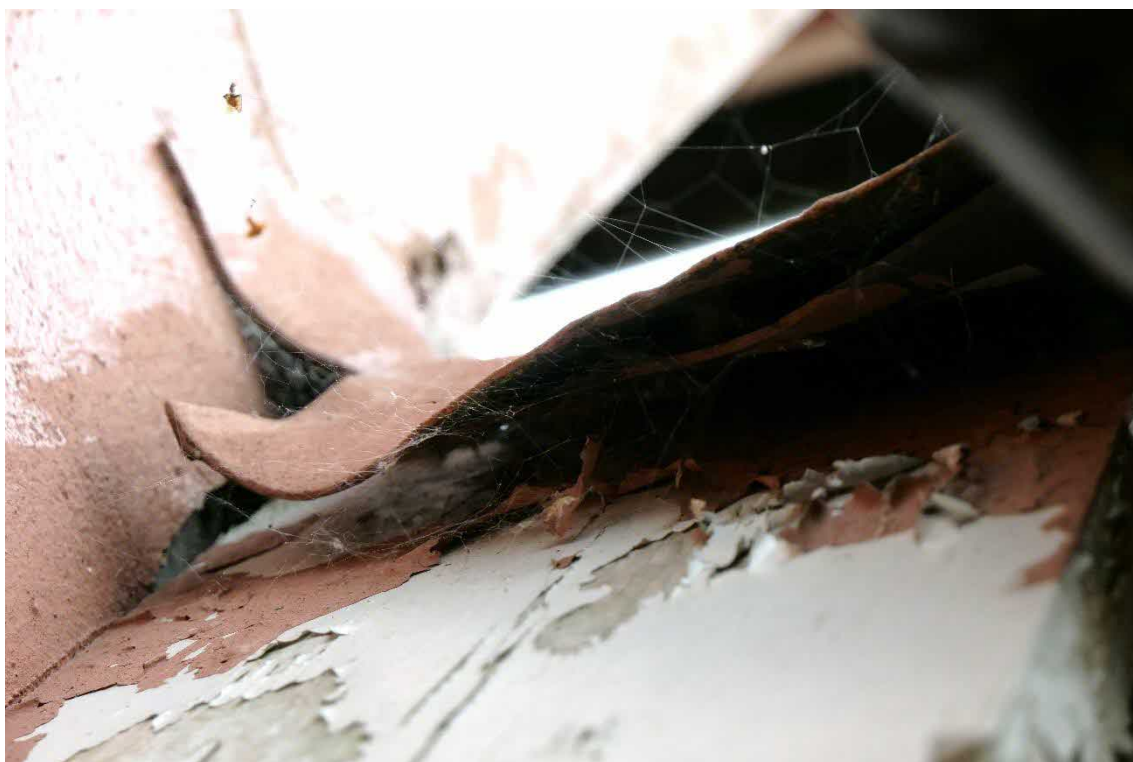


Photo 11, lifted lead flashing at the west aspect where the proposed extension will join the existing dwelling.

Buildings 2-3

6.9. The buildings vary in construction and are comprised of:

Building two – constructed of rendered brick walls with pitched concrete pantile roof. The garage features timber soffits and fascias, with timber framed windows and doors, and a large metal garage door on the north aspect. Internally the building features an open loft space, moderate natural light, a ridge beam, breathable roof membrane and timber ‘A’ frame trusses. Although there is a slight crevice at the southwest corner timber fascia, this is heavily cobwebbed.

Building three – a timber framed shed, with timber cladding and a single-pitched bitumen felt roof. Internally the roof space is open, low natural light, no ridge beam, lined with timber sarking and timber trusses. Although there are crevices beneath the lifted bitumen felt roof, these are limited and the material would cause significant fluctuations in environmental conditions making it an unsuitable roost for bats.

6.10. There were no signs of use by bats on the building exteriors or interiors and the structures provide unsuitable roost environments. The buildings are assessed as negligible (summer and hibernation) roost suitability for bats.



Photo 12, south and east aspects of building two, looking northwest.



Photo 13, north and east aspects of building three, looking southwest.

Buildings four

- 6.11. The storage shed is a timber-framed shed with tongue and groove cladding, with a pitched bitumen lined roof. Internally the roof space is open with moderate natural light, timber sarking lining, a ridge beam and modern timber trusses.
- 6.12. There were no signs of use by bats on the building exteriors or interiors and the structure provides an unsuitable roost environment, with no suitable cavities for roosting bats. The buildings are assessed as none (summer and hibernation) roost suitability for bats.



Photo 14, north and east aspects of building four, looking southwest.

Trees

- 6.13. Two trees were assessed as having the potential to support roosting bats, based on their location, age and suitable features, and assessed as Potential Roost Feature – Individual (“PRF-I”) (Table 2, Figure 3).
- 6.14. The remaining trees are assessed as none bat roosting potential, due to their age and/or lack of features.

Tree No.	Tree species	What3words	Bat roosting potential	Potential roosting features
1	Hawthorn	shrimp. inflamed. ruin	PRF-I	Ivy cover.
2	hawthorn	cookies. hubcaps. hurls	PRF-I	Ivy cover.

Table 2, trees with bat roosting potential.



Photo 15, tree one with moderate ivy cover, looking northeast.



Photo 16, tree two with moderate ivy cover, looking south.

Foraging and commuting links

- 6.15. The site itself provides low value commuting and foraging habitat for bats along the boundary hedgerows.
- 6.16. The landscape immediately adjacent to the site is considered of low to moderate value for foraging and commuting bats, with linked gardens, hedgerows, treelines and the river located approximately 0.9km southwest, providing links to the wider landscape. Residential dwellings adjacent the site and within Wilby have the potential to provide roosting opportunities for bats.

Birds

- 6.17. 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.
- 6.18. The following bird species were observed during the site visit:

Amber listed:

Dunnock	<i>Prunella modularis</i>
Woodpigeon	<i>Columba palumbus</i>

Green listed:

Blackbird	<i>Turdus merula</i>
Blue tit	<i>Cyanistes caeruleus</i>
Magpie	<i>Pica pica</i>
Rook	<i>Corvus frugilegus</i>

- 6.19. The site provides suitable nesting habitats for hedgerow, tree and building nesting species.
- 6.20. The site has the potential to support nests for the following Red listed species: greenfinch *Chloris chloris*, house martin *Delichon urbicum*, house sparrow *Passer domesticus*, mistle thrush *Turdus viscivorus*, swift and starling *Sturnus vulgaris*.
- 6.21. The site has the potential support nests for the following Amber listed species: dunnock *Prunella modularis*, song thrush *Turdus philomelos*, woodpigeon *Columba palumbus* and wren *Troglodytes troglodytes*.
- 6.22. Please note, the species listed in the paragraphs above are not exhaustive, as birds can nest in unexpected locations. Additionally nesting parameters may change between years and following building/habitat management.
- 6.23. No signs of barn owl were found on the site and no foraging habitat is present.

Great crested newts

- 6.24. There are no ponds within the survey site and six further ponds within 250m, which for the size of the development and nature of terrestrial habitat on the site, is a sufficient distance to consider for assessment (Figure 4). GCN are most likely to occupy good quality terrestrial habitat within 250m of a breeding pond (English Nature, 2001).
- 6.25. The terrestrial habitats on the site are considered both suitable (irregularly managed modified grassland and hedgerows) and unsuitable (other developed land) for GCN.
- 6.26. Terrestrial habitats adjacent the site include a mixture of unsuitable (arable fields and residential dwellings with associated gardens and hardstanding) and suitable (unmanaged grassland and hedgerows) GCN foraging and commuting habitats.
- 6.27. Ponds 1-2 were assessed as below average to good suitability for GCN (Table 3). Pond three had been filled in and ponds 4-6 were not assessed in detail, as authorised access to the ponds was not available.
- 6.28. 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
Geographic location	Zone A	Zone A
	1.00	1.00
Pond surface area (m ²)	350m ²	100m ²
	0.70	0.20
Desiccation rate	<2 years in 10	Annually
	1.00	0.10
Water quality/ invert density	Moderate	Moderate
	0.67	0.67
Shoreline shade (%)	20%	20%
	1.00	1.00
Waterfowl impacts	Absent	Absent
	1.00	1.00
Fish impacts	Possible	Absent
	0.67	1.00
Ponds within 1km	13+	13+
	1.00	1.00
Terrestrial habitat quality	Poor	Poor
	0.33	0.33
Macrophyte cover (%)	20%	0%
	0.50	0.30
HSI Score	Good	Below average
	0.74	0.52

Table 3, HSI score for ponds within 250m of the proposed site.



Photo 17, pond one, looking north.



Photo 18, pond two, looking southwest.

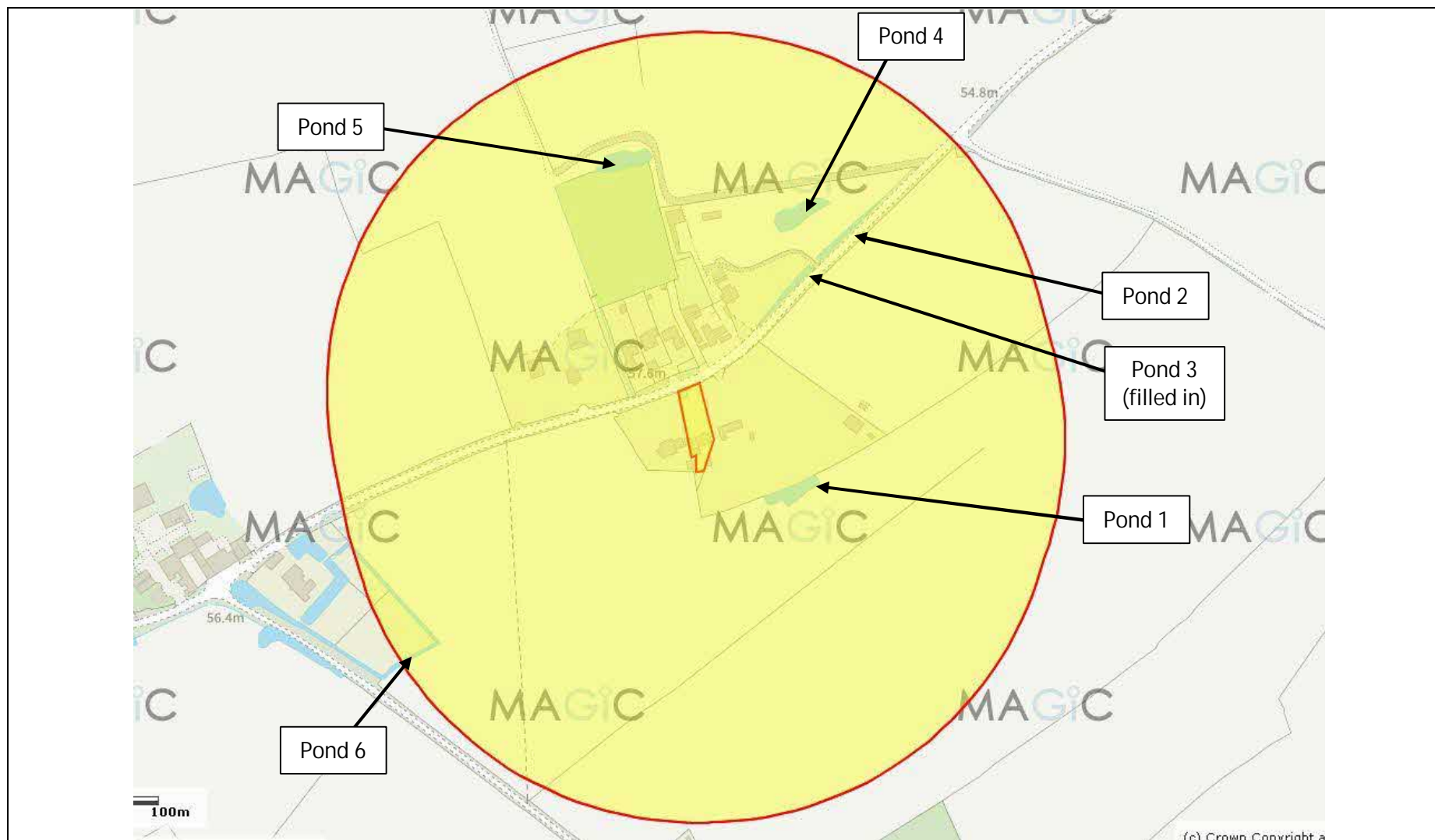


Figure 4
Ponds within 250m of the proposed site.
Image © MAGIC, date accessed 10/11/23

Reptiles

- 6.29. The habitats on the site are considered both suboptimal (irregularly managed modified grassland and hedgerows) and unsuitable (other developed land) for reptiles.
- 6.30. 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.
- 6.31. Terrestrial habitats adjacent the site include a mixture of unsuitable (arable fields and residential dwellings with associated gardens and hardstanding) and suitable (unmanaged grassland and hedgerows) reptile foraging and commuting habitats.

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 one non-statutory protected site located within 2km of the site.

The closest non-statutory protected site (RNR 199 CWS), is located approximately 1.9km west of the site and designated for its sulphur clover.

- 7.2. The proposed development falls outside of any SSSI Impact Risk Zones relating to 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 extension of building one (dwelling), demolition of buildings 2-3 (garage and garden shed), removal of other developed land and clearance of vegetated habitats on site, including <0.01ha of modified grassland. No priority habitats will be affected by the proposed development. This is expected to result in a low scale loss of nesting habitat for hedgerow, tree and building nesting birds, and a low scale loss of foraging features for bats. Please refer to the bat section below for predicted impacts on buildings and trees with potential bat roosts.
- 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:
 - a. The planting of new native species-rich (≥ 5 species), hedgerows and trees on and around the site (see Appendix F for suggested species).
 - b. The planting of flowering lawn mixtures in open spaces, which are rich in nectar and pollen (see Appendix F for suggested seed mix).
 - 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 will require the extension of building one (dwelling) and demolition of buildings 2-3 (garage and garden shed), which has the potential to result in a low scale loss of potential roosting and foraging habitats for bats.
- 7.7. Although the dwelling (building one) is assessed as moderate bat potential, the proposed works are limited to the soffit boxes and a small area of tiles on the single storey west aspect, with all other potential roosting features being retained. Therefore, we consider that the mitigation provided below is sufficient and proportionate to potential impacts, given the evidence available.
- 7.8. The following mitigation will be required to avoid impacts on bats from the proposed works:
 - i. On the first day works are proposed to commence, any potential roosting features around the proposed area of works will be surveyed for bats using a torch and endoscope. If bats are found to be present and roosting within the building, further activity surveys and a European Protected Species Mitigation Licence may be required for the development.
 - ii. A soft strip of the soffits and a small number of roost tiles will be undertaken with care and under the supervision of a licenced bat ecologist. If any bats are found, works will cease immediately and advise on how to proceed obtained.
 - iii. The new extension will be lined with traditional type 1F bitumen felt or a non-bitumen coated roofing membranes (NBCRM) that has passed the snagging propensity test (must be supplied/installed with the necessary certification). Please note, no other NBCRM (includes both breathable and non-breathable membranes), will be permitted.
 - iv. If proposed works change to incorporate additional roosting features, at least two bat activity surveys will be conducted on building one (dwelling) between May and September. Please note, at least one survey must be conducted between May and August. If bats are found to be present and roosting within any building(s), further activity surveys and a European Protected Species Mitigation Licence may be required for the development.
 - v. If proposed works change to incorporate trees with PRF-I bat roosting potential, a soft-fell approach will be adopted and one standalone bat box installed on a suitably mature tree or building for every PRF-I tree felled prior to their removal and to compensate for the loss of potential roosting features (Greenwood's Ecohabitats three crevice bat box – Appendix G). Soft-felling is where the tree limbs are cut, slowly lowered to the ground and left overnight with roosting features pointing upwards, to allow any roosting bats the opportunity to disperse. If a bat is found, works must cease immediately and a suitably licensed ecologist sought to advise on appropriate mitigation.

- vi. Any lighting schemes will follow guidance from the Bat Conservation Trust (GN08/23) and CIE 150:2017. Warm-white (<3,000K) lights with UV filters (where necessary) will be installed away from roosting locations and linear features. Lighting units will feature a beam angle <70°, connected to movement sensors and feature baffles, hoods, louvres and horizontal cut off units at 90° where necessary.
- 7.9. 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 (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.
- 7.10. As enhancements, the following will be implemented:
- i. One integrated bat box will be installed on the southern aspect of the new extension (Bat Block – Appendix G).
- 7.11. 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

- 7.12. The proposed works are expected to result in a low scale loss of bird nesting habitat through the extension of building one (dwelling), demolition of buildings 2-3 (garage and garden shed) and clearance of vegetation.
- 7.13. 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 1st March and 31st July), then a precautionary check of all habitats will be conducted by a qualified ecologist immediately prior to starting any work. If any nesting birds are found, an appropriate protection zone from the nest will be required and will be maintained until the young have fledged.
- 7.14. As enhancements, the following will be implemented:

- i. One integrated swift box installed on the extended dwelling (Swift Block – Appendix G).
 - ii. One small bird box installed on an appropriate tree in the garden space (Schwegler 1B or 2H Nest Box – Appendix G).
- 7.15. 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 National Planning Policy Framework (NPPF) 2023.

Great crested newts

- 7.16. The proposed works are expected to result in a low scale loss of terrestrial habitats (<0.01ha of irregularly managed modified grassland).
- 7.17. 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.
- 7.18. Taking a worst-case scenario of <0.01ha 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 highly unlikely”.
- 7.19. As a precautionary measure, the following mitigation will be implemented to avoid impacts on GCN from the proposed works:
- i. Vegetation on site will be cut and maintained short (maximum height of 10cm) until the start of works, to discourage animals from using these areas.
 - ii. 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.
 - iii. Construction materials will be stored off the ground on pallets and waste materials in skips, to prevent providing shelter for animals and subsequent harm when materials are moved.
- 7.20. After these precautionary mitigation measures, we predict no impact on GCN as a result of the development plans, and no further surveys are necessary.

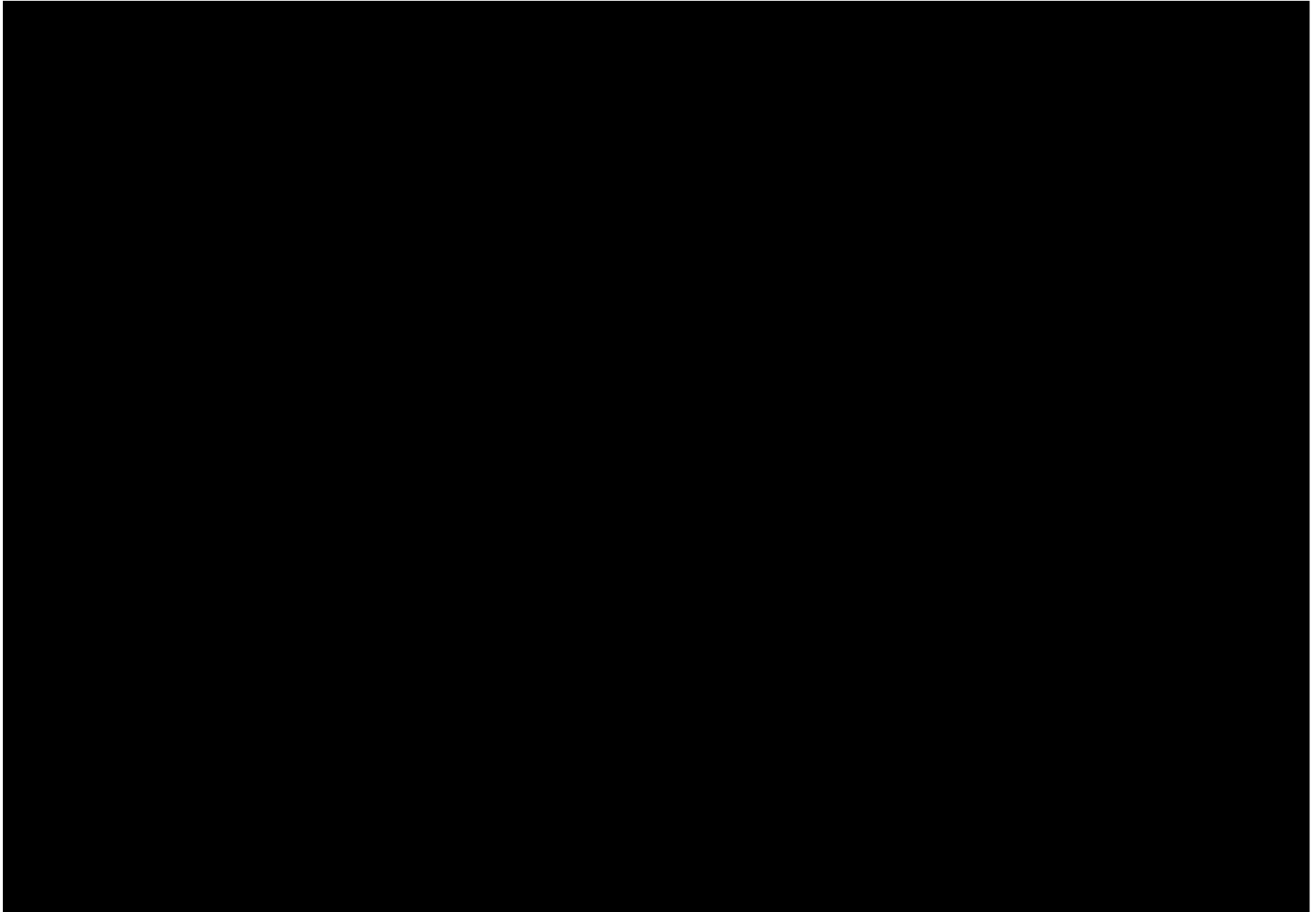
Reptiles

- 7.21. The proposed works are expected to result in a low scale loss of reptile habitat through the clearance of <0.01ha of irregularly managed modified grassland.
- 7.22. Although suitable reptile habitats are present on site, they are in small quantities (<0.05ha irregularly managed modified grassland) with only <0.01ha of suitable habitats being cleared,

which 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.

7.23. 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

7.27. 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).

7.28. 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.

7.29. As enhancements, the following will be implemented:

- i. The installation of one bee brick on extended building (Bee brick – Appendix I).

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. (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.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn.). The Bat Conservation Trust, London.
- Department for Levelling Up, Housing & Communities (2023). National Planning Policy Framework, 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 (2017). CIE 150:2017, Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations.
- Korsten, E., Jansen, E., Booman, M., Schillemans, M., Limpens, H. (2016). Swarm and Switch: on the trail of the hibernating common pipistrelle. Bat News Issue 110, BCT, London. Available from: https://researchgate.net/publication/306098306_Swarm_and_switch_on_the_trail_of_the_hibernating_common_pipistrelle.
- 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.
- 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.
- Reason, P.F., Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield.
- 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
- UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at <https://www.ukhab.org/>).

Appendix A

Methods

Desktop Review

A desktop review of published data, such as records of protected sites and species, OS maps and satellite images has been carried out. A data search was carried out with the Suffolk Biodiversity Information Service ("SBIS").

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

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

Habitats

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

Bats

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

The 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:

- Suitability – none. No habitat features on site likely to be used by any roosting bats at any time of year i.e. a complete absence of crevices/suitable shelter at all ground/underground levels.

- Negligible roost suitability for bats. These buildings have no obvious potential roosting features for bats, or minor features in an isolated or unsuitable location such that the presence of a bat roost is considered highly unlikely. However, a small element of uncertainty remains as bats can use small and

apparently unsuitable features on occasions. 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 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, two dusk emergence surveys 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 three dusk emergence surveys 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, dense thick-stemmed ivy, etc.

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

Suitability - none. Either no potential roosting features in the tree or highly unlikely to be any. Trees highly unlikely to be used by roosting bats.

Further Assessment Required. Further assessment required to establish if potential roosting features are present in the tree.

Potential Roosting Feature – Individual (“PRF-I”). Potential roosting features only suitable for individual bats or very small numbers of bats, either due to the size of lack of suitable surrounding habitats i.e. trees with limited roosting potential.

Potential Roosting Feature – Multiple (“PRF-M”). Potential roosting features suitable for multiple bats and may therefore be used by a maternity colony.

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

Suitability – none. No habitat features on site likely to be used by any commuting or foraging bats at any time of year i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats.

Negligible commuting and foraging potential for bats. Habitat features unlikely to be used by commuting or foraging bats i.e. no obvious flight-paths or foraging opportunities. However, a small element of uncertainty remains in order to account for non-standard bat behaviour.

Low commuting and foraging potential for bats. Habitats that could be used by a small number of commuting or foraging bats such as, a gappy hedgerow, unvegetated stream or lone trees, but are isolated and not well connected to the surrounding landscape.

Moderate commuting and foraging potential for bats. Habitats that are continuous and connected to the wider landscape such as, lines of trees, scrub, linked back gardens, grasslands and water features.

High commuting and foraging potential for bats. Habitats that are continuous and connected to the wider landscape such as, river valleys, watercourses, hedgerows, lines of trees, deciduous woodland, and grazed parkland. These habitats are likely to be used regularly by commuting or foraging bats and are likely to be close to, or connected to, known roosts.

Birds

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

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

Great crested newts

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

Water features on and near the site were assessed for their suitability for occupation by GCN, according to a Habitat Suitability Index (“HSI”). The HSI is a theoretical index of a waterbody’s suitability to support a breeding population of GCN and is calculated from a series of ten variables recorded on site, as detailed in Table 4.

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

Table 4, 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

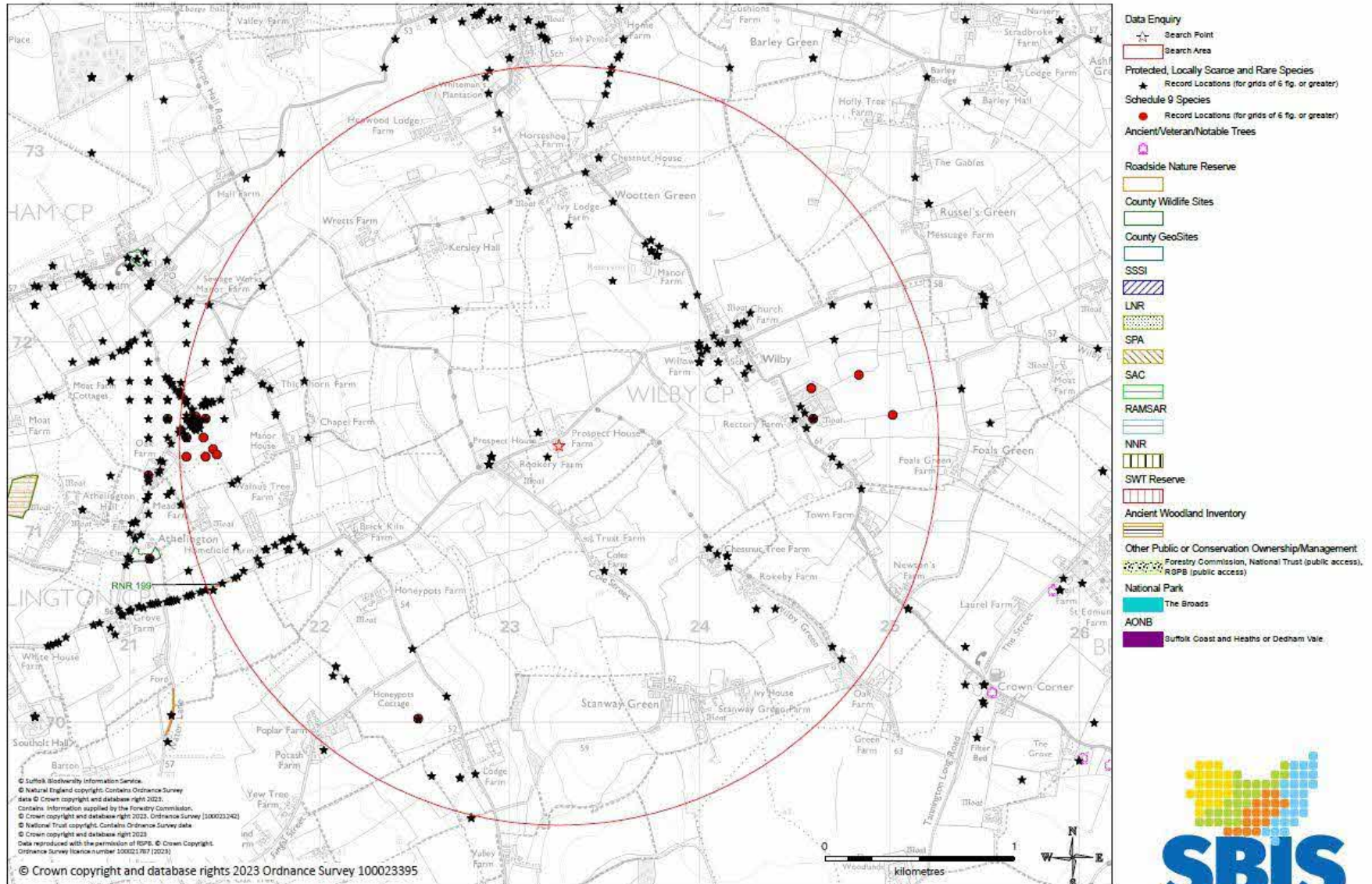
Particular regard was made to the nature of the proposed development and the potential of impact upon any other protected species, species which are nationally or locally scarce, or species subject to other conservation designations such as Red Data Book or Priority S41 species, from the development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



Greenlight (Prospect Cottage, Wilby TM23262 71459) 2km Data Enquiry

Date: 27/09/2023 | Drawn by: Andy Mercer

Appendix C Protected sites citations

County Wildlife Sites citations

CWS Number	Mid Suffolk 193
Site Name	RNR 199
Parish	ATHELINGTON
District	Mid Suffolk
NGR	TM214707
Description	Sulphur clover. This is also a Roadside Nature Reserve.
Area	0.01

Appendix D

Legislation

European Protected Species

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

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

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

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

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

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

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

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

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

National Planning Policy - National Planning Policy Framework (NPPF)

Section 15 of the National Planning Policy Framework 2023 (NPPF): Conserving and enhancing the natural environment states that 'planning policies and decisions should contribute to and enhance the natural and local environment by ... minimising impacts on and providing net gains for biodiversity.'

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

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

Implications of legislation and policies

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

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

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

Bats

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

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

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

This legislation provides defences so that necessary operations may be carried out in places used by bats, provided the appropriate Statutory Nature Conservation Organisation (in England this is Natural England) is notified and allowed a reasonable time to advise on whether the proposed operation should be carried out and, if so, the approach to be used. The UK is a signatory to the Agreement on the Conservation of Bats in Europe, set up under the Bonn Convention. The Fundamental Obligations of Article III of this Agreement require the protection of all bats and their habitats, including the identification and protection from damage or disturbance of important feeding areas for bats.

Barn Owls

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

Breeding Birds

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

Great Crested Newts

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

Water Vole

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

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

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

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

Otters

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

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

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

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

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

White-Clawed Crayfish

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

Reptiles

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

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

Badger

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

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

Dormice

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

Natural England Licensing - EPS Mitigation Licensing

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

Appendix E

Plant species recorded on site

English name	Scientific name
Acer	Cer sp.
Annual meadow	Poa annua
Bent	Agrostis sp.
Bramble	Rubus fruticosus
Buddleja	Buddleja sp.
Ceanothus	Ceanothus sp.
Cherry laurel	Prunus laurocerasus
Cleavers	Galium aparine
Cock's-foot	Dactylis glomerata
Common mouse-ear	Cerastium fontanum
Cranesbill	Geranium sp.
Creeping buttercup	Ranunculus repens
Reeping cinquefoil	Potentilla reptans
Daisy	Bellis perennis
Dandelion	Taraxacum officinale
Fescue	Festuca sp.
Hawthorn	Crataegus monogyna
Herb-robert	Geranium robertianum
Ivy	Hedera helix
Leyland cypress	Cupressus x leylandii
Mallow	Malva sp.
Nettle	Urtica dioica
Ribwort plantain	Plantago lanceolata
Selfheal	Prunella vulgaris
Thistle	Cirsium sp.
White campion	Silene latifolia
White clover	Trifolium repens
White dead-nettle	Lamium album
Yarrow	Achillea millifolium
Yorkshire fog	Holcus lantais

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</i> spp. (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</i> spp.
Silver birch (d)	<i>Betula pendula</i>
Small-leaved lime (d)	<i>Tilia cordata</i>
White willow (d)	<i>Salix alba</i>
Wild cherry (f; d)	<i>Prunus avium</i>
Walnut (d)	<i>Juglans regia</i>

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

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

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

Flowering Lawn Mixture – EL1 Emorsgate Seeds

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

Appendix G Examples of bat and bird boxes

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

<p style="text-align: center;">Integrated bat box Habibat Bat Box</p> 	<p style="text-align: center;">Integrated bat box Bat Block</p> 
<p style="text-align: center;">Small bird nesting box 1B Schwegler Nest Box</p> 	<p style="text-align: center;">Small bird nesting box 2H Schwegler Robin Box</p> 
<p style="text-align: center;">Integrated swift box Swift Block</p> 	<p style="text-align: center;">Integrated swift box Manthorpe Swift Brick</p> 
<p>Recommendations for installing bird boxes: (Sourced from British Trust for Ornithology www.bto.org, Manthorpe www.manthorpe.co.uk and Barn Owl Trust www.barnowltrust.org.uk)</p>	
<p>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.</p>	

Shelter your nest box from prevailing wind, rain and strong sunlight. The box should face between north and east, and angled vertically or slightly downwards to prevent rain entering.

Make sure cats cannot get into the box.

Keep nest box away from bird feeders.

Use galvanized or stainless steel screws or nails. If fixing boxes to trees, galvanised wire can be used to tie the box to the trunk or hang it from a branch. Make sure to regularly inspect these fittings (every two or three years) to ensure the box remains securely attached.

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

Locate $\geq 5\text{m}$ high on the gable wall of the property and above the level of the insulation zone.

Where possible, install in locations that are unlikely to receive large amounts of direct sunlight during the hottest times of the day, ideal places include below the overhang of the verge and barge board.

Recommendations for installing bat boxes:

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

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

Locate boxes:

Where bats are known to feed close to hedges and treelines (some bats use a treeline or hedgerow for navigation, putting boxes near these features may help the bats find the box).

On trees: boxes should be placed on the trunk of a mature tree, where there is a clear flight line/accessible entrance.

On buildings: boxes should be placed as close to the eaves as possible.

As high as possible (ideally, at least 3 to 4m above the ground, where safe installation is possible).

In sunny places, sheltered from strong winds (usually between south-west and south-east).

Make sure the boxes are secured.

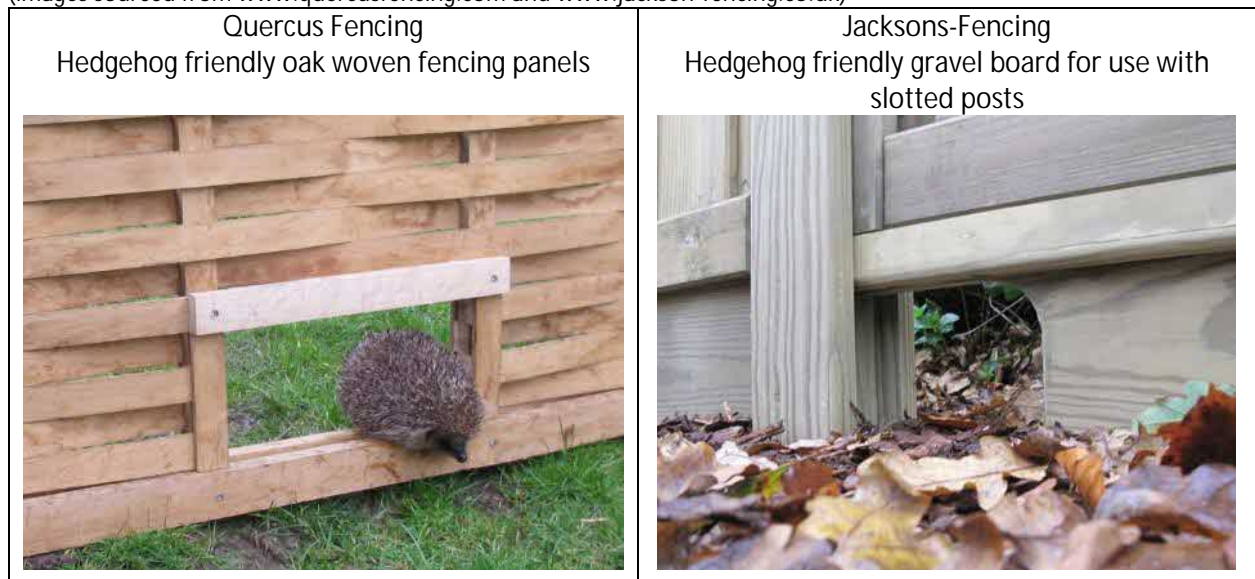
Boxes can be installed on trees using adjustable ties to avoid damaging the trees. Otherwise, timber screw bolts or nails can be used. Aluminium alloy nails are less likely to damage saws and chipping machinery.

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

Appendix H

Examples of hedgehog friendly fencing

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



Recommendations for installing hedgehog friendly fencing:

(Sourced from Hedgehog Street www.hedgehogstreet.org)



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

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

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

Appendix I Bee Bricks

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

Bee post	Bee bricks
	
Recommended bee brick installation (Sourced from NHBS www.nhbs.com)	
<p>Bee bricks will be installed on a south facing sunny spot of an external wall of the residential dwelling, at a minimum height of 1m. No vegetation should be obstructing the holes.</p> <p>Bee posts will be positioned south facing in a sun exposed spot, with no vegetation covering the fascia. The posts must be set in a concrete base at a minimum of 30mm, similar to installing a fencepost.</p>	

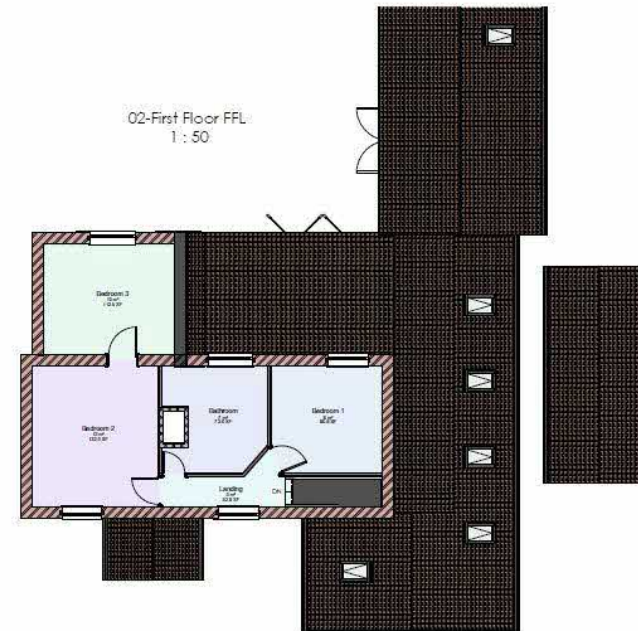
Appendix J Proposed plans

PLANNING ISSUE - NOT FOR CONSTRUCTION

AHP-PCWR-01-Proposed Plans
Prospect Cottage, Worlingworth Road, Wilby, Eye, Suffolk IP21 5LG

SCALE @ A1: 1 : 50

0m 1m 2m 3m 4m 5m
VISUAL SCALE 1:50 @ A1



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PLANNING ISSUE - NOT FOR CONSTRUCTION

AHP-PCWR-02-Proposed Elevations
Prospect Cottage, Worlingworth Road, Wilby, Eye, Suffolk IP21 5LG
SCALE @ A1: As indicated



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PLANNING ISSUE - NOT FOR CONSTRUCTION

AHP-PCWR-04-3D Views
Prospect Cottage, Worlingworth Road, Wilby, Eye, Suffolk IP21 5LG
SCALE @ A1:



3D View 1



3D View 2



3D View 5



3D View 3



3D View 4



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