
Ecology Report

**PROPOSED ANCILLARY ACCOMMODATION, NEW
CARTLODGE AND OUTBUILDING
Sparrows, Shelley, Suffolk**

December 2021



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Executive Summary

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of an existing garage and adjacent land at Sparrows, Shelley, Suffolk. A planning application is to be submitted to Babergh District Council to convert the existing cart shed and garage ("cart shed/garage") into ancillary accommodation for the existing dwelling, to construct a new detached cart lodge, and build a separate outbuilding.

The former cart shed (north section) and garage (south section) is a single storey building of brick wall construction with pantile roof and wooden doors. A first floor has been built into the roof void above the garage, with the cart shed section open to the rafters. A gravel driveway exists immediately to the south and west of the cart shed/garage, with the house ('Sparrows') to the west. A main car parking area exists to the north of the cart shed and garage.

Some climbers are growing up some of the building's elevations, with some shrubs, trees, lawn and a roadside hedgerow to the north, with conifers along the southern site boundary.

A small number of old bat droppings and brown long-eared bat (*Plecotus auritus*) feeding remains were found indicating a night roost/feeding perch. Bat activity surveys are recommended to determine degree to which the barn is used by roosting bats. Mature trees and hedgerows to the north and west of the existing dwelling provide moderate value bat commuting and foraging habitat. The line of conifers are of low value for commuting/foraging bats.

The site immediately around the existing cart shed and garage provides negligible habitat for common reptiles and badger (*Meles meles*), though amphibians and hedgehog (*Erinaceus europaeus*) may seek refuge within the base of shrubs and adjacent hedgerows, whilst birds may nest within these habitats. Evidence of nesting swallow (*Hirundo rustica*) and small passerines were recorded in the former cart shed/garage. The gardens to the west of Sparrows provide more suitable habitat for amphibians, reptiles and hedgehog such that they may pass through the site.

Recommendations are made to avoid wildlife offences and ecological impacts. Where impacts cannot be avoided entirely, measures are proposed to mitigate remaining effects including timing of works and good working practices, with likely compensation detailed. Biodiversity enhancements are proposed.

1 Introduction

1.1 BRIEF

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of a former cart shed and garage (“cart shed/garage”) and adjacent land at Sparrows, Shelley, Suffolk (TM 00823 38247; Figure 1). The report will inform a planning application to Babergh District Council to convert a former cart shed (north section) and garage (south section) into ancillary accommodation for the existing dwelling, and to construct a new detached cart lodge and a separate outbuilding for storage.

The ecological survey and this report are necessary to:

- Identify the existing ecological value of the site;
- Identify the need for further (e.g., protected species) surveys;
- Assess any potential adverse impacts of the proposed development on ecological features of the site or nearby designated sites;
- Make recommendations for mitigation (if required); and
- Identify opportunities for biodiversity enhancements and, consistent with national and local planning policy, net gains.

This report will be used to develop the proposals as necessary, and to form the basis for the submission of biodiversity information with any planning application. It reflects the site at the time of the survey and should be reviewed and revised as appropriate.

1.2 SITE LOCATION AND DESCRIPTION

The proposed development site is located off Martins Lane, Shelley (Figure 1) and comprises an existing former cart shed (north section) and modern garage (south section) with gravel driveway (Photos 1 to 5).

A short roadside hedgerow abuts the garage with a section of beech (*Fagus sylvatica*) hedge along the southern side of the car parking area. Some mature conifers exist along the southern site boundary with some scattered trees to the north of the cart shed/garage (Photos 6 and 7) with ruderal vegetation and grasses as an understorey. An area of short mown lawn (Photo 7) exists immediately to the north of the cart shed/garage with larger areas of lawn within the gardens to the west of the existing house along with several mature trees. A former pond exists in the rear garden to the west (Photo 8).

Photos are provided within Appendix A1.

2 Planning policy and legislation

2.1 INTRODUCTION

This chapter summarises the key legislation and policies relevant to assessing the biodiversity impacts of the scheme upon habitats and species.

2.2 PLANNING POLICY

2.2.1 *National Planning Policy Framework (NPPF)*

The National Planning Policy Framework was originally published in 2012 and most recently revised in July 2021. The document sets out the Government's planning policies for England and provides guidance on how these policies are expected to be applied. It provides a framework for, and must be taken account of within, locally prepared plans for housing and other development, and is a material consideration in planning decisions.

An overarching objective of the NPPF, which aims to integrate and secure net gains, is to contribute to protecting and enhancing the natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

The full NPPF is available to view online using the gov.uk website: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf . Policies of particular relevance to development and biodiversity include 174, 180, 181 and 182.

174. Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

180. When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest (SSSI), and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

181. The following should be given the same protection as habitats sites:

- a) potential Special Protection Areas (SPA) and possible Special Areas of Conservation (SAC);
- b) listed or proposed Ramsar sites; and
- c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential SPA, possible SAC, and listed or proposed Ramsar sites.

182. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects) unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

2.2.2

Local Plan

Adopted local plans provide the framework for development across England, and include policies related to conserving and enhancing the natural environment. Existing planning policies and supporting documents used to plan, deliver, and monitor development across the Babergh District Council area can be found at:

<https://www.midsuffolk.gov.uk/planning/planning-policy/adopted-documents/babergh-district-council/babergh-local-plan/>.

Babergh and Mid Suffolk Councils are in the process of creating a new Joint Local Plan.

2.3

LEGISLATION

2.3.1

Environment Act 2021

The Environment Act received royal assent in November 2021. The Act will set clear statutory targets for the recovery of the natural world in four priority areas: air quality, biodiversity, water and waste, and includes an important new target to reverse the decline in species abundance by the end of 2030. Of particular relevance to

development planning will the requirement for all new development to deliver a quantified (10%) Biodiversity Net Gain.

2.3.2 *Natural Environment and Rural Communities (NERC) Act 2006*

Section 40 places a duty on every public body in exercising its functions, to have regard to the purpose of conserving biodiversity; this includes restoring or enhancing populations or habitats. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and public-sector decision making. *Species and habitats of principal importance* in this respect are those published under Section 41 ("S. 41") of the NERC Act 2006.

2.3.3 *Wildlife and Countryside Act 1981 (as amended)*

Rare and scarce habitats and species are afforded varying levels of protection under the Wildlife and Countryside Act 1981 (as amended) (hereafter "WCA 1981"). Some species and groups are afforded full protection (e.g. Schedule 1 bird species, bats), whilst others receive partial protection (e.g. widespread reptiles). Section 3.1 provides further detail relevant to this scheme. Species afforded legal protection are referred to by their relevant schedule ("Sch.") within the act, i.e. "Sch. 1" (birds), "Sch. 5" (other animals), or "Sch. 8" (plants).

Invasive plant species such as Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*) are listed on Schedule 9 of the WCA 1981. It is an offence to plant or otherwise cause these species to grow in the wild and this includes the development of sites such that the plant colonises land owned by a third party.

2.3.4 *The Countryside and Rights of Way (CROW) Act 2000*

The CROW Act 2000 strengthened and updated elements of the WCA 1981, and gave a statutory basis to biodiversity conservation, requiring government departments to have regard for biodiversity in carrying out its functions and to take positive steps to further the conservation of listed habitats and species. It strengthened the protection of SSSI and threatened species. Many of its provisions have been incorporated as amendments into the WCA 1981 and some have been superseded by the NERC Act 2006.

2.3.5 *The Conservation of Habitats and Species Regulations 2017*

The Conservation of Habitat and Species Regulations 2017 (as amended) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) into UK law. They have been recently amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019, which continue the same provision for European Protected Species, licensing requirements, and protected areas (National Site Network) after Brexit.

Under the Regulations, competent authorities i.e. any Minister, government department, public body, or person holding public office, have a general duty, in the exercise of any of their functions, to have regard to the Regulations.

2.3.6 *Protection of Badgers Act 1992*

The Protection of Badgers Act 1992 (hereafter "PBA 1992") consolidates and improves upon the previous Badgers Act 1973, Badgers Act 1991, and Badgers (Further Protection) Act 1991. Under the PBA 1992 (except when holding a licence to

do so) it is illegal for a person to wilfully; kill, injure, take, possess, sell, or otherwise cruelly treat a badger. It is also illegal to dig out, damage, destroy, or obstruct entry to setts (including by use of dog(s)). Further information on offences, exceptions, and penalties are listed on the PBA 1992 on legislation.gov.uk.

3 Methodology

3.1 INTRODUCTION

This report has been produced with reference to relevant guidance, most notably:

- Guidelines for Ecological Report Writing (CIEEM, 2017);
- Biodiversity – Code of Practice for Planning and Development (BS 42020:2013¹);
- Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018); and
- Biodiversity Net Gain: good practice principles for development (CIRIA, CIEEM and IEMA, 2016).

The following sections summarise the approaches used to review existing data, and to undertake appropriate field surveys to scope and inform an Ecological Impact Assessment (EclA) for the scheme. Where further surveys are considered necessary, this is identified in section 5.

3.2 DESK SURVEY

The following data sources were consulted to assess the potential for the application site to support protected or notable habitats/species:

- Aerial photos, Ordnance Survey maps, and the MAGIC website (<http://magic.defra.gov.uk/>): These were used to identify habitat types including priority habitats, suitability for particular species/groups, and the locality of nationally and internationally designated sites;
- Natural England (NE) open source protected species and habitat survey data; and
- Historical biological records: species and locally designated site records within 2km of the site were provided by the Suffolk Biodiversity Information Service (SBIS; Appendix A2).

From this exercise, it was concluded that the following legally protected species/groups may be present on the sites and/or land immediately adjacent:

- Amphibians including great crested newt (GCN) (*Triturus cristatus*)² and reptiles such as slow worm (*Anguis fragilis*)³;
- Mammals including badgers (*Meles meles*)⁴ and bats²;
- Breeding birds⁵ including Red and Amber status⁶ species; and
- S. 41⁷ list species such as hedgehog (*Erinaceus europaeus*).

In the context of the setting and nature of the developments, the 'zone of influence' of the scheme is considered restricted to habitats on the sites and species within 250m of the site boundaries.

3.3 FIELD SURVEY

An initial site walkover was undertaken on the 16 November 2021 to 1) record habitats present; and 2) assess the value of the habitats present for protected and notable species. A list of vascular plants and a description of the vegetation was

¹ BSI Standards publication BS 42020:2013 Biodiversity – Code of practice for planning and development.

² GCNs and all species of bats receive full protection under the WCA 1981 and Habitats Regulations 2017.

³ Widespread reptiles and amphibians receive partial protection under the WCA 1981.

⁴ Badgers and their setts are afforded protection by the PBA 1992.

⁵ All wild birds, their nests and eggs are protected under the WCA 1981 (as amended), level of protection varies per species.

⁶ The conservation statuses of UK bird species are listed within the Birds of Conservation Concern 4 (Stanbury *et al.*, 2021).

⁷ S. 41 of the NERC Act 2006 lists 'habitats and species which are of principal importance for the conservation of biodiversity in England'.

made, including the location and extent of any Schedule 9 (WCA 1981) plants. Photos of the habitats present, and any field signs are provided in Appendix A1.

3.3.1 *Habitats and vascular plants*

The site was walked with all distinct vegetation and habitat types, and any features of interest identified using the Phase 1 Habitat Survey methodology (JNCC, 2010). Care was taken to record as many species as possible.

3.3.2 *Amphibians and reptiles*

a) Amphibians

A pond P1 (Photo 6, Figure 2) shown on OS maps is located to the west of the application site was assessed for its potential to hold GCN and other breeding amphibians. Three other ponds are located within 250m of the site as well as a farm irrigation reservoir for Shelley Priory Farm. Pond P4 no longer exists as confirmed by aerial photos (Google Earth Pro).

The terrestrial habitat suitability of the site was assessed with respect to refugia and foraging habitat based on the known habitat preferences of GCN and widespread amphibians such as common frog (*Rana temporaria*), smooth newt (*Lissotriton vulgaris*), and common toad (*Bufo bufo*).

b) Reptiles

Habitats on and around the application site were assessed with respect to the known foraging and refuge habitat preferences of widespread reptile species.

3.3.3 *Bats*

a) Building inspection

The existing former cat shed/garage were assessed with regards to suitability for supporting roosting bats with reference to the NE Bat Mitigation Guidelines (Mitchell-Jones, 2004) and the Bat Conservation Trust (BCT) "Bat Surveys: Good Practice Guidelines, 3rd edition" (Collins, 2016).

b) Tree roost potential

Existing trees which may require removal were visually checked to assess their suitability for use by roosting bats using the following criteria:

1. All potential roosting cavities (e.g. natural cavities, rot holes, woodpecker holes, splits, peeling bark) were inspected from the ground, using binoculars where necessary;
2. All potential niches would be assigned a category according to Bat Conservation Trust (BCT) protocols (Collins, 2016). These categories are listed below:
 - High Suitability: Trees 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, conditions, and surrounding habitat;
 - Moderate Suitability: Trees 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;
 - Low Suitability: A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential. However, the tree(s) are of a size and age that elevated surveys may result in features being found; or features which may have limited potential to support bats; and

- Negligible Suitability: Trees with negligible bat roost potential.
3. Where potential niches existed, niches below 5m high were physically inspected, using ladders where appropriate. Any cavities with the potential to support roosting bats were inspected with a SeeSnake endoscope and/or a small LED torch as necessary;
 4. All potential roosting niches were checked for the presence of bats (alive or dead), faecal staining, fur and/or scratch marks around the entrance and droppings within the cavities or attached to the trunk/bough below the entrance.

c) Foraging and commuting habitat

Consideration was given to the value of any potential foraging and commuting habitats (i.e., hedgerows, trees, streams, ponds, composting areas) on the application site.

3.3.4 *Nesting birds*

The value of the site was assessed in relation to nesting birds. This was supplemented with field records of birds seen or heard within the site, or nests observed.

3.3.5 *Badger*

The application site and adjacent habitats were surveyed for evidence of badger activity including setts, day beds, latrines, diggings/snuffle holes, paths/runs, scratching posts, hair, and footprints. Any potential sett found was then assessed for evidence of recent use by badger and classified as per current guidance (Scottish Badgers, 2018).

3.3.6 *S.41 list habitats and species*

The site was surveyed to determine the presence of any S. 41 habitats such as native species-rich hedgerows. The site's suitability for S. 41 list species such as hedgehog was assessed based on their habitat preferences.

3.3.7 *Non-native invasive plant species*

The site was inspected for Schedule 9 species such as Japanese knotweed and giant hogweed.

3.4 SURVEY CONSTRAINTS

Botanical surveys are typically best done in the late spring to early summer period. It is considered likely that no notable plant species were overlooked given the limited footprint and lack of typical botanically interesting habitat on site.

3.5 SURVEYORS

The initial site survey was undertaken by Christian Whiting BSc (Hons) MSc MCIEEM who has over 20 years' experience working as an ecologist. He holds Natural England (NE) survey licences for bats (2015-14745-CLS-CLS - Bat Survey Level 2), barn owl (CL29) and great crested newts (Class A licence 2015-17633-CLS-CLS). He is a Registered Consultant (Registration RC089) on NE's Bat Low Impact Class Licence and is an agent under the Environment Agency's and IDB water vole (*Arvicola amphibius*) organisational and class licences respectively. His main areas of expertise are bats, vascular plants, amphibians and reptiles, otter (*Lutra lutra*) and water vole.

Christian was assisted by Jake Brendish BSc (Hons) MSc, an ecologist with 2 seasons' survey experience. His main areas of focus are birds, bats and vascular plants.

3.6

ASSESSMENT

Impacts and effects upon habitats and species are assessed with reference to the CIEEM Guidelines for Ecological Impact Assessment (2018) and are reported in Section 5, based on the baseline conditions reported in Section 4.

The assessment includes potential impacts upon habitats and species during the construction and operational phases of the scheme. It considers positive and negative impacts, their extent, magnitude and duration, frequency and timing and reversibility.

4 Results

4.1 INTRODUCTION

This chapter summarises the results of the desk and field surveys.

4.2 BASELINE ECOLOGICAL CONDITIONS - DESK STUDY

4.2.1

Designated sites

Any locally designated sites (e.g. Local Nature Reserves) within 2km, nationally designated sites within 5km and internationally designated sites within 13km of the application site are listed below in Table 4.1.

Table 4.1 Relevant designated sites

Site name	Site designation
Polstead Acid Grassland	CWS
Martins Cottage Meadow	CWS
Millfield Wood*	CWS
Mark Wood*	CWS
Layham Pit and Meadow	CWS
The Dollops	CWS
Stour and Orwell Estuaries	SPA/Ramsar

*Listed on the county Ancient Woodland Inventory

Locally designated sites

No Local Nature Reserves (LNRs) are present within 2km of the site. Six County Wildlife Sites (CWS) within 2km are listed below.

Polstead Acid Grassland is an area of unimproved acid grassland underlain by sands and gravels. Typical plant species of this habitat include bird's-foot trefoil (*Lotus corniculatus*), sheep's sorrel (*Rumex acetosella*), heath speedwell (*Veronica officinalis*), mouse-ear hawkweed (*Pilosella officinarum*) and changing forget-me-not (*Myosotis discolor*). Clustered (*Trifolium glomeratum*) and knotted clovers (*Trifolium striatum*) occur on site; both these species are relatively scarce away from the coast.

Martins Cottage Meadow slopes gently down to a stream which runs along the northwestern edge. The meadow is enclosed by a hedge and fence. The northeastern corner of the site is colonised by alder (*Alnus glutinosa*) and willow (*Salix sp.*) carr. The remainder of the meadow consists of two main plant communities. The low-lying wetter area which lies adjacent to the stream is colonised by a wide range of wetland plants, including water forget-me-not (*M. scorpioides*), meadowsweet (*Filipendula ulmaria*), ragged-robin (*Silene flos-cuculi*) and greater bird's-foot trefoil (*Lotus pedunculatus*).

Millfield Wood is dominated by cherry (*Prunus sp.*) with an understorey of hazel (*Corylus avellana*) coppice. Millfield Wood supports a high diversity of woodland species; a total of seventy nine flowering plants has been recorded including scarce ancient woodland indicators like yellow archangel (*Lamiaestrum galeobdolon*), wood millet (*Milium effusum*) and small-leaved lime (*Tilia cordata*).

Mark Wood is features extensive planted and coppiced sweet chestnut (*Castanea sativa*). Oak has been planted with small areas of Douglas fir (*Pseudotsuga menziesii*) in the north. Elder (*Sambucus nigra agg.*), birch (*Betula sp.*) and cherry are

frequent in the shrub layer. Remnants of the original woodland can be seen in the form of small patches of small-leaved lime and hornbeam (*Carpinus betulus*) coppice. The ground flora is impoverished due to the shade cast by the dense canopy, featuring dog's mercury interspersed with some bluebell (*Hyacinthoides non-scripta*), bramble and primrose (*Primula vulgaris*).

Layham Pit is an active aggregate pit supporting a range of habitats such as ruderal vegetation, bare ground, scrub and sand martin cliffs. By necessity much of this habitat is transitory and subject to rapid change as a part of ongoing operations. However, there is an area towards the centre of the pit that will remain undisturbed and is of particular wildlife value. Part of a former valley carrying a tributary to the river Brett has been 'cut off' by pit operations. It supports a mosaic of semi-natural woodland, scrub and spring-fed, unimproved wet grassland/fen meadow. The woodland includes a steep free-draining slope dominated by oak, while the wet grassland includes ragged robin, fen bedstraw (*Galium uliginosum*) and greater bird's foot trefoil. There is evidence of badgers feeding and it is important for a wide range of invertebrates, amphibians and reptiles including grass snake. Developing scrub around the edge of the wet grassland creates a graded edge that is ideal habitat for a range of birds including willow warbler (*Phylloscopus trochilus*), chiffchaff (*P. collybita*), blackcap (*Sylvia atricapilla*) and nightingale (*Luscinia megarhynchos*).

The Dollops includes areas of wet woodland and mixed deciduous woodland. The highest diversity of species is found adjacent to the stream alongside a public footpath, with alder and hazel dominating the wetter areas, along with a small area of mature hornbeams with evidence of previous coppicing. The ground flora is diverse, particularly close to the stream, and includes typical woodland flora such as ragged robin, bracken and red campion, as well as a number of ancient woodland indicators including moschatel (*Adoxa moschatellina*), opposite-leaved golden saxifrage (*Chrysosplenium oppositifolium*), alternate-leaved golden saxifrage (*C. alternifolium*), wood sedge (*Carex sylvatica*), ramsons (*Allium ursinum*), wood anemone (*Anemone nemorosa*), primrose and wood speedwell (*Myosotis sylvatica*). The woodland provides habitat opportunities for a range of wildlife including birds, small mammals and invertebrates. Hazel dormouse (*Muscardinus avellanarius*) is known to occur in the locality and due to habitat suitability and connectivity to other wildlife-rich sites is likely to be present within this woodland.

The development is not expected to impact any of the above sites given its limited size, the relative isolation of some of the sites and existing greenspace present around within the immediate vicinity of the site. No significant ecological impacts are anticipated.

Nationally designated sites

No nationally designated sites are present within 5km of the site.

Internationally designated sites

The Stour and Orwell Estuaries SPA and Ramsar sites comprise a large Internationally important network of estuaries and coastal habitats which qualify for important populations of overwintering birds including hen harrier (*Circus cyaneus*), redshank (*Tringa totanus*) and black-tailed godwit (*Limosa limosa islandica*) amongst other species. The number of overwintering waterfowl present has been estimated to number over 65,000 birds.

Habitats Regulations Assessment

Where a development or project may, alone or in combination, have a 'likely significant effect' upon the features of the Natura 2000 or Ramsar site, the Habitats Regulations 2017 require a Habitats Regulations Assessment (HRA) to be undertaken. Advice from NE states that increased housing located within 1km by foot and 13km by car of Natura 2000 sites may potentially cause disturbance to the interest features due to walkers (and dogs). Disturbance to bird species that breed and/or overwinter within the sites is considered to cause the greatest impact.

HRAs are undertaken by a "competent authority" (CA), which in the case of Local Plans and most planning applications is the Local Planning Authority (LPA). Within Suffolk, Ipswich Borough Council in partnership with the neighbouring authorities Babergh District Council and East Suffolk Council have developed a 'Recreational disturbance Avoidance and Mitigation Strategy' (RAMS) to address likely significant effects upon Natura 2000 sites resulting from development within the area. The strategy provides the practical basis and evidence to identify projects to mitigate the impact of new development on the protected sites.

As per the advice from NE above, financial contributions towards the RAMS will normally be the LPA's preferred mechanism for securing mitigation for new dwellings and financial payments through the RAMS may be used for mitigating impacts of holiday lets. As the proposed development is to provide ancillary accommodation to the existing dwelling the Suffolk RAMS is not applicable.

No further assessment will be made within this document.

4.2.2 *Priority habitats*

Assessment of the Magic Map database returned several areas of deciduous woodland around 500m south, with woodpasture and parkland 800m southeast.

4.2.3 *Species*

No protected or notable species records exist from within the application site boundary. Species of relevance include are shown in Table 4.2.

Table 4.2 Protected/notable species within 2km of the application site

Latin Name	Common Name	Designation
Amphibians and reptiles		
<i>Anguis fragilis</i>	Slow worm	Sch. 5; S. 41
<i>Bufo bufo</i>	Common toad	Sch. 5; S. 41
<i>Lissotriton vulgaris</i>	Smooth newt	Sch. 5
<i>Natrix helvetica</i>	Grass snake	Sch. 5; S. 41
<i>Rana temporaria</i>	Common frog	Sch. 5
<i>Triturus cristatus</i>	Great-crested newt	Sch. 5; S. 41
Bats		
<i>Nyctalus leisleri</i>	Leisler's bat	Sch. 5
<i>Pipistrellus pygmaeus</i>	Soprano pipistrelle	Sch. 5; S. 41
<i>Plecotus auritus</i>	Brown long-eared	Sch. 5, S. 41
Birds		
<i>Accipiter nisus</i>	Sparrowhawk	Amber Status
<i>Alauda arvensis</i>	Skylark	Red Status, S. 41

<i>Anthus pratensis</i>	Meadow pipit	Amber Status
<i>Apus apus</i>	Swift	Red Status
<i>Columba oenas</i>	Stock dove	Amber Status
<i>Delichon urbicum</i>	House martin	Red Status
<i>Emberiza citrinella</i>	Yellowhammer	Red Status, S. 41
<i>Emberiza schoeniclus</i>	Reed bunting	Amber Status, S. 41
<i>Linaria cannabina</i>	Linnet	Red Status
<i>Motacilla cinerea</i>	Grey wagtail	Amber Status
<i>Muscicapa striata</i>	Spotted flycatcher	Red Status, S. 41
<i>Passer domesticus</i>	House sparrow	Red Status, S. 41
<i>Passer montanus</i>	Tree sparrow	Red Status, S. 41
<i>Poecile palustris</i>	Marsh tit	Red Status
<i>Prunella modularis</i>	Dunnock	Amber Status
<i>Pyrrhula pyrrhula</i>	Bullfinch	Amber Status
<i>Streptopelia turtur</i>	Turtle dove	Red Status, S. 41
<i>Sturnus vulgaris</i>	Starling	Red Status
<i>Turdus philomelos</i>	Song thrush	Amber Status
<i>Turdus viscivorus</i>	Mistle thrush	Red Status
Invertebrates		
<i>Apamea anceps</i>	Large nutmeg	S. 41
<i>Caradrina Morpheus</i>	Mottled rustic	S. 41
<i>Lucanus cervus</i>	Stag beetle	Sch. 5; S. 41
<i>Spilosoma lubricipeda</i>	White ermine	S. 41
<i>Spilosoma lutea</i>	Buff ermine	S. 41
<i>Timandra comae</i>	Blood-vein	S. 41
<i>Tyria jacobaeae</i>	Cinnabar	S. 41
Other mammals		
<i>Erinaceus europaeus</i>	Hedgehog	S. 41
<i>Meles meles</i>	Badger	PBA 1992
<i>Mustela putorius</i>	Polecat	S. 41
Plants		
<i>Euphorbia exigua</i>	Dwarf spurge	RLENG.VU
<i>Filago vulgaris</i>	Common cudweed	RLENG.Lr(NT)
<i>Mentha arvensis</i>	Corn mint	RLENG.Lr(NT)
<i>Potentilla erecta</i>	Tormentil	RLENG.Lr(NT)
<i>Spergula arvensis</i>	Corn spurrey	RLENG.VU
<i>Stachys arvensis</i>	Field woundwort	RLENG.Lr(NT)

4.2.4

NE open source GCN records

Assessment of Natural England's GCN class licence return data and eDNA pond survey records show the closest positive record (eDNA) to be located c. 5.0 km northeast of the application site (dated 2019), which is outside the normal dispersal range of the species.

4.3

BASELINE ECOLOGICAL CONDITIONS – FIELD SURVEY

4.3.1

Habitats and vascular plants

Descriptions of the habitats (Figure 3) and the characteristic plants species present are provided below. Photos are provided in Appendix A1.

a) Built environment

The existing cart shed/garage is a single-storey building (Photos 1 to 4) of brick construction with pantile roof and wooden doors. A first floor has been built into the roof void above the garage, with the cart shed section open to the rafters. The section of roof above the garage has some bitumen Type 1F felt under the tiles

A main car parking area exists to the north (Photo 5, Figure 3) of the cart shed and garage. A gravel driveway exists immediately to the south and west of the cart shed/garage, with the house ('Sparrows') to the west.

b) Hedgerows, shrubs and trees

A short roadside hedgerow abuts the garage and features holly (*Ilex aquifolium*), hawthorn (*Crataegus monogyna*), ivy (*Hedera helix*) and rose (*Rosa sp.*). A section of beech hedge exists along the southern side of the car parking area.

Some scattered trees (Photos 6 and 7) ash (*Fraxinus excelsior*), Norway maple (*Acer platanoides*), horse chestnut (*Aesculus hippocastanum*), holly and some plum (*Prunus sp.*) are located to the north of the existing cart shed/garage. Some Leyland cypress (*Cupressocyparis leylandii*) conifers are growing along the southern site boundary and forms a dense, tall hedgerow. A holly and a magnolia (*Magnolia grandiflora*) are present adjacent to the west elevation of the cart shed/garage.

c) Ruderal vegetation

Some ruderal vegetation (Photo 6) along with grasses exists as an understorey to the area of trees to the north of the existing former cart shed/garage.

d) Lawn

An area of short mown lawn (Photo 7) exists immediately to the north of the cart shed/garage. It is dominated by perennial rye-grass (*Lolium perenne*) and including a small number of common forbs such as common cat's-ear (*Hypochaeris radicata*), creeping buttercup (*Ranunculus repens*) and daisy (*Bellis perennis*). A concrete path bisects the lawn. More extensive lawn areas exist within the gardens to the west of the existing dwelling.

e) Climbers

Some climbers are growing on the walls of the cart shed/garage including passionflower (*Passiflora sp.*) on the east elevation.

4.3.2

Amphibians and reptiles

a) Ponds

A former pond P1 (Photo 8) was found to the rear of the house, though it was dry and unsuitable for breeding GCN and does not look to have held water in a long time (Google Earth Pro). Pond P2 is a small ornamental pond located to the north, whilst P3 was choked with vegetation and heavily shaded (2000 as shown on Google Earth Pro) and then cleaned out and later extended. It is very turbid and likely to support fish. Pond P4 no longer exists no evidence of a pond on aerial photos after 2000.

b) Terrestrial habitat

i) *Amphibians*

The site itself provides largely suboptimal terrestrial habitat for amphibians within the hard standing areas and the existing cart shed/garage. Lawn areas are suitable for foraging at night during rainfall or heavy dews, whilst shrubs and hedgerows providing

potential refuge and dispersal opportunities. Animals may also forage in adjacent gardens.

An area of long grass with pathways cut through it exists to the north (Figure 3) which provides optimal foraging habitat.

ii) Reptiles

Local historical records exist within 2km for slow-worm (*Anguis fragilis*). The rear garden supports potential (though suboptimal) foraging, refuge, and dispersal habitats for reptiles in the hedgerows and around the edges of the dry pond (e.g., ephemeral vegetation and shrubs) which may be used. However, the lawn is regularly mown and does not afford adequate cover for slow-worm and other species such as common lizard, which prefer a mosaic of rough/tussocky grassland and scattered scrub. Common lizards are also less often found in residential gardens due to being vulnerable to cat predation.

When considering the above factors, the overall habitat suitability for reptiles was assessed as low, and perhaps limited to the occasional individual (grass snake) dispersing through the adjacent gardens.

4.3.3

Bats

a) Building inspection

The pantile roof features several gaps between the tiles which allow access into the roof void above the garage section where the tiles are lined with mostly traditional bitumen underfelt. The open-fronted section (Photo 9) of the former cart shed provide access into the building interior, though the absence of an under/felt makes the tiles themselves unsuitable for roosting bats, though bats may roost under the ridge tiles. Gaps also exist around the wooden doors.

BLE droppings and feeding remains (Photo 10) were found at the top of the stairs at the southern end of the former cart shed, with further droppings on the interior of the east wall of a storage area the garage.

The cart shed/garage was assessed as providing moderate bat roosting potential with it likely supporting occasional roosts used by single BLEs and possibly pipistrelles. No large roosts are believed present, with no significant aggregations of droppings in the roof void or externally on the walls below access points.

b) Tree Roost Assessment

No trees require felling which support potential bat roosts.

c) Foraging/commuting habitat

The proposed cart lodge will require the felling of some trees and shrubs, whilst the new outbuilding requires the removal of some mature conifers along the southern site boundary which are considered of low to moderate bat commuting/foraging habitat. Several mature trees exist within the rear garden and together with boundary hedgerows afford moderate commuting habitat value for bats and are connected to other areas of suitable habitat in the wider landscape. Foraging potential was assessed as negligible, while commuting habitat is low.

4.3.4

Nesting birds

The interior of the cart shed provide suitable nesting locations for swallow (*Hirundo rustica*) (Amber List), with old nests found inside the building (Photo 11). No evidence of other hirundines such as house martin (*Delichon urbicum*) was recorded. A passerine nest (Photo 12) was also found on the interior frame.

No evidence of nesting or roosting barn owl was recorded.

The hedgerow north of the garage could provide cover for small passerine nests, including those of dunnock (*Prunella modularis*) (Amber List) and house sparrow (*Passer domesticus*) (Red List; S. 41). The climbing passionflower on the garage wall could also provide cover for a similar range of species as well as spotted flycatcher (*Muscicapa striata*).

4.3.5 *Badger*

No evidence of badger (e.g. snuffle holes, runs, latrines, setts) was observed.

4.3.6 *S. 41 habitats and species*

a) Habitats

No S. 41 habitats were recorded on site.

b) Species

The site itself offers little foraging potential for hedgehogs, but individuals may commute through the site to access neighbouring gardens and hedgerows. Hedgerows and mature trees could support some S. 41 list invertebrates.

4.3.7 *Non-native invasive plants*

No non-native invasive species were recorded within the application site boundary.

4.4 **GEOGRAPHIC CONTEXT**

The geographic context of a feature is a useful consideration within an assessment of impacts. For this report, the geographic frames of reference for the habitats and species present on site are provided in Table 4.3; values are based upon the criteria in Table A2.1 and expert best judgements.

Table 4.3 Feature value based on geographic context

Feature	Value
Lawn, ruderal vegetation, trees, shrubs and hedgerows.	Local
Amphibians and reptiles	Local
Bats	Local
Nesting and foraging birds	Local
S. 41 habitats and species	Local

5 Assessment and recommendations

5.1 INTRODUCTION

The following section provides a summary description of the proposed development, with an assessment of associated impacts and likely significant effects upon biodiversity.

The assessment and recommendations are based on use of the mitigation hierarchy, which in the first instance aims to avoid impacts. Where impacts cannot be avoided, they should be minimised (through mitigation). Only where impacts cannot be avoided or minimised should there be compensation for biodiversity harm.

Ecological enhancements are suggested, and consideration is given to individual as well as overall net gains or losses of biodiversity.

5.2 DESCRIPTION OF PROPOSED DEVELOPMENT

Planning permission is being sought to convert an existing former cart shed (northern section) and garage (southern section) into ancillary accommodation for the existing 'Sparrows'. A new detached cartlodge is proposed to the north and an outbuilding and brick wall adjacent to the southern site boundary.

The proposals are expected to result in the loss of a small area of lawn, the removal of some mature conifers along the southern site boundary, and some of surrounding habitat, though there is potential for the works to impact any bats roosting within the dwelling.

The assessment and recommendations below provide preliminary recommendations for mitigation and enhancements for the proposed development. They are based on drawings available at the time of writing provided by Roger Balmer Design as follows:

- Site/Block Plan as Existing (Drawing No: 1121 – 02);
- Plans and Elevations as Existing (Drawing No: 1121 – 03);
- Site/Block Plan as Proposed (Drawing No: 1121 – 04);
- Cartlodge Plans and Elevations as Proposed (Drawing No: 1121 – 05);
- Garage Plans and Elevations as Proposed (Drawing No: 1121 – 06); and
- Outbuilding Plans and Elevations as Proposed (Drawing No: 1121 – 07).

The report should be updated accordingly if the scheme is subsequently amended.

5.3 NEED FOR FURTHER SURVEYS

Given the potential for roosting bats to be present within the cart shed/garage, as identified during the visit, bat emergence and/or re-entry surveys will be required in order to inform the need for an EPS licence and avoid the unlawful destruction of one or more potential bat roosts.

It is generally advised that subject to no significant change in site management regimes, and dependent on the species present, baseline survey results remain valid for approximately 12 – 18 months (CIEEM, 2019). Exceptions include where mobile species are/may be present, where site management practices cease or change, or where existing guidance indicates otherwise.

5.4

ASSESSMENT OF IMPACTS

The EclA assessment process (CIEEM, 2018) involves:

- Identifying and characterising impacts and their effects;
- Incorporating measures to avoid and mitigate negative impacts and effects;
- Assessing the significance of any residual effects after mitigation;
- Identifying appropriate compensation measures to offset significant residual effects; and
- Identifying opportunities for ecological enhancement.

The emphasis in EclA is on the assessment of 'significant effects' i.e. an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. In broad terms significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species including extent, abundance, and distribution.

The ecological features to be subject to detailed assessment in this report are those judged to be important and potentially affected by the project; protected species are included where the development will result in a potential breach of legislation.

5.5

HABITATS AND VASCULAR PLANTS

a) Potential impacts

The works will be restricted primarily to the lawn and hard standing immediately around the cart shed/garage along with some tree, shrub and ruderal vegetation removal to the north where the new cart lodge is proposed. A line of mature conifers will require removal along the southern site boundary to allow the construction of the proposed outbuilding. Together these losses are considered a significant effect at the local level.

Any accidental damage to retained trees/shrubs, hedgerows, and areas of lawn during construction would result in a significant negative effect at the local level.

b) Mitigation

The works footprint and associated disturbance should be minimised in extent as much as possible. Retained hedgerows, trees and grassed areas should be protected with temporary fencing (e.g., Heras) to prevent above ground damage and Root Protection Areas (RPAs) should be used to inform the detailed design.

The builder's compound/welfare unit (if required) should be sited off the grassed areas.

c) Residual effects

There will be a small residual loss of trees, shrubs and lawn habitat which requires compensation.

5.6

AMPHIBIANS AND REPTILES

a) Potential impacts

Ground-breaking and construction activities, in addition to limited vegetation clearance, could result in the potential entrapment, injury and mortality of amphibians (including potentially GCNs) through contact with caustic substances (e.g., wet cement), trenches (e.g., sewerage and surface water drainage runs), and movement of stored building materials.

During the operational phase site drainage comprising the use of gully pots and down pipes connecting to closed surface water drainage or those with silt traps can result in animals becoming trapped (Muir *et al.*, 2012) and impact upon amphibians.

Combined, such impacts could result in permanent negative effects upon low numbers of individuals.

b) Mitigation

See section 5.5.

To avoid impacts upon amphibians, including potentially GCNs, good practice precautionary methods should be followed for the scheme, to include the following measures:

1. The GCN poster in Appendix A4 should be erected in the welfare facilities provided for construction staff on site.
2. Should any GCNs (Appendix A4) be encountered within the working area or site compound works should stop immediately, and advice be sought from a suitably experienced ecologist. Any other animals should be allowed to move out of the works area, or safely relocated.
3. Areas of lawn immediately adjacent to site should be kept short with regular mowing prior to and during construction.
4. Excavations should be filled on the same day they are dug or covered overnight with ply boarding and any gaps filled with damp sharp sand;
5. If this is not feasible access ramps should be created to allow animals to escape and the excavations should be inspected daily and immediately prior to infilling. Any animals (except for GCN) present should be moved into retained hedgerows and/or other boundary habitats providing adequate cover;
6. Footings and concrete slabs should be poured during the morning where possible to ensure it has solidified prior to dusk to reduce the risk of animals coming into contact with wet concrete;
7. Any hand mixing of mortar or concrete should be on ply boarding over a tarpaulin which is folded over the boarding at the end of each day to prevent animals coming into contact;
8. Any excess concrete should be poured into a concrete skip, so it can then set to prevent animals coming into contact; and
9. All building materials and waste materials should be stored on hardstanding or stored off the ground on pallets to reduce risk of animals seeking refuge.

Downpipes taking water off the roofs should be sealed at ground level by using a leaf and debris screen⁸ to prevent amphibians entering drains.

c) Residual effects

With mitigation measures proposed, no significant effects are anticipated during either the construction or operational phases.

5.7

BATS

a) Potential impacts

i) Roosting bats

The proposed works will result in the destruction of a BLE feeding perch/night roost within the garage. This would be considered a significant effect at the local level.

⁸ <https://www.drainagepipe.co.uk/leaf-and-debris-gully-110mm-p-D94G/>

ii) Foraging and commuting habitats

The loss of some mature conifers and some native broad-leaved trees to the north of the cart shed/garage will result in the loss of low to moderate bat commuting/foraging habitat. Limited vegetation clearance combined with the retention of hedgerows mean no significant impacts are anticipated.

iii) Light disturbance

Lighting (construction and operational phases) can impact bat commuting and foraging behaviour and increase the risk of predation, which could affect foraging success and population recruitment considered a potential significant effect at the local level.

Lighting impacts relate to security lighting external to the buildings, and potentially from light spillage resulting from internal lighting once the buildings are in use. In this instance, impacts on the adjacent hedgerows and broadleaved trees are most relevant.

iv) Roofing membranes

Research has shown bats can become entangled in modern breathable roofing membranes if used under clay pantiles or peg/plain tiles (Waring *et al.*, 2013) or behind weatherboarding. Without mitigation, the impacts above could result in significant effects at a local scale.

b) Mitigation

i) Roost disturbance/loss

To ensure offences are avoided, bat surveys during May – September 2022 are recommended. These will confirm the nature of bat roosts within the cart shed/garage and inform a subsequent European Protected Species (EPS) mitigation licence application (if required).

ii) Foraging and commuting habitat

As per 5.5, protective fencing will be used to protect retained trees and other features.

iii) Light disturbance

Exterior lighting (as well as temporary security lighting during the construction phase) design must minimise lighting impacts upon retained natural habitats including boundary hedgerows and trees, particularly to the east of the site, and should follow current guidance as necessary^{9,10}:

- *Type of lamp (light source)*: Light levels should be as low as possible as required to fulfil the lighting need. Lighting should have a maximum of 7.5 to 10 lux and LED lights should be used using the warm white (or amber) spectrum, with peak wavelengths >550nm (2700 or 3000°K) and no UV component; and
- *Lighting design*: Lighting should be directed to where it is needed, with minimal horizontal spillage towards retained habitats including mature broadleaved trees and hedgerows. This can be achieved by restricting the height of the lighting columns/fixtures and the design of the luminaire, including the following measure:
 - ❖ Light columns/fixtures in general should be as short as possible as light at a low level reduces the ecological impact.

⁹ <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting>

¹⁰ www.eurobats.org/sites/default/files/documents/publications/publication_series/WEB_DIN_A4_EUROBATS_08_ENGL_NVK_28022019.pdf

- ❖ Luminaires with an upward light ratio of 0% should be mounted on the horizontal i.e. with no upward tilt.
- ❖ If taller lights are required, and as a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill; and
- ❖ PIR movement sensors and timers should be used to minimise the 'lit time'.

c) Residual effects

Dependent on the survey outcome, residual effects will either be negligible or significant and require compensation.

5.8

NESTING BIRDS

a) Potential impacts

Conversion of the cart shed/garage will result in the loss of suitable nesting habitat for a variety of garden and farmland species, including swallow, house sparrow and potentially rarer species such as spotted flycatcher should existing climbers on the external walls require removal considered a negative effect at the local level.

The commencement of building works including any tree/shrub/climber removal could result in the disturbance of nesting birds (in the process of building a nest) and the destruction of the nest and injuring/killing of any dependent young which would be a significant negative effect (an offence under the WCA 1981).

b) Mitigation

Habitat avoidance and mitigation as per sections 5.5 and 5.6.

Commencement of the building works and any tree/shrub clearance) should take place outside of the nesting bird season. If this is not feasible, a check for nesting birds should be undertaken prior to works starting. If any active nests are present, works within 5m must wait until the young have fledged.

c) Residual impact

Direct impacts on nesting birds will be avoided. However, the loss of suitable nesting habitat requires compensation.

5.9

OTHER S. 41 LIST HABITATS AND SPECIES

a) Potential impacts

The required tree and shrub clearance will result in the permanent loss of potential hedgehog refuge habitat, whilst construction works could accidentally damage retained areas of foraging (e.g., lawn) and refuge (e.g. hedgerows and trees) habitat for hedgehogs.

During construction, hedgehogs could potentially fall into open trenches resulting in entrapment and possible injury and mortality of individuals due to falling in or becoming in contact with caustic substances such as fresh concrete.

Erection of ecological barriers (e.g., timber panel fencing) would affect foraging access for animals. In combination such impacts would be considered to result in a negative ecological effect at the local level.

Combined, the above impacts would result in negative effects upon local individuals.

b) Mitigation

Habitat avoidance and mitigation as per section 5.5 and 5.6. Site clearance should always consider the potential presence of hedgehogs with vigilance, with no clearance of dense vegetation undertaken when temperatures are regularly below 6°C. Animals encountered at other times should be moved to suitable cover, e.g. base of hedgerows.

During construction, concrete should be poured early in the day or covered with ply boarding or membrane overnight to prevent animals coming into contact. Trenches should be covered overnight, or mammal ladders (large rough planks placed at shallow angles) placed to allow animals escape. Uncovered trenches must be checked daily and any animals encountered be relocated out of the works area.

The use of close board fencing should be minimised, with native species-rich hedgerows preferable where boundary features are required. If close board fencing were to be installed, then at least one hedgehog highway¹¹ should be provided at either end of the fencing run with signage.¹²

c) Residual effects

Direct impacts upon hedgehog will be avoided with no significant residual impacts.

5.10

COMPENSATION

Compensation for the loss of bat roosts will be decided following bat emergence and/or re-entry surveys, but would include the provision of some bat boxes (Appendix A5) incorporated into the walls of the converted cart shed/garage and on mature trees:

- Kent Eco bat boxes;
- Integrated bat boxes;
- Vincent Pro boxes; and
- Schwegler 1F boxes.

To compensate for the loss of bird nesting habitat:

- Three swallow nest cups^{13,14} must be incorporated into the open-fronted section of the proposed cartlodge beneath a suitable overhang (location to be agreed with suitably qualified ecologist) or access could be provided into the roof void; droppings boards¹⁵ can be fitted if fouling is an issue; and
- Two open-fronted bird boxes (Appendix A6) suitable for robin and wren and a sparrow terrace must be mounted on suitable trees or the walls of the new cartlodge and outbuilding.

Tree planting is required to offset the losses required for the proposed cartlodge. Native species should be used as follows:

- Wild service tree (*Sorbus torminalis*);
- Whitebeam (*S. aria*);
- Wayfaring tree (*Viburnum lantana*);
- Small-leaved lime (*Tilia cordata*);

¹¹ <https://www.hedgehogstreet.org/help-hedgehogs/link-your-garden/>

¹² <https://ptes.org/shop/just-in/hedgehog-highway/>

¹³ <https://www.nhbs.com/woodstone-swallow-nest-bowl/>

¹⁴ <https://www.nhbs.com/vivara-pro-woodstone-swallow-bowl/>

¹⁵ <https://www.nhbs.com/schwegler-droppings-board-for-house-martin-swallow-nests>

- Black poplar tree (*Populus nigra*)
- Wild cherry (*Prunus avium*);
- Bird cherry (*P. padus*); and
- Spindle (*Euonymus europaeus*).

The loss of the line of mature Leyland cypress trees/hedge will be compensated through the proposed hedgerow planting once it has matured. Some additional mixed native hedgerow planting could be considered to mark the western site boundary of the applicant's land ownership.

5.11 CUMULATIVE EFFECTS

The Babergh District Council website was searched on the 29 November 2021 for significant planning applications within 1km of the application site dating back by two years. Refused and withdrawn applications were not considered in relation to cumulative ecological effects.

The search returned a small number of applications for extensions/alterations to existing dwellings. Given the scale and type of the applications identified, no significant cumulative effects are considered likely.

5.12 ENHANCEMENT OPPORTUNITIES

Table 5.1 details a number of suggested enhancement measures which could be implemented to maximise biodiversity gains. A minimum of one of the options will be implemented.

Table 5.1 Biodiversity enhancement options

Feature	Enhancement
Breeding birds	<ol style="list-style-type: none"> 1. Sparrow terraces (Appendix A6) could be mounted on the west elevation of the new outbuilding or the new cart lodge. 2. A barn owl box or kestrel box (Appendix A6) could be mounted on mature trees along the northern boundary of the site overlooking an area of long grassland where pathways are mown. 3. A spotted flycatcher nest box could be erected on the east elevation of the converted cart shed/garage within the existing passion flower if it is retained, or an open fronted box could be erected on the north or east elevation of the proposed cart lodge. If the latter, a native or ornamental climber e.g., evergreen clematis (<i>Clematis sp</i>) or honeysuckle could be planted to grow up to provide cover round the box.
Nectar rich climbers for pollinators	<ol style="list-style-type: none"> 4. Any ornamental planting should utilise nectar rich plants for the benefit of pollinators and associated predators (e.g., foraging bats and hedgehogs). Planting should include nectar rich climbers such as traveller's joy (<i>Clematis vitalba</i>) and honeysuckle (<i>Lonicera periclymenum</i>), which could be planted at 5m intervals along existing and proposed hedgerows or trained up fences, posts, or trellises.
Hedgerow planting for birds, mammals, and invertebrates	<ol style="list-style-type: none"> 5. In addition to the proposed hornbeam hedgerow, additional hedgerows could be planted using a minimum of 6 of the following species:

	<ul style="list-style-type: none"> • Beech; • Hawthorn; • Hazel; • Holly; • Hornbeam; • Crab apple (<i>Malus sylvestris</i>); • Dog rose (<i>Rosa canina</i>); • Field maple (<i>Acer campestre</i>); • Common dogwood (<i>Cornus sanguinea</i>); • Guelder rose (<i>Viburnum opulus</i>); and • Wild privet (<i>Ligustrum vulgare</i>).
Fruit trees for pollinators, birds and mammals	6. A minimum of 6 heritage fruit trees ¹⁶ could be planted within the existing gardens at Sparrows. Cordon or espaliers could be planted against building or used to mark pathways.
Amphibians, reptiles and mammals	7. Log and brash piles (Appendix A7) should be created from any felled trees and located a suitable on-site location, e.g., within the area of long grass with pathways to the north or by the former pond P1, to provide suitable refuge and hibernation sites for common amphibians, reptiles and potentially hedgehog.

Peat-based composts must not be used in any of the proposed landscape planting.

5.13

CONCLUSIONS

Subject to securing the relevant NE licence(s) the proposed mitigation, compensation and enhancement measures will ensure the proposed scheme avoids net losses of biodiversity and will maximise biodiversity enhancements provided.

Measures proposed should be secured through appropriate planning conditions as per the British Standard (BS 42020:2013¹). These could include conditions specific to bats (D.6.2 Submission of a copy of the EPS licence), nesting birds (e.g., BS 42020:2013 D.3.2.1) or a Biodiversity Method Statement (BS 42020:2013 D.2.1) to provide detailed guidance for mitigation, compensation, and enhancement measures.

¹⁶ <https://www.applesandorchards.org.uk/>

6 References

CIEEM (2017) Guidelines for Ecological Report Writing. Second edition. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2019) Advice Note: on the lifespan of ecological reports and surveys.

CIRIA, CIEEM and IEMA (2016) Biodiversity Net Gain: good practise principles for development.

Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition), Bat Conservation Trust, London.

JNCC (2010) Handbook for Phase 1 habitat survey – A technique for environmental audit, JNCC, Peterborough.

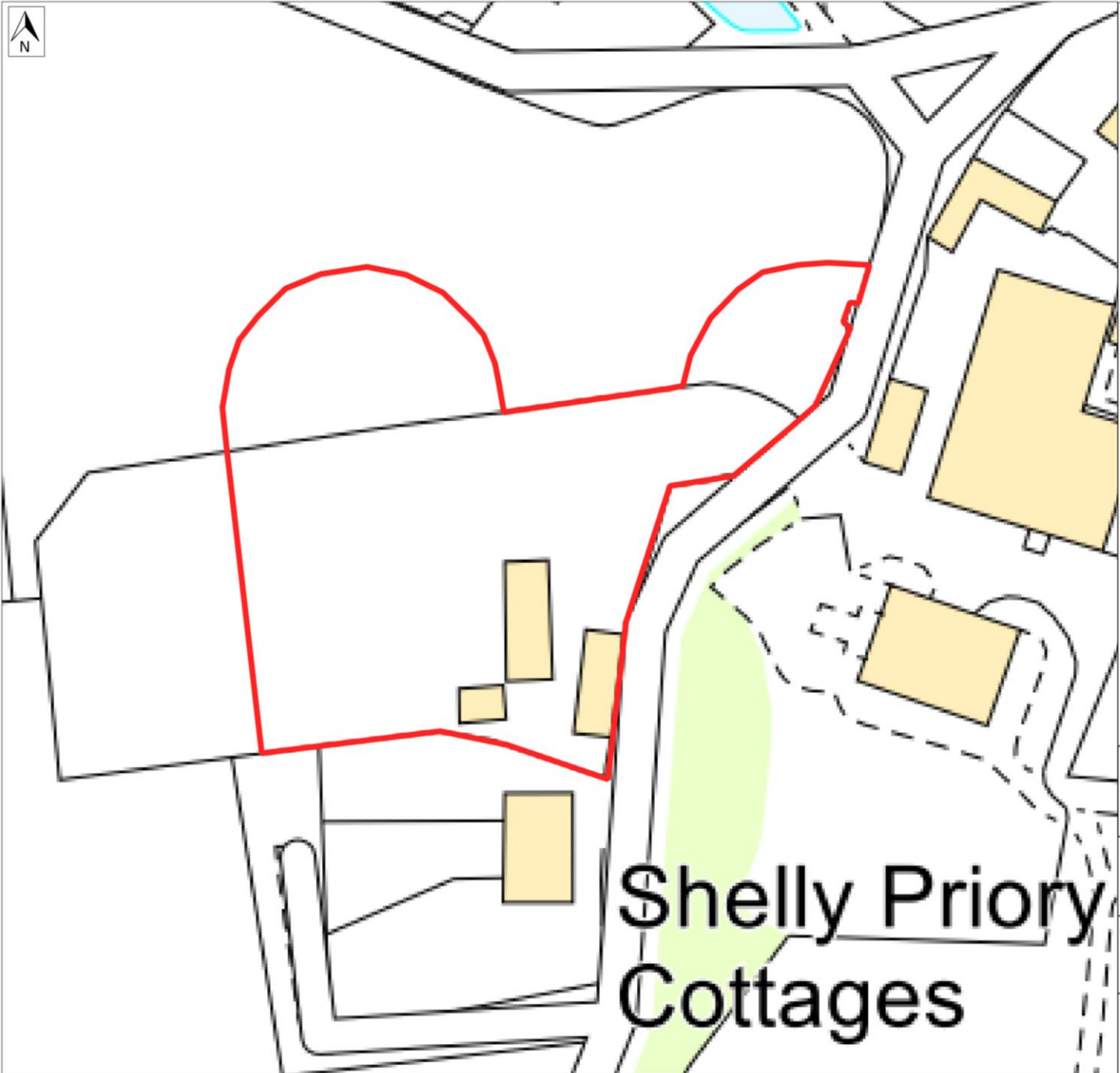
Muir D. (2012), Amphibians in drains project report summary. Biodiversity News, 59, 16-18.

Scottish Badgers (2018) Surveying for Badgers: Good Practice Guidelines. Version 1.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021) The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds*, 114, 723-747.

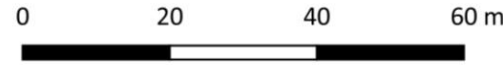
Waring, S., Essah, E., Gunnell, K. and Bonser, R. (2013) Double jeopardy: the potential for problems when bats interact with breathable roofing membranes in the United Kingdom. *Architecture & Environment*, 1 (1). pp. 1-13.

Figures



Legend

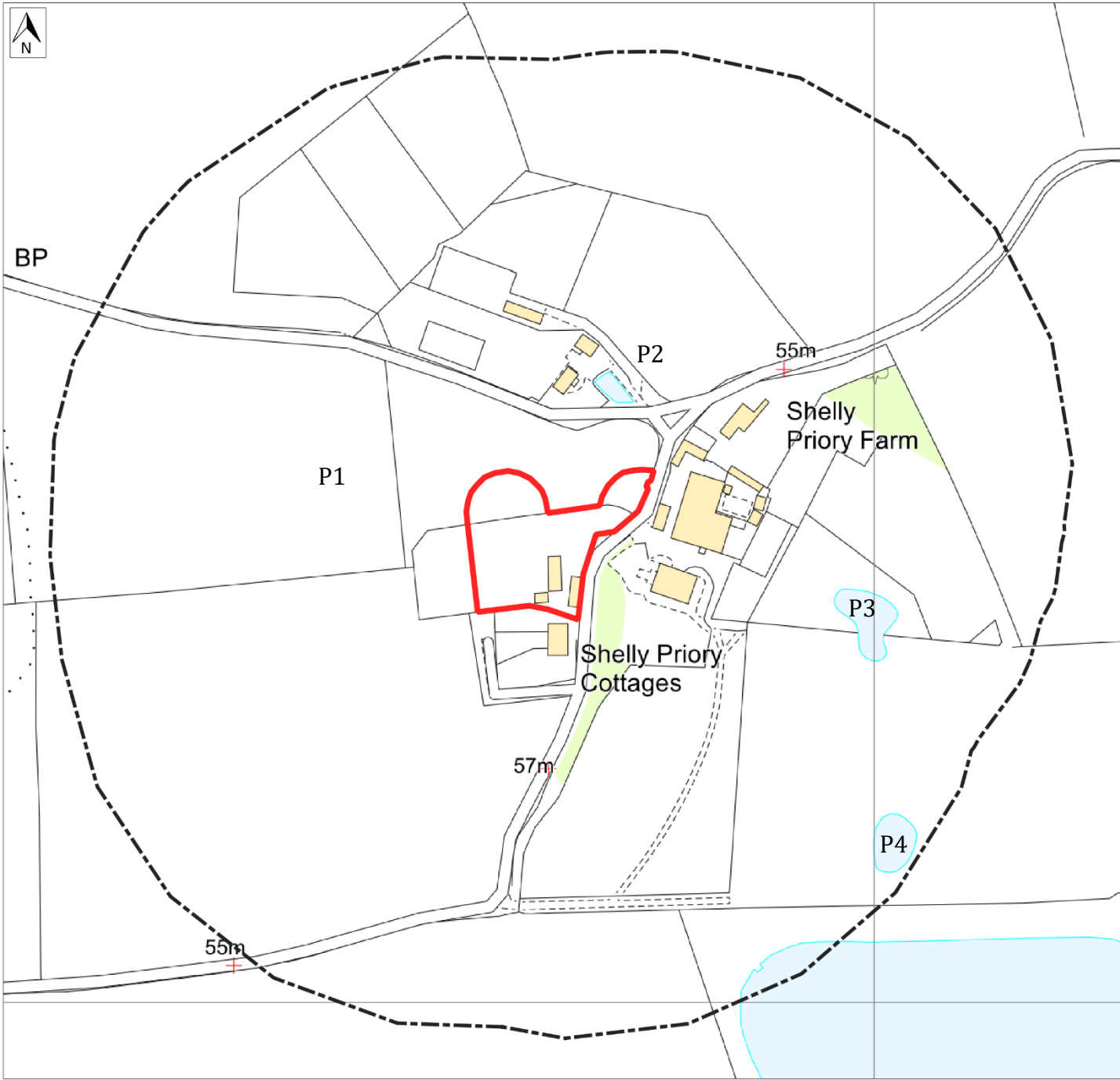
 Application site boundary



Project: Sparrows, Shelley, Suffolk

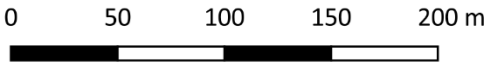
Drawn:	Date:	Drawing Ref:
JB	02/12/21	SPARROWSHELLEY/01

Figure 1 Site location plan



Legend

- Application site boundary
- 250m site buffer



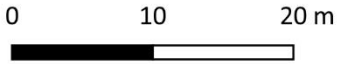
Project: Sparrows, Shelley, Suffolk

Drawn:	Date:	Drawing Ref:
JB	02/12/21	SPARROWSSHELLEY/02

Figure 2 Ponds plan



Legend



Client: Mr and Mrs Duckworth-Chad

Project: Sparrows, Shelley, Suffolk

Drawn:	Date:	Drawing Ref:
JB	26/11/21	SPARROWSSHELLEY/03

Figure 3 Habitats plan

Appendices

Appendix A1 Photos



Photo 1 South and east elevation of garage and cart lodge



Photo 2 West elevation



Photo 3 North gable end of cart lodge



Photo 4 West elevation of garage and cart lodge – panoramic view



Photo 5 Main car parking area and access drive

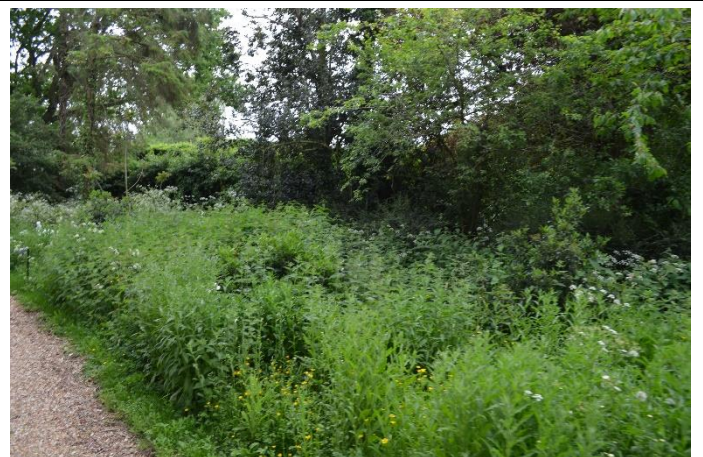


Photo 6 Ruderal vegetation by roadside hedgerow and trees



Photo 7 Hedgerow and trees to north of the cart lodge and garage along with some lawn



Photo 8 Former pond to rear of back garden with lawn and scattered trees



Photo 9 Internal view of the cart shed



Photo 10 Brown long-eared feeding perch

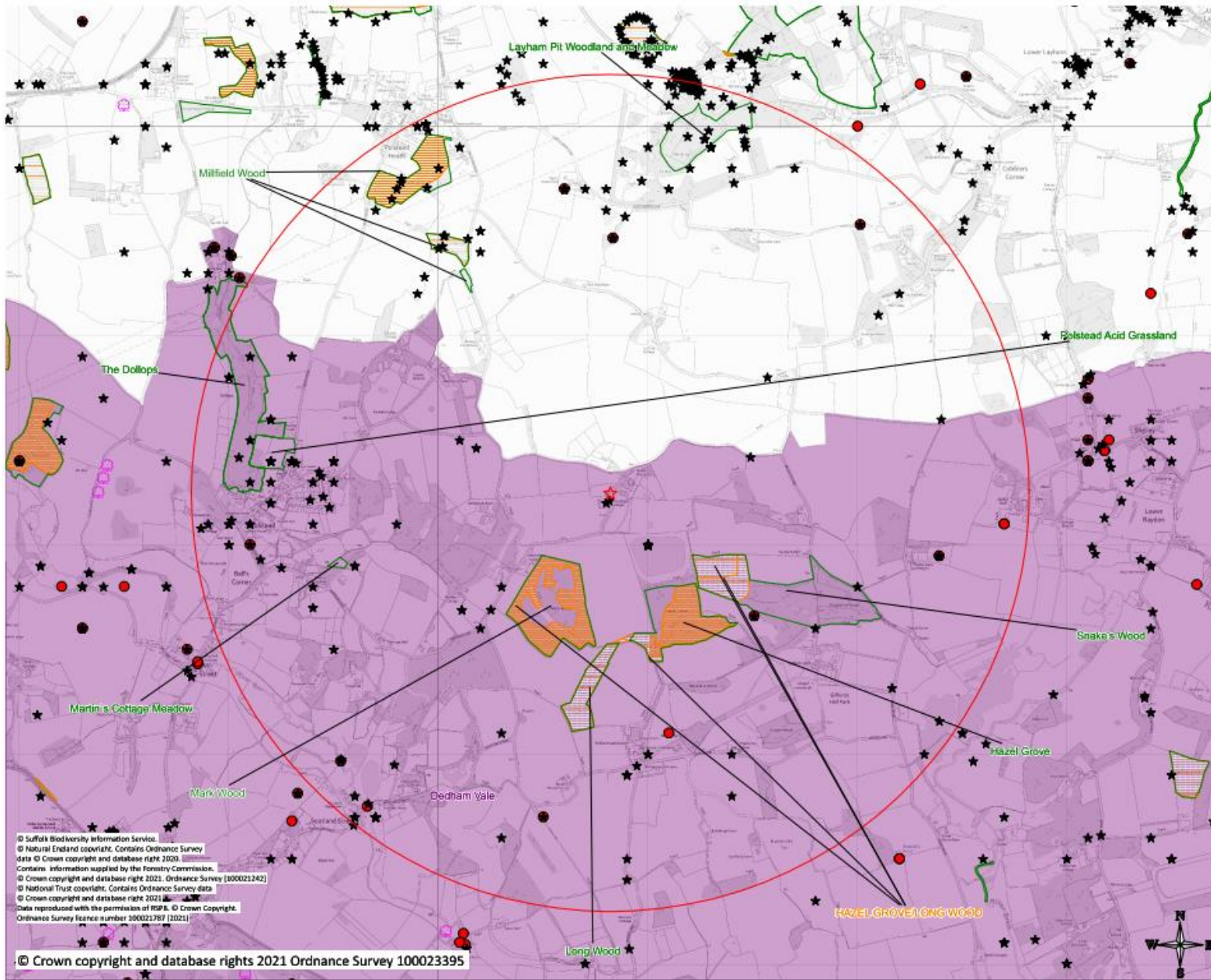


Photo 11 Interior of pantile roof, showing gaps, absence of roofing membrane and swallow nest adjacent to ridge



Photo 12 Northern room in garage Remains of passerine nest in wooden frame

Appendix A2 SBIS data search map



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

- ☆ Record Locations

Roadside Nature Reserve

-

County Wildlife Sites

-

County GeoSites

-

SSSI

-

LNR

-

SPA

-

SAC

-

RAMSAR

-

NNR

-

SWT Reserve

-

Ancient Woodland Inventory

-

AONB

- Suffolk Coast and Heaths or Dedham Vale

National Park

- The Broads

Other Public or Conservation Ownership/Management

- Forestry Commission, National Trust (public access), RSPB (public access)

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 Contains information supplied by the Forestry Commission.
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 Ordnance Survey licence number 100021767 (2021)

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Scale report: 1:18,000



Suffolk Biodiversity Information Service

Date: 29/11/2021 | Drawn by: Andy Mercer

MHE Consulting (Sparrows Hall, Shelley TM 00820 38247) 2km Data Enquiry

Appendix A3 EclA criteria

A3.1 General criteria for geographic context/value

Designation	Example
International	<ul style="list-style-type: none"> • SPA, SAC and Ramsar sites and the features that they have been designated for. • A sustainable area of habitat listed in Annex I of the Habitats Directive or smaller areas of such habitat which are essential to maintain the viability of a larger whole. • A sustainable population of an internationally important species e.g. UK Red Data Book (RDB) species or European Protected Species (EPS) of unfavourable conservation status in Europe (e.g. Annex II species: bats, GCNs etc.), of uncertain conservation status or of global conservation concern in the UK BAP.
National	<ul style="list-style-type: none"> • SSSI or a discrete area that meets the selection criteria for designation. • A sustainable area of priority habitat identified included on the S. 41 NERC Act list or smaller areas of such habitat that are essential to maintain the viability of a larger whole. • A sustainable population of priority species (listed under S. 41 of the NERC Act 2006). • A sustainable population of a nationally important species i.e. RDB species not included in above category but which is listed on Schedules 5 or 8 of the WCA 1981 (as amended). Also, sites supporting a breeding population of such species or supplying a critical element of their habitat requirements. • A sustainable population of uncommon or threatened Annex IV EPS species at a UK level. • A nationally scarce species (occurs in 30-100 10km squares in the UK) that has its main UK population within the district.
County	<ul style="list-style-type: none"> • A viable area of habitat identified in the county BAP. • A County Wildlife Site. • A sustainable population of common or non-threatened Annex IV EPS species at a UK level. • A Nationally Scarce species that does not have its main population within the county. • Any BAP species not included in the 'national' category above for which a county Action Plan exists.
Local	<ul style="list-style-type: none"> • Individual members of local populations of priority or other nationally/internationally important species which are not in themselves key for maintaining a sustainable population (e.g. individual dog otter passing through area with no holts or resting sites). • Other habitats and species not in the above categories but are considered to have some value at the district/borough level.

Appendix A4 GCN poster

Great Crested Newt

If seen by any employee, works must cease immediately and an ecologist be contacted for advice

It is an offence to intentionally or recklessly disturb, injure or kill great crested newts

Further information can be found at www.arguk.org



https://secure.telegraph.co.uk/multimedia/archive/03435/great_crested_newt_3435922k.jpg

Appendix A5 Bat boxes



Integrated eco bat box (crevice)



2F Schwegler Bat Box



Vincent Pro bat box



Schwegler 1FE



Access to the bat boxes cut into the weather boarding. The holes can be cut by scalloping the underside of the board where it covered the board below to reduce water ingress



Ibstock integrated bat box



Woodstone multi-chamber box



Eco Kent bat box

Appendix A6 Bird boxes

RSPB Sparrow terrace nest box Qty 1



Product Code: R407816 **£ 29.99**


In Stock [ADD TO BASKET](#)

Product Information | Product details | Ratings & Reviews

PROMOTIONAL NEST BOXES!

- Add two promotional nest boxes to your basket to save £2
- Offer ends 5th January 2020 and is subject to availability
- Loyalty points can be collected/redeemed as usual
- Not available in conjunction with any other offer



Welcome to the RSPB online shop

Save nature while you shop

Favourites | Compare Products | Sign In | Account


My basket: (0) ITEM £0.00 [CHECKOUT](#)

Bird food
Birds & wildlife
Binoculars & scopes
Gifts & home
Sale & offers
New

Standard UK delivery £3.95 or free for orders over £75

Got a catalogue? Use [Quick order](#)

Home > RSPB Robin and wren diamond nestbox Order online or call us on 0345 034 7733



RSPB Robin and wren diamond nestbox

£12.99 Qty 1 In stock [ADD TO BASKET](#)

Product information | Advice | Specifications | Delivery Returns

Best-selling, diamond shaped, open-fronted nest box attractive to robins, wrens, pied wagtails and spotted flycatcher.


Beautifully made from FSC timber; roof treated with safe, non-toxic, water-based preservative. UK made.

UK MADE


FSC

Installing your nestbox

For secure and stable fixing, there are two hanging tabs attached to the



Home | About Us | Other Services | Gallery | Contact



Open Fronted Nest Box

£25.00

For birds such as robin and pied wagtail. Open fronted but with a generous canopy to screen from aerial predators. Place in good cover not in the open.

43 in stock

- 1 + [Add to basket](#)

Category: bird and bat boxes

Description | Additional information | Reviews (1)

Description

Height tbc

Width

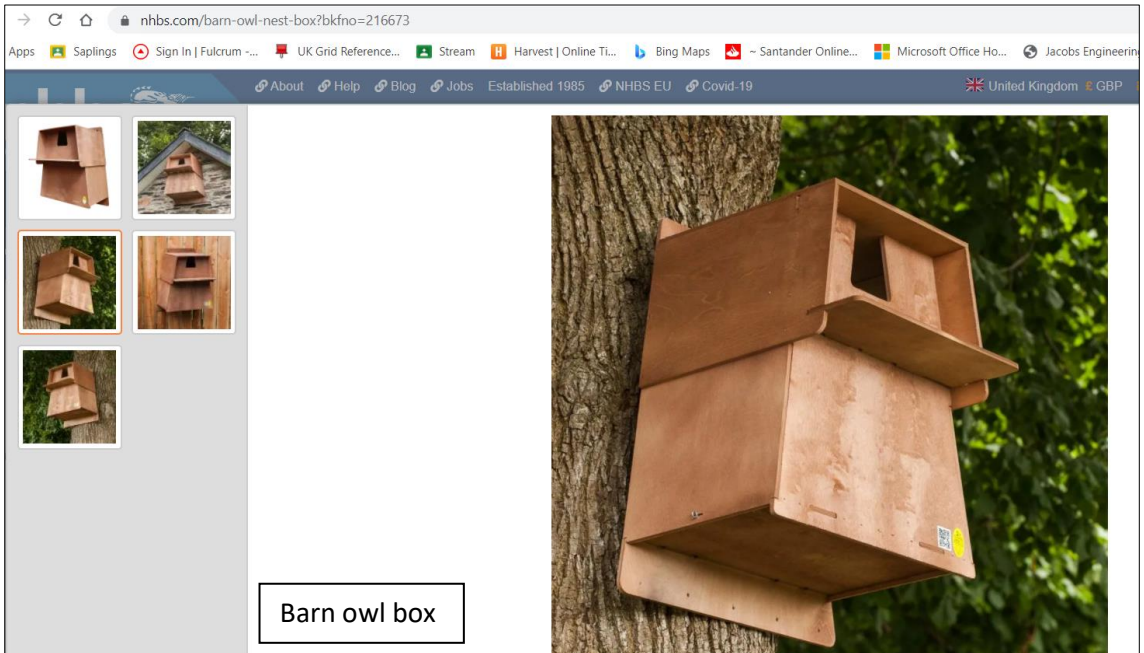
Depth

Typical Weight

nhbs.com/barn-owl-nest-box?bkfno=216673

Apps Saplings Sign In | Fulcrum ... UK Grid Reference... Stream Harvest | Online Ti... Bing Maps ~ Santander Online... Microsoft Office Ho... Jacobs Engineerin

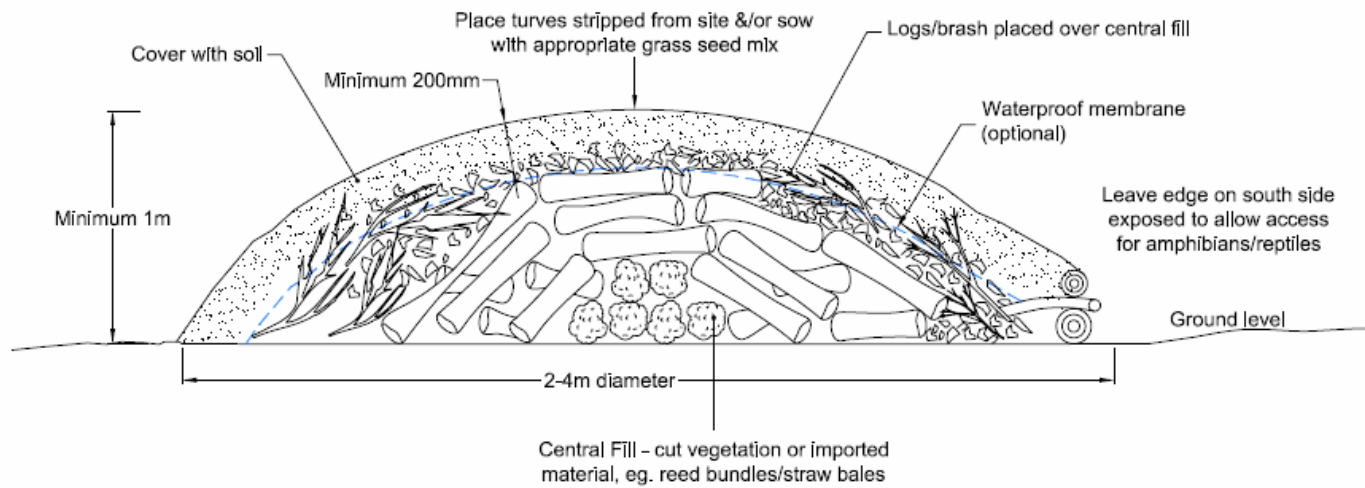
About Help Blog Jobs Established 1985 NHBS EU Covid-19 United Kingdom GBP



Barn owl box



Appendix A7 Amphibian/reptile refugia



Brush/log pile recently created



Brush/log pile (c. 2 years old) with vegetation growing through and over