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## Ecology Report

**PROPOSED RESIDENTIAL DEVELOPMENT**  
**The Old Rectory, Somerton, Bury St Edmunds, Suffolk**

September 2021



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## Contents Amendment Record

**REPORT NUMBER: OLDRIRECTORYSOMERTON/2021/ER/001**

This report has been issued and amended as follows:

Issue	Revision	Description	Date	Signed
1	0	Draft	04/08/2021	A. Gregory
1	1	Final draft	09/09/2021	C. Whiting
1	2	Updated report	15/09/2021	C. Whiting

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# Executive Summary

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of two outbuildings and adjacent land at The Old Rectory, Somerton, Suffolk. A planning application will be submitted to Babergh District Council to convert, connect, and extend two existing artist studios to form a one-bedroom house/studio.

The application site is located off Somerton Road, Somerton and comprises two separate timber framed buildings and a small area of managed lawn within a wider residential garden setting. Adjacent habitats include hedgerows, broadleaved trees, flowerbeds with ornamental shrubs and plants and two ponds.

No evidence of roosting bats or roosting/nesting birds was found in either building with both supporting low bat roosting potential (BRP). The lawn offers some limited foraging habitat for widespread amphibians and hedgehogs (*Erinaceus europaeus*) whilst adjacent habitats (e.g. mature broadleaved trees, hedgerows, flowerbeds and pond) in the wider garden (beyond the applications site boundary) offer nesting, foraging and song perch habitat for common garden birds and foraging, refuge and dispersal opportunities for mammals, invertebrates, amphibians and potentially grass snake (*Natrix helvetica*).

Recommendations are made to avoid wildlife offences and ecological impacts. Where impacts cannot be avoided, measures are proposed to mitigate remaining effects including timing of works and good working practices. Compensation measures and biodiversity enhancements are proposed. Standard planning conditions are referenced to secure the recommended measures.

# 1 Introduction

## 1.1 BRIEF

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of two outbuildings and adjacent land at The Old Rectory, Somerton, Suffolk (TL 81148 53086; Figure 1). A planning application will be submitted to Babergh District Council to convert, connect, and extend two existing artist studios to form a one-bedroom house/studio.

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 application site is located off Somerton Road (Figure 1; Photos 1 to 4) and comprises two separate timber framed buildings set within an area of species-poor lawn with some ornamental shrubs. A combination of a Portuguese laurel (*Prunus lusitanica*) hedgerow and some wooden picket fencing marks the site boundaries.

Habitats in the wider landscape include two ponds (Figure 2; Photos 5 and 6) and residential properties with gardens. Photos of habitats present 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](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, 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 and possible Special Areas of Conservation;
- b) listed or proposed Ramsar sites; and
- c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, 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. Planning policies and supporting documents that are used to plan, deliver and monitor development across the Babergh District area can be found at <https://www.midsuffolk.gov.uk/planning/planning-policy/>.

Babergh and Mid Suffolk District Councils are currently in the process of generating a new joint Local Plan.

## 2.3

### **LEGISLATION**

### 2.3.1

#### *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.

### 2.3.2 *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.

### 2.3.3 *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.

### 2.3.4 *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.

### 2.3.5 *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](http://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 42020:2013<sup>1</sup>);
- Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018); and
- Biodiversity Net Gain: good practise 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, Natural England open source GCN survey data, 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; and
- Historical biological records: species and locally designated site records within 2km of the sites were provided by 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*)<sup>2</sup> and reptiles such as grass snake (*Natrix helvetica*)<sup>3</sup>;
- Mammals including badgers (*Meles meles*)<sup>4</sup> and bats<sup>2</sup>;
- Breeding birds<sup>5</sup> including Red and Amber status<sup>6</sup> species; and
- S. 41<sup>7</sup> list habitats such as hedgerows, and 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 100m of the site boundaries.

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

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

<sup>3</sup> Widespread reptiles and amphibians receive partial protection under the WCA 1981.

<sup>4</sup> Badgers and their setts are afforded protection by the PBA 1992.

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

<sup>6</sup> The conservation statuses of UK bird species are listed within the Birds of Conservation Concern 4 (Eaton *et al.*, 2015).

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

### 3.3 FIELD SURVEY

An initial site walkover was undertaken on 9 July 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 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 sites were 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

Two ponds, P1 (Photo 8) and P2 (Photo 9) located within 250m of the application site (Figure 2) were assessed for their suitability to support GCNs using the Habitat Suitability Index (HSI) methodology as developed by Oldham *et al.* (2000) and modified by Lee Brady. No access was secured to assess two other ponds P3 and P4 (Figure 2) located within 250m.

The terrestrial habitat suitability of the sites was assessed with respect to refugia and foraging habitat based on the known habitat preferences of GCNs 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 sites were assessed with respect to the known foraging and refuge habitat preferences of widespread reptile species.

#### 3.3.3 *Bats*

##### a) Preliminary roost inspection

The buildings were assessed for their suitability to support 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) Foraging and commuting habitat

Consideration is given to the value of any potential foraging and commuting habitats (i.e. hedgerows, trees, ponds) on the application site (Collins, 2016).

#### 3.3.4 *Nesting birds*

The value of the sites 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 sites 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**

All of the site was accessible for inspection.

## 3.5

### **SURVEYORS**

The site assessment was undertaken by Christian Whiting BSc (Hons) MSc MCIEEM MEECW 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 (CL29/00213), 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. He is an agent under the Environment Agency's and IDB water vole 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 Alex Gregory, a mature student studying a BSc in environmental management at Harper Adams University (CIEEM accredited course), currently on an industrial placement with MHE Consulting Ltd. Alex has over 18 months of undertaking field surveys and mitigation in relation to Phase 1 habitat surveys and has assisted on bat, reptile, GCN, water vole, and badger surveys, mitigation, and monitoring projects.

## 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 and nationally designated sites within 5km are identified in Table 4.1. There are no internationally designated sites located within 13km of the application site.

**Table 4.1 Relevant designated sites**

Site name	Designation
Hawkedon Water	CWS
Long Grove	CWS
Thurston Park	CWS
Roadside Nature Reserve 93 and 215	RNR
Cavendish Woods*	SSSI
Frithy and Chadacre Woods*	SSSI
Hay Wood, Wkepstead*	SSSI
Kentwell Woods*	SSSI

\*Listed in the Ancient Woodland Inventory for England

#### Locally designated sites

Three County Wildlife Sites (CWS) and Two Roadside Nature Reserves (RNR) which are located within 2km of the application site are listed below:

- Hawkedon Park CWS is an attractive lake set on the north bank of the River Glem. The lake is partly surrounded by native trees and shrubs with reedbeds, sedges and rushes, including one patch of wood club-rush (*Scirpus sylvaticus*), a plant now very scarce in Suffolk. The lake supports a diverse marginal flora and holds a good number of fish.
- Long Grove CWS is a small ancient woodland thought to be a remnant of a once much larger woodland. Despite its small size, Long Grove supports a relatively diverse ground flora, including several ancient woodland indicators, whilst a dense shrub layer provides optimal habitat for a wide variety of woodland birds, particularly warblers. The wood has been neglected for some time and is used mainly for pheasant rearing.
- Thurston Park CWS is a small area of wet woodland containing two small streams situated on a north facing slope above the River Glem. The wood comprises neglected coppice stands and is divided into four squares by rides that meet in the centre. A rich ground flora has developed at the site including several ancient woodland species and orchids such as twayblade (*Neottia ovata*) and common spotted orchid (*Dactylorhiza fuchsia*). The wood also contains a large pen for rearing pheasants.
- RNR 93 is notable for displaying a rich flora on boulder clay soils.

- RNR 215 is of ecological interest for containing sulphur clover (*Trifolium ochroleucum*).

**Given the scale, nature and location of the development, the proposals will have no or negligible impact on the notable features of the sites (e.g. direct damage or indirectly via air emissions or consented discharges).**

Nationally designated sites

Cavendish Woods SSSI comprises a series of semi-natural ancient woodlands which are actively managed as coppice-with-standards. Ash (*Fraxinus excelsior*)-maple (*Acer campestre*) woodland is the dominant woodland type with oak (*Quercus robur*) the dominant standard tree and smaller areas of maple-ash-lime (*Tilia* sp.) and ash-wych elm (*Ulmus glabra*) also present. The woods support a diverse ground flora, including oxlip (*Primula elatior*), which has a very localised distribution in Suffolk. Numerous small pools and ponds add extra ecological value to the site.

Frithy and Chadacre Woods SSSI comprises three small areas of ancient, semi-natural woodland principally of the wet ash-maple stand type, though areas of hazel are present in some quantity, in addition to numerous other species. The woods support a diverse ground flora and numerous species of breeding bird including three species of woodpecker and nightingale (*Luscinia megarhynchos*).

Hay Wood, Whepstead SSSI is a small ancient coppice-with-standards wood on poorly drained boulder clay soils. It is the most westerly location (known in Suffolk) for small-leaved lime (*Tilia cordata*) and contains the uncommon ash-maple-lime stand type, with localised stands of “Lineage elm”. The wood supports a rich ground flora including the locally scarce species oxlip.

Kentwell Woods SSSI consists of a group of fifteen woods, most of which were associated with the former Kentwell Estate. They contain a considerable range and variety of woodland types which reflects variations in soil type and management. The ground vegetation is typical of ancient woods; it contains several noteworthy species and shows some interesting distribution patterns.

**The application site lies within a SSSI Impact Risk Zone (IRZ) but does not meet the listed criteria to warrant further consultation between the Local Planning Authority and Natural England.**

4.2.2

*Species*

a) Relevant biological records

No protected or notable species records exist for within the application site boundary. Table 4.2 identifies species records for within 2km and 250m (**in bold**) of the application site boundary.

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

Scientific name	Common name	Legal /conservation status
<b>Amphibians and reptiles</b>		
<i>Anguis fragilis</i>	Slow worm	Sch. 5; S. 41
<i>Lissotriton vulgaris</i>	Smooth newt	Sch. 5
<i>Rana temporaria</i>	Common frog	Sch. 5

<i>Triturus cristatus</i>	Great crested newt	EPS; Sch. 5; S. 41
<b>Bats</b>		
<b><i>Pipistrellus pipistrellus</i></b>	<b>Common pipistrelle</b>	<b>EPS; Sch. 5</b>
<i>Pipistrellus pygmaeus</i>	Soprano pipistrelle	EPS; Sch. 5; S. 41
<b>Birds</b>		
<i>Apus apus</i>	Swift	Amber Status
<i>Emberiza citrinella</i>	Yellowhammer	Red Status; S. 41
<i>Falco tinnunculus</i>	Kestrel	Amber Status
<i>Linaria cannabina</i>	Linnet	Red Status
<i>Muscicapa striata</i>	Spotted flycatcher	Red Status; S. 41
<b><i>Passer domesticus</i></b>	<b>House sparrow</b>	<b>Red Status; S. 41</b>
<b><i>Prunella vulgaris</i></b>	<b>Duncock</b>	<b>Amber Status</b>
<i>Pyrrhula pyrrhula</i>	Bullfinch	Amber Status
<i>Scolopax rusticola</i>	Woodcock	Red Status
<i>Strix aluco</i>	Tawny owl	Amber status
<b><i>Sturnus vulgaris</i></b>	<b>Starling</b>	<b>Red Status; S. 41</b>
<i>Turdus philomelos</i>	Song thrush	Red Status; S. 41
<i>Tyto alba</i>	Barn owl	Sch. 1
<b>Other mammals</b>		
<i>Lepus europaeus</i>	Brown hare	S. 41
<i>Erinaceus europaeus</i>	Hedgehog	S. 41
<i>Meles meles</i>	Badger	PBA
<i>Mustela putorius</i>	Polecat	S. 41
<b>Invertebrates</b>		
<i>Coenonympha pamphilus</i>	Small heath	RLGB.Lr(NT); S. 41

#### 4.2.3

##### *Priority habitats*

No priority habitats exist within 100m of the application site boundary.

#### 4.2.4

##### *Additional species data*

Assessment of Natural England's GCN class licence return data and eDNA pond survey records show the closest positive record to be located c. 2.6km north-west of the application site (dated 2015), 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 and the characteristic plants species present are provided below with photos provided in Appendix A1.

##### a) Built environment

###### Studio 1

Studio 1 is a timber framed building with a red pantile mono-pitched roof. The building is currently used as an art studio and has an open-fronted lean-to attached to its east elevation (Photos 1 and 2).

###### Studio 2

Studio 2 (Photos 3 and 4) is a rectangular shaped, single storey building situated to the west of Studio 1. The building has horizontal weatherboarding on the walls and previously had a corrugated cement-asbestos roof, which has recently been replaced with a zinc roof. Ornamental shrubs have been planted along the northern edge of the building and a gravel footpath exists adjacent (Photos 3 and 4).

b) Species-poor lawn

An area of managed species-poor regularly mown lawn exists between the two buildings (Photo 3 and 4). The lawn supports low numbers of common forbs such as common daisy (*Bellis perennis*), selfheal (*Prunella vulgaris*), ground ivy (*Glechoma hederacea*), dandelion (*Taraxacum officinale*), broad-leaved plantain (*Plantago major*) and white clover (*Trifolium repens*). No rare or notable plants were recorded.

c) Boundary features

The western garden boundary is marked by a mature Portuguese laurel (*Prunus lusitanica*) hedgerow (Photo 4) whilst the remaining boundaries are marked by wooden picket fencing.

4.3.2

*Amphibians and reptiles*

a) Amphibians

i) Ponds

Pond P1 (Photo 5) is located c.10m to the west of the application site, on the opposite side of the road. The pond was covered in a dense growth of duckweed which will affect oxygenation of the water and therefore reduce the likelihood of significant populations of GCNs and other amphibians using the pond for breeding. A very macro-invertebrate assemblage was recorded dominated by *Chironomidae* and *Asselidae*. Overall, the pond was assessed as supporting *Below average* GCN HSI score (0.564).

Pond P2 (Photo 6) is a small duck pond located in the Old Rectory gardens c 40m south of application site boundary. The pond is situated adjacent to some areas of suitable terrestrial habitat offering potential foraging, refuge, and dispersal opportunities (e.g., lawn, hedgerows, shrubberies, ditches). However, the presence of waterfowl has impacted macrophyte coverage and reduced the pond's water quality, leaving it slightly turbid. The pond also received a *Below average* GCN HSI score (0.580).

ii) *Terrestrial habitat suitability*

The laurel hedgerow along the western garden boundary and shrubs planted along the edge of Studio 2 provide some limited refuge habitat for amphibians whilst the lawn offers some foraging opportunities for GCNs, smooth newts and to a lesser extent common toad and common frog (*Rana temporaria*).

Adjacent garden areas (beyond application site boundary), including areas of lawn, shrubs, and hedgerows, provide amphibians with further areas of suitable foraging and refuge habitat, including potentially for overwintering.

b) Reptiles

The species-poor lawn is regularly mown, and as such offers inadequate cover/refuge habitat for reptiles such as common lizard (*Zootoca vivipara*) and slow worm (*Anguis fragilis*), which generally require a greater mosaic of habitats including areas of rough/tussocky grassland and scrub habitat for refuge, with open areas for basking.

Grass snake could occasionally pass through the site on-route to hunt in nearby ponds and may seek refuge within boundary habitats e.g. hedgerows. The overall habitat suitability of the site for reptiles was assessed as *Low*.

#### 4.3.3

##### *Bats*

###### a) Preliminary roost assessment

Internal and external inspections of the two buildings returned no evidence of roosting bats (e.g. droppings and/or staining). The roof on Studio 1 is tight fitting and therefore reduces the potential for bats to access and the roof of Studio 2 was corrugated cement-asbestos until recently being replaced with a zinc roof (Photo 3) which does not contain any potential access points. The overall suitability of the buildings to support roosting bats was assessed as being Negligible.

###### b) Foraging and Commuting Habitat

The buildings and lawn offer Negligible to Low foraging and commuting habitat value. The boundary hedgerow is relatively well connected to other linear features in the wider landscape and was assessed as providing *Moderate* bat commuting and foraging habitat value (Collins, 2016).

#### 4.3.4

##### *Nesting birds*

No evidence of nesting birds was found in either building though both could potentially be used by nesting small passerines.

The garden offers some nesting, song perch and foraging habitat for a range of common garden bird species such as dunnock (*Prunella modularis*) (Amber Status; S. 41 List), song thrush (*Turdus philomelos*) (Red List; S. 41 List), blackbird (*Turdus merula*) and wren (*Troglodytes troglodytes*) and starling (*Prunella vulgaris*) (Red Status; S. 41).

#### 4.3.6

##### *Badger*

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

#### 4.3.7

##### *S. 41 list habitats and species*

###### a) Habitats

No S.41 habitats exist within the bounds of the application site.

###### b) Species

The boundary hedgerow and lawn provide refuge/cover and foraging opportunities for hedgehogs whilst ornamental shrubs could support some S. 41 list invertebrates such as Lepidoptera.

#### 4.3.8

##### *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 sites are provided in Table 4.3; values are based upon the criteria in Table A3.1 and expert best judgements.

**Table 4.3 Feature value based on geographic context.**

Feature	Value
Lawn, hedgerows, shrubs, and ponds	Local



Amphibians and reptiles	Local
Bats	Local
Nesting 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 developments, 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**

A planning application will be submitted to Babergh District Council to convert, connect, and extend two existing artist studios to form a one-bedroom house/studio with a new library, boot room, and art studio with toilet facilities. Some localised vegetation clearance (e.g. species-poor lawn and ornamental shrubs) will be required to accommodate the new library building and extension/conversion of the two existing buildings.

The assessment and recommendations below provide preliminary recommendations for mitigation and enhancements for the proposed development. They are based on drawings by Thirty-One Architects, including the Proposed Site Block Plan (Drawing Ref: 2000\_2130\_P4), GA Floor Plans (Drawing Ref: 2010\_2103\_P6), GA Elevations-Primary (Drawing Ref: 2105\_2103\_P5), GA Elevations-Secondary (2106\_2103\_P4), and information available at the time of writing and should be updated accordingly as the scheme is subsequently amended.

### **5.3 FURTHER SURVEYS REQUIRED**

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.

No significant habitat manipulation, clearance, or change from current management regimes should occur prior to development, other than as specified below without advice from a suitably experienced ecologist.

### **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*

Vegetation clearance, ground-breaking and construction operations will result in the permanent loss only of a small area of managed lawn and some ornamental shrubs. This is not considered to be ecologically significant but will constitute a small net loss of greenspace.

Accidental damage to retained habitats in the wider gardens (e.g. hedgerows and mature broadleaved trees) during the construction phase would constitute a significant negative effect at the local level.

### *b) Mitigation*

Retained areas of lawn and the Portuguese laurel hedge should be protected from damage Heras (or similar) fencing during the construction phase.

### *c) Residual effects*

The development will result in the permanent loss of a small area of managed lawn, which constitutes an overall net loss of green space. This is unlikely to be ecologically significant in terms of the habitats present and therefore no residual ecological effects are anticipated.

## 5.6 AMPHIBIANS AND REPTILES

### *a) Potential impacts*

The development will result in a small net loss of foraging habitat (e.g. managed lawn) for GCNs and/or other amphibians. In addition, animals dispersing through the application site could fall into open trenches resulting in entrapment and mortality. Any animals seeking refuge within building materials or temporary spoil heaps on site could also be harmed when these materials are moved.

On completion of the development, the use of gully pots or similar as part of a surface water drainage system can result in the entrapment of amphibians (Muir, 2012) if the gully pots do not discharge straight into a ditch or pond (e.g. they discharge into attenuation crates or the gully pots contain silt traps) without impediment.

Combined, the impacts are considered a significant negative effect at the local level.

*b) Mitigation*

To avoid an offence under the relevant legislation in relation to GCNs, appropriate measures will be required. This could be in the form of a Precautionary Working Method Statement (PWMS) which should be secured through an appropriate planning condition to provide detailed guidance including the following measures which will also mitigate impacts upon other herpetofauna present:

- Retention of boundary and unaffected wider habitats;
- Regular low-level cuts of the lawn area to be removed and adjacent prior to and throughout the works period to ensure an absence of cover for animals in proximity to the works area;
- Clearance of any taller vegetation required (e.g. shrubs along the edge of building B2) undertaken sensitively during the months of April to September inclusive. Hand tools (e.g. strimmers and hedge trimmers) should be used under ECoW supervision to take taller vegetation down to ground level using a 2-stage cut as follows:
- The first cut should be to no lower than 150mm above ground level with brash raked removed from site;
- The area should be left overnight to allow any animals to move and the second cut should be to just above ground level. The arising should again be raked off and removed from site to prevent any wildlife seeking refuge;
- Excavations undertaken during the winter months, or filled on the same day they are dug, or covered overnight with ply boarding and any gaps filled with damp sharp sand;
- Open excavations checked daily and immediately prior to filling;
- Footings and concrete slabs 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;
- Any hand mixing of mortar or concrete on ply boarding over a tarpaulin which is folded over the boarding at the end of each day to prevent animals coming into contact;
- Any excess concrete poured into a concrete skip, so it can then set to prevent animals coming into contact. Concrete mixers and shovels, rakes, boots etc. must be cleaned off in a safe location; and
- All building materials and waste materials stored on bare ground or stored off the ground on pallets to reduce risk of animals seeking refuge.
- Should any GCNs (Appendix A4) be encountered, 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. The poster in Appendix A4 should be erected in the welfare facilities provided for construction staff onsite.

Gully pots (if required) should use small diameter (6mm) grates where possible. Any installed gully pots that do not discharge without impediment straight into a ditch or

pond must be situated  $\geq 100\text{mm}$  from roadside; OR a wildlife-kerb<sup>8</sup> must be installed adjacent to each gully pot; AND a gully pot ladder<sup>9</sup> placed into each gully pot.

Any downpipes taking water off the roofs should be sealed at ground level by using a leaf and debris screen<sup>10</sup> to prevent amphibians entering drains.

c) *Residual effects*

As per 5.5. With mitigation implemented, direct impacts upon animals will be avoided with no significant residual effect.

## 5.7

### **BATS**

a) *Potential impacts*

i) Roosting bats

No impacts anticipated.

ii) Foraging and commuting habitat

Given the small loss of managed lawn losses of bat foraging and commuting habitats are not considered to be significant. Accidental damage to adjacent/boundary habitats (e.g. boundary hedgerows trees) could disrupt feeding and commuting behaviour.

ii) Light disturbance

Lighting during the construction and operational phases can impact bat foraging behaviour and increase the risk of predation, which could affect foraging success and population recruitment, considered a significant effect upon the conservation status of bats at a local level. In this instance, lighting impacts relate to security lighting external to the extended building, and potentially from light spillage from internal lighting. Lighting impacts upon the Portuguese laurel hedgerow and mature broadleaved trees in the garden to the south and west to the buildings are considered most relevant.

iii) Roofing membranes

Research has shown bats can become entangled in modern breathable roofing membranes (BRMs) such as Tyvek and other woven membranes, causing injury or death to individuals (Waring *et al.* 2013). Use of these membranes in the new structure may have a negative impact upon bats if pantile or plain/peg tiles are used.

In combination the above impacts could have a negative ecological effect.

b) *Mitigation*

i) Roosting bats

None required.

ii) Foraging and commuting habitat

As per 5.5.

iii) Light disturbance

Exterior lighting design must be made with reference to published guidance<sup>11</sup> and will consider:

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<sup>8</sup> e.g. <https://www.aco.co.uk/products/wildlife-kerb>

<sup>9</sup> <https://www.thebhs.org/the-bhs-amphibian-gully-pot-ladder>

<sup>10</sup> <https://www.drainagepipe.co.uk/leaf-and-debris-gully-110mm-p-D94G/>

<sup>11</sup> <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting>

1. *Type of lamp (light source)*: Light levels should be as low as possible as required to fulfil the lighting need. LED lights should be used preferentially, using the warm white spectrum with peak wavelengths >550nm (~3000°K). UV elements and metal halide, fluorescent sources must be avoided; and
2. *Lighting design*: Lighting should be directed to where it is needed, with no horizontal spillage towards trees and hedgerows. This can be achieved by restricting the height of the lighting columns and the design of the luminaire as follows:
  - Light columns in general should be as short as possible as light at a low level reduces the ecological impact.
  - Luminaires with an upward light ratio of 0% should be mounted on the horizontal i.e. with no upward tilt.
  - If taller columns (> 8m) 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' (up to 1 minute).

iv) *Roofing membranes*

If slates or concrete interlocking tiles/weatherboarding are to be used, then breathable membranes could potentially be used if no gaps >4mm are present. BRMs should not be used under handmade or reclaimed pantiles or clay peg/plain tiles or where gaps are >4mm; traditional Type 1F roofing felt or a breathable sarking board (e.g. Hunton Sarket or Pavatex Isolair) should be used instead.

c) *Residual effects*

With the mitigation measures implemented, there will be negligible residual negative effects upon bats.

## 5.8

### **NESTING BIRDS**

a) *Potential impacts*

Commencement of the building works during the nesting season (March to August inclusive) as well accidental damage to retained habitats (e.g. hedgerow) during construction operations, has the potential to result in the injury or death of nesting birds and damage to active nests and eggs. This would constitute a negative effect (as an offence under wildlife legislation) at the local level.

b) *Mitigation*

As per 5.5.

Removal of habitats on site should be undertaken outside the nesting bird season. If this is not feasible for any reason, then checks for breeding birds should be undertaken immediately prior to and during the vegetation clearance. Any active nests must be left in situ undisturbed (with a 5m buffer) until the young have fledged.

c) *Residual effects*

No significant effects.

## 5.9

### **OTHER S. 41 LIST SPECIES**

a) *Potential impacts*

Vegetation clearance, ground-breaking and construction activities will result in loss of a small area of foraging habitat for hedgehog, with potential entrapment, injury and

mortality of individuals due to presence of trenches as well as caustic and building materials.

*b) Mitigation*

As per sections 5.5 and 5.6.

Site clearance should always consider the potential presence of hedgehogs with vigilance. Animals encountered should be moved to suitable cover, e.g. within the existing boundary hedgerow.

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.

*c) Residual effects*

No significant residual effects.

**5.10**

**COMPENSATION**

Residual effects relate to a small net loss of greenspace (e.g. managed lawn and possibly some ornamental shrubs) which is not ecologically significant and therefore no mitigation is required.

To be consistent with planning policy biodiversity enhancements should be delivered and are recommended in section 5.12 below.

**5.11**

**CUMULATIVE EFFECTS**

The Babergh District Council planning website was searched on the 6 August 2021 with a 1km buffer dating back a minimum of two years. The search returned low numbers of minor applications including a previous application at the same address (DC/20/05523), where permission was granted (28 Jan 2021) to erect a store building.

Due to nature and scale of the proposed development, and when considering previous applications in the wider area, no significant cumulative ecological effects are expected.

**5.12**

**ENHANCEMENT OPPORTUNITIES**

To minimise losses and maximise ecological enhancement opportunities, the following biodiversity enhancements are recommended as part of the scheme (Table 5.1).

**Table 5.1 Enhancement opportunities**

<b>Feature</b>	<b>Guidance</b>
1. Bird boxes	Two house sparrow ( <i>Passer domesticus</i> ) terraces could be erected on the converted buildings with nest boxes (1 of each) for tree creeper ( <i>Certhia familiaris</i> ), willow tit ( <i>Poecile montanus</i> ) mounted on suitable mature trees within the wider gardens (Appendix A5). A spotted flycatcher ( <i>Muscicapa striata</i> ) box could be erected on a north or north west facing wall where existing climbers exist as they like to nest with cover.

2. Bat boxes	3x tree mounted bat boxes (Appendix A6) could be erected on mature trees within the applicant's landholding (exact locations to be agreed with suitably experienced ecologist) including trees by pond P2.
3. Amphibians and reptiles	A grass snake egg laying heap (Appendix A7) could be created, using arisings generated during the required vegetation clearance, and positioned in the garden near to pond P2.
4. Invertebrates	<p>a) Nectar rich climbers such honeysuckle (<i>Lonicera periclymenum</i>) and wild clematis (<i>Clematis vitalba</i>) could be planted against the walls of the newly converted buildings to provide nectar sources for pollinator species and habitat for nesting birds.</p> <p>b) A wildlife friendly composting area (Appendix A8) could be created to provide a supply of sustainable organic source of fertiliser, and at the same time creating a vital refuge for a variety of invertebrates and potentially animals which prey upon them including amphibians (e.g. common frog and common toad), small mammals (e.g. hedgehog), birds, and possibly reptiles (e.g. slow-worm and grass snake).</p>

**Peat based composts will not be used for any planting or landscaping in order to preserve existing carbon stores and avoid damage to sensitive habitats.**

## 5.13

### CONCLUSIONS

With avoidance and mitigation measures suggested, the scheme will minimise biodiversity impacts and provide some enhancements in accordance with planning policy.

Measures proposed should be secured through appropriate planning conditions such as e.g. a Precautionary Working Method Statement (BS 42020:2013 D.2.1) to outline measures required to avoid impacts on amphibians and other protected and notable species, and/or a Biodiversity Enhancement Strategy to ensure ecological gains are secured.



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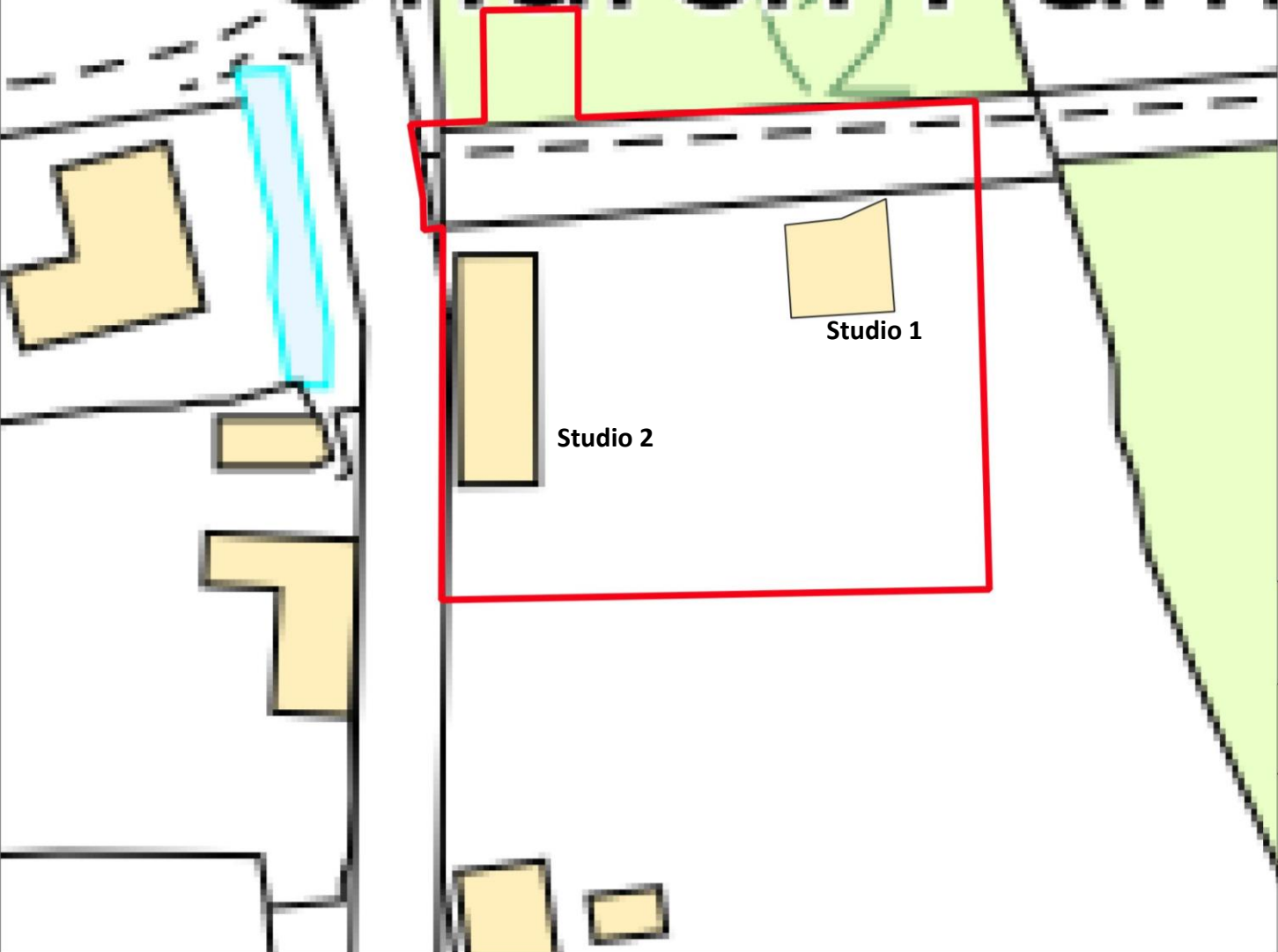
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## Figures



# Church Farn



## Legend

 Application site boundary

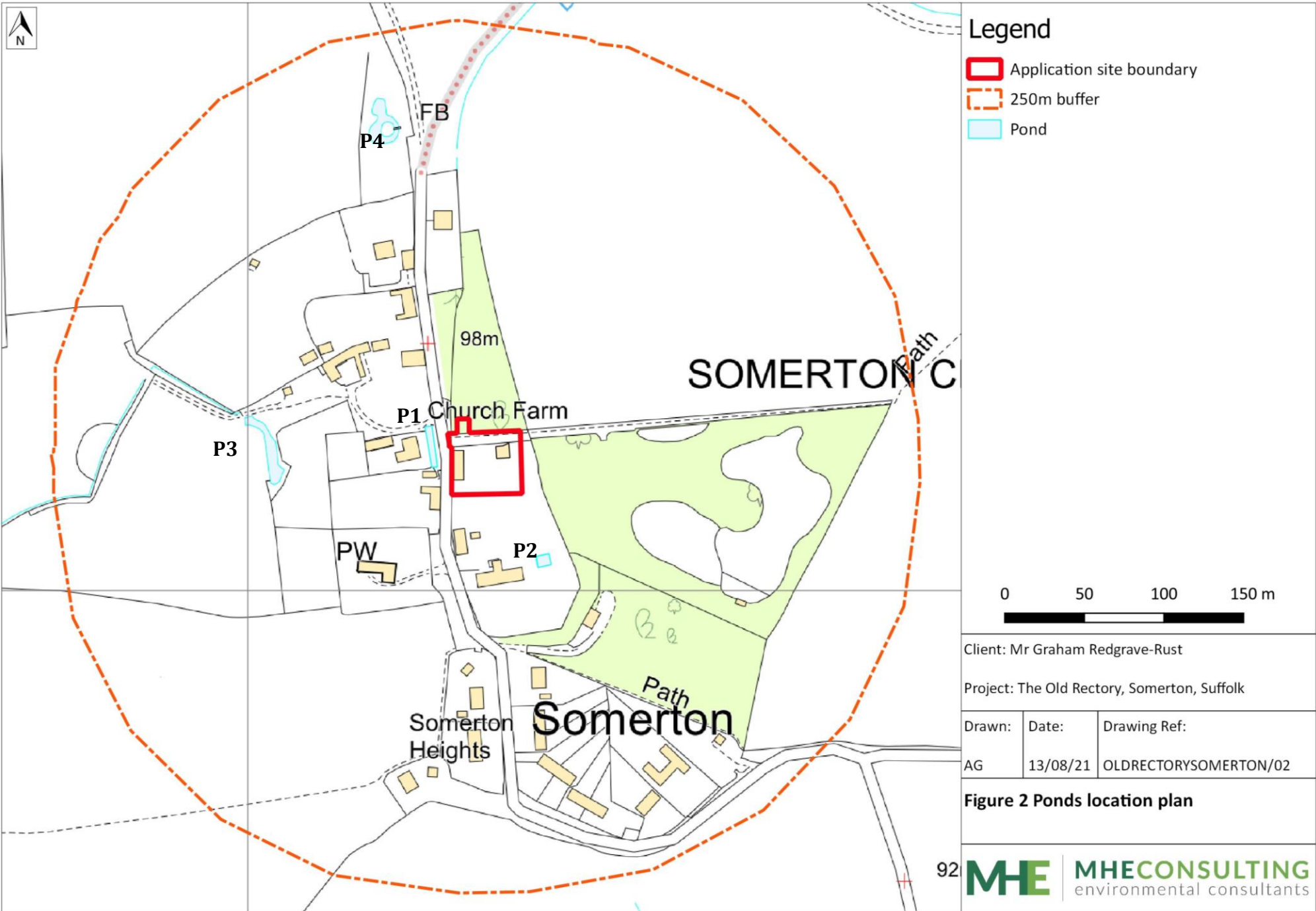


Client: Mr Graham Redgrave-Rust

Project: The Old Rectory, Somerton, Suffolk

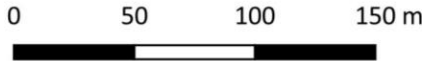
Drawn:	Date:	Drawing Ref:
AG	13/08/21	OLDRECTORYSOMERTON/01

**Figure 1 Site location plan**



**Legend**

- Application site boundary
- 250m buffer
- Pond



Client: Mr Graham Redgrave-Rust  
 Project: The Old Rectory, Somerton, Suffolk

Drawn:	Date:	Drawing Ref:
AG	13/08/21	OLDRIRECTORYSOMERTON/02

**Figure 2 Ponds location plan**

## Appendices

## Appendix A1 Photos





**Photo 1** South-west elevation of Studio 1



**Photo 2** South-east elevation of Studio 1



**Photo 3** View of Studio 2 with garden in front



**Photo 4** North elevation of Studio 2 with lawn and hedgerow in background



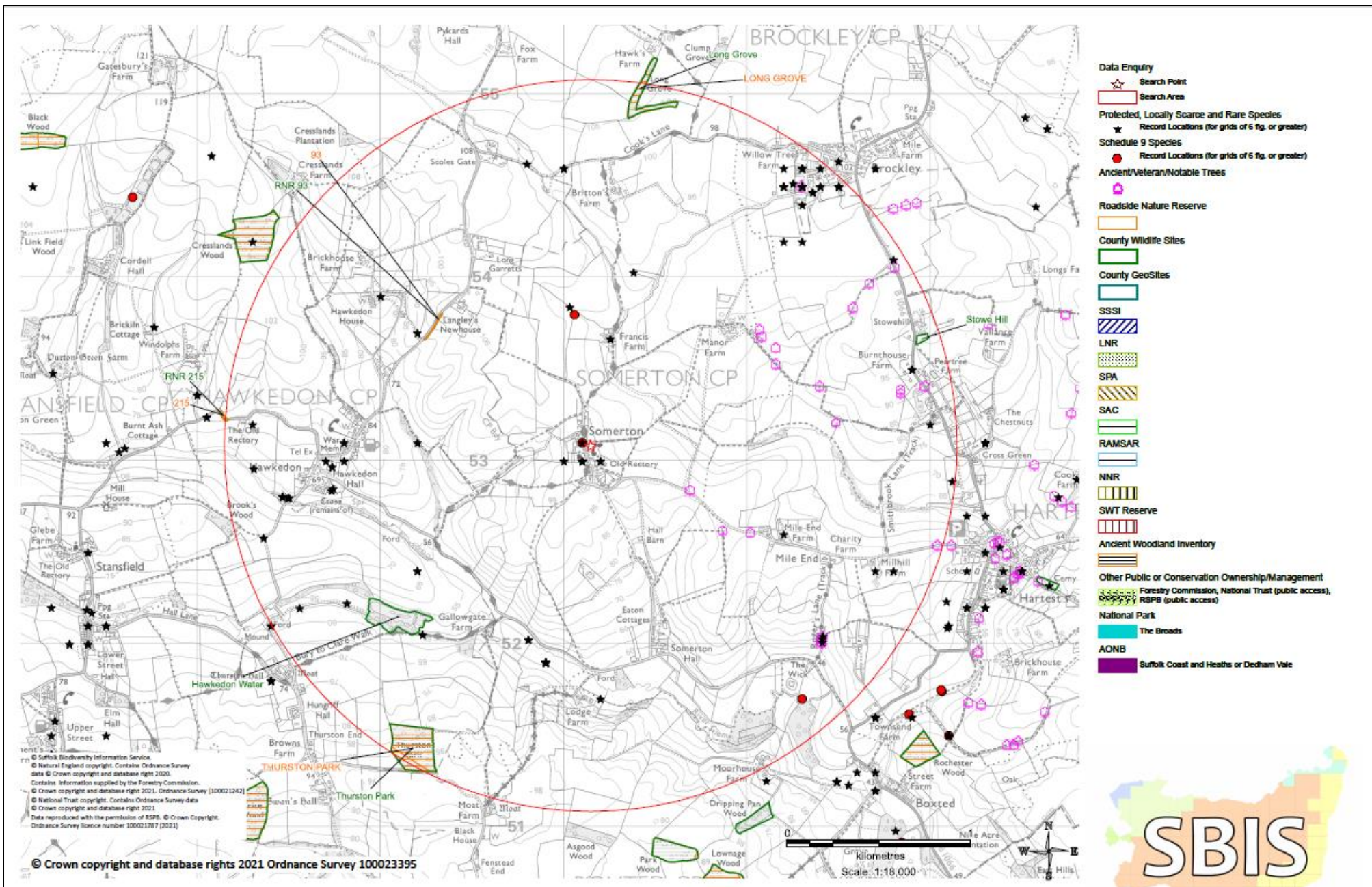
**Photo 5** Pond P1



**Photo 6** Pond P2

## **Appendix A2 SBIS data map**





MHE Consulting (Old Rectory, Somerton TL8114553085) 2km Data Enquiry

**SBIS**  
 Suffolk Biodiversity Information Service  
 Date: 12/08/2021 | Drawn by: Jane Mason

## **Appendix A3 EclA criteria**

### A3.1 General criteria for geographic context/value

Designation	Example
<b>International</b>	<ul style="list-style-type: none"> <li>• SPA, SAC and Ramsar sites and the features that they have been designated for.</li> <li>• 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.</li> <li>• 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.</li> </ul>
<b>National</b>	<ul style="list-style-type: none"> <li>• SSSI or a discrete area that meets the selection criteria for designation.</li> <li>• 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.</li> <li>• A sustainable population of priority species (listed under S. 41 of the NERC Act 2006).</li> <li>• 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.</li> <li>• A sustainable population of uncommon or threatened Annex IV EPS species at a UK level.</li> <li>• A nationally scarce species (occurs in 30-100 10km squares in the UK) that has its main UK population within the district.</li> </ul>
<b>County</b>	<ul style="list-style-type: none"> <li>• A viable area of habitat identified in the county BAP.</li> <li>• A County Wildlife Site.</li> <li>• A sustainable population of common or non-threatened Annex IV EPS species at a UK level.</li> <li>• A Nationally Scarce species that does not have its main population within the county.</li> <li>• A sustainable population of a BAP species not included in the 'national' category above for which a county Action Plan exists.</li> </ul>
<b>Local</b>	<ul style="list-style-type: none"> <li>• 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).</li> <li>• Other habitats and species not in the above categories but are considered to have some value at the district/borough level.</li> </ul>

## **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](http://www.arguk.org)





## **Appendix A5 Brid boxes**





## RSPB Robin and wren diamond nestbox

Product Code: R401640

£ 13.99

★★★★☆ [Read all reviews](#)

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.

[Read full information](#)

### SAVE £2 WHEN YOU BUY TWO PROMOTIONAL NEST BOXES!

- Add two promotional nest boxes to your basket to save £2
- Offer ends 5th January 2021 and is subject to availability
- Loyalty points can be collected/redeemed as usual
- Not available in conjunction with any other offer

## RSPB Sparrow terrace nest box

Product Code: R407816

Qty

£ 29.99



[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



In Stock:

[ADD TO BASKET](#)



**BARK BOXES**  
Conserve and Enhance

[Home](#) [About Us](#) [Other Services](#) [Gallery](#) [Contact](#)



## Willow Tit/Tree Creeper

£35.00

A long, thin box designed for fitting to smaller willow/birch trees, low to the ground, to encourage willow tit. Filled internally with damp sawdust/shavings/rotting wood as this species likes to excavate their own holes. The narrowing top crevice is designed to be suitable for roosting bats. Also suitable for tree creeper without the sawdust infill.

7 in stock (can be backordered)

[Add to basket](#)

Category: bird and bat boxes

[Description](#) [Additional information](#) [Reviews \(0\)](#)

*Description*





## 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

Category: bird and bat boxes

Description	Additional information	Reviews (0)
<i>Description</i>		
Height tbc		
Width		
Depth		
Typical Weight		

## **Appendix A6 Bat boxes**



Large Multi Chamber WoodStone Bat Box

### The Kent bat box

Simple to construct, self-cleaning and low maintenance.

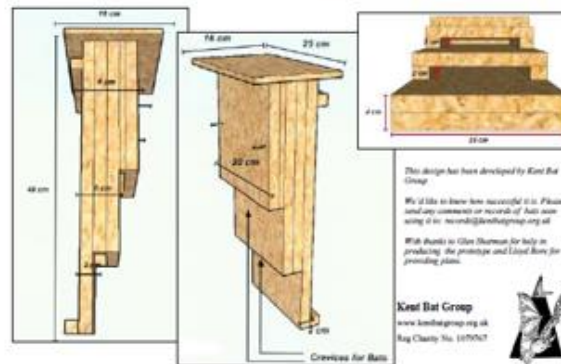
The only critical measurement is the width of the crevices—these should be no larger than suggested. Other measurements are approximate.

#### Materials and construction

Box to be made from untreated rough-sawn timbers  
 Timber should be c.20mm thick  
 The box should be rainproof and draught-free  
 Crevices can be between 15 and 25 mm wide  
 Fixing may be by use of brackets, durable bands or wires

#### Location

Boxes are best fixed as high as possible in a sheltered wind-free position, exposed to the sun for part of the day.  
 They can be fitted to walls, other flat surfaces or trees  
 A clear flight line to the entrance is important



Vincent Pro bat box

## **Appendix A7 Grass snake egg laying heap**

# Creating grass snake egg-laying heaps



RAVON

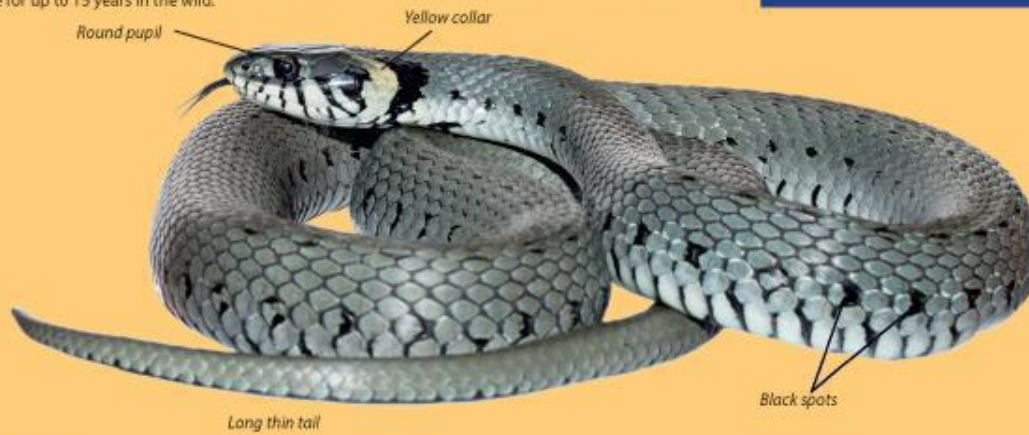


ARG UK



## Identification

The grass snake *Natrix helvetica* is the largest British native snake, and can grow to over 1 metre in length. Grass snakes range from grey to green or brown in colour. They have a distinctive yellow or cream collar, bordered to the rear by contrasting dark markings. There is a series of dark bars running along the flanks and some individuals have dark spots on the back as well. Often found near water, grass snakes can sometimes be spotted swimming, or hunting for favoured prey species, which are mainly amphibians. Grass snakes are non-venomous, but they can exude an unpleasant smelling musk if caught. They can live for up to 15 years in the wild.



## Introduction

### Life cycle

In common with other native reptiles, grass snakes hibernate over winter from October to March, emerging as the weather warms in early spring to replenish their energy reserves by feeding and basking. During April and May they find a mate, and in June or July females lay 10 to 40 leathery white eggs, often in warm compost, piles of leaves or manure heaps, which helps the eggs to incubate and hatch. Several females may use the same egg laying spot, so it may be possible to find large numbers of eggs in a suitable heap. After 6 to 10 weeks the pencil sized (14-22 cm long) young grass snakes emerge. Hatchlings cut their way out of the egg with an egg tooth, which they lose once they have emerged. It then takes three to four years for the young grass snakes to reach adulthood and sexual maturity.



Hatched grass snake eggs

Grass snake distribution  
in the British Isles  
(© NBN Atlas)

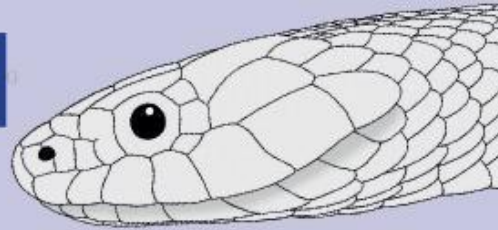


### Distribution and habitat

Grass snakes are widely distributed across much of England and Wales, though they are less commonly recorded in the North East of England, and Scotland. Generally, grass snakes prefer to live near water, where they can readily find their amphibian prey; but two other essential habitat features are egg-laying sites and places to hibernate. Natural grass snake egg-laying sites include heaps of organic material, or rotted tree stumps. Many grass snakes, however, take advantage of human activities and lay their eggs in manure or compost heaps. As a result, grass snakes are sometimes seen near riding stables and allotments during the spring and summer months. Over-wintering or hibernation occurs in dry, frost free and relatively undisturbed locations. Hibernation sites may be located in burrows or holes, heaps of rubble or wood, or dilapidated stone walls or buildings. In some areas, a vegetated earth bank or hedge bank, sea wall or even a road or rail embankment may be used.



## Why create egg-laying heaps?



### How you can help grass snakes

Grass snakes and humans have been intricately linked through livestock husbandry for many thousands of years across large parts of Europe. Historically, grass snakes have made use of manure heaps, and latterly compost heaps, as egg-laying sites, since these structures generate the heat that the snakes need to incubate and successfully hatch their eggs. In previous times this close association led to the grass snake being regarded as a house god in some parts of Europe, the symbol of spring, wisdom and protecting livestock.

However, in common with much of our native wildlife, we are seeing declines in grass snakes as agricultural and livestock husbandry practices change. One factor is thought to be availability of egg-laying sites, since there are fewer suitable heaps of manure accessible to grass snakes in the wider countryside. One means of boosting grass snake numbers may therefore be to create egg-laying heaps. These heaps also provide shelter and overwintering sites for slow-worms, amphibians, invertebrates and small mammals such as hedgehogs, mice and voles.



### How to create a grass snake egg-laying heap



- **Where:** In a sunny spot, adjacent to tall vegetation, away from busy roads and no more than 400m from a water body. Female grass snakes become habituated to using a successful heap for several years, so when refreshing a heap, ensure you always use the same location.
- **When:** Mid-March to late April
- **Materials:**
  - One third fresh horse manure
  - One third vegetation (leaves, clippings) or compost
  - One third large sticks or branches
- **Instructions:**
  - Clear the ground where you want the heap
  - Create a base layer of leaves and clippings
  - Lay the largest sticks/branches on top of this
  - Place half of the horse manure on top of the sticks and branches.
  - Add another layer of smaller sticks.
  - Mix the remaining manure with the vegetation/compost and add this to the heap. Add some branches and smaller sticks to keep these layers well ventilated.
  - Ensure that the egg-laying heap is not too compacted, so the animals can easily get into it, and to prevent it from overheating.

## **Appendix A8 Wildlife friendly composting area**



# How to build a wildlife friendly compost heap...

NB Commercially available alternatives could be installed e.g. <https://www.griggsagri.co.uk/hutton-compost-bin-230-litre.html>

- Clear an area.
- Stand a pallet up so its long edge sits on the ground.
- At either end of the pallet, hammer a stake between the two layers of the pallet.
- Place two pallets at right-angles to the first and once again secure with stakes.
- Secure the remaining pallet to the front using wire or string - this will allow you to remove it when you need to turn or empty your compost.



**Shaggy ink cap** - fungi help breakdown the contents of your compost heap.



**Snail** - will feed on the compost and provide food for many different birds.



**Grass snake** - if you are lucky a female may lay eggs in your heap during June or July.



**Woodlouse** - minibeasts are vital to a compost heap.



**Slow worm** - may breed and have their young in the heap.



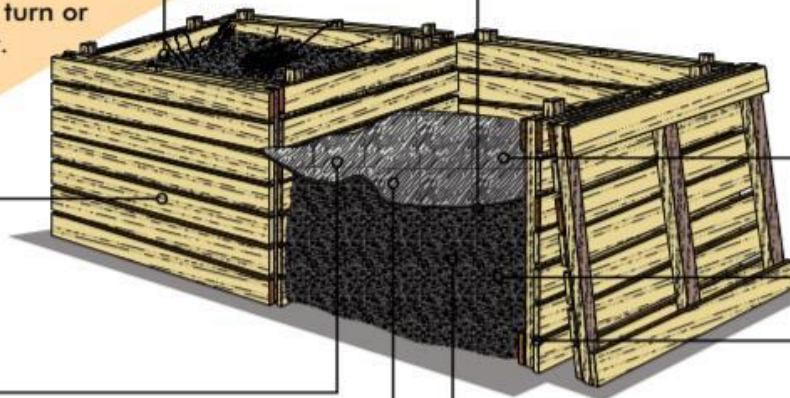
**Common toad** - will find shelter in the damper parts of the heap.



**Worm** - a healthy compost heap needs worms.



**Hedgehog** - may visit at night to feed on snails and other invertebrates.



## The compost heap's ingredients

Balance is the key to a good compost heap. To make a good mix you need more or less equal amounts of 'greens' and 'browns' plus small amounts from the 'others' list.

### The Greens

#### Nitrogen-rich ingredients

- Comfrey leaves, nettles, young green weeds - avoid weeds with seeds, coffee grounds, grass cuttings, urine - diluted using 20 parts water to 1 part urine, raw vegetable peelings, tea bags and leaves, soft green prunings.

### The Browns

#### Carbon-rich ingredients

- Cardboard - cereal packets and egg boxes, waste paper - even shredded, old bedding plants, newspaper - although it is better to recycle them, hay and straw, wood shavings, fallen leaves.

### Other Compostable Items

- Wood ash - in moderation, hair, crushed egg shells, natural fibres - such as wool or cotton.