Preliminary Ecological Appraisal

of

A Barn at Moat Farm,

Hargrave

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Survey Commissioned by:	**Phil Cobbold Planning Ltd.**
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Disclaimer

The findings detailed in this report are based on evidence from thorough survey, where every effort has been taken to provide an accurate assessment of the site at the time of the survey. No liability can be assumed for omissions or changes after the survey has taken place. This report can be relied upon for twelve months from the date of issue, after this date an updated site visit should be undertaken to assess any material changes to the site.

This report was instructed by the Phil Cobbold Planning Ltd., and following the brief agreed. Aspen Ecology has made every effort to meet the client's brief.

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1 Executive Summary

Aspen Ecology was instructed by Phil Cobbold Planning Ltd. on behalf of their client to carry out a Preliminary Ecological Appraisal (PEA) of the site at Moat Farm, Hargrave hereafter referred to as 'the Site'. The central grid reference for the Project Site is TL 7690 5926. The site survey was undertaken on the 11th January 2021.

The Site comprises a Barn and adjacent timber shed. The buildings are within the curtilage of Moat Farm and are surrounded by garden habitats including two ponds.

No Statutory designated sites were located within 2km of the site, and one European site (SPA, SAC or Ramsar sites) was recorded within 13km. Three non-statutory County Wildlife Sites were located within 2km. No direct impacts to any statutory, European or non-statutory sites are predicted due to the small scale of the site and its location; However, there is a risk of causing increased recreational pressure on European site within 13km, this risk is considered to be negligible given the scale of the proposed development and the distance to the designated site.

The development proposals comprise the demolition the Barn and shed to facilitate the construction of a new residential dwelling. The existing, surrounding garden habitats including the adjacent ponds will not be impacted.

It is considered unlikely that the site itself supports a any protected or rare species, however the surrounding garden habitats could be used by foraging & nesting birds, foraging bats and breeding great crested newts that are present in the local area. Precautionary working methods are included in this report to minimise the risk of causing disturbance to any wildlife that may be present. Enhancement suggestions are also provided that if included may improve the site for wildlife post development.

Contents

2 Introduction

2.1 Background

Aspen Ecology was commissioned by Phil Cobbold Planning Ltd. on behalf of their client to undertake a Preliminary Ecological Appraisal of a Barn at Moat Farm, Hargrave, Suffolk. The National Grid co-ordinates for the centre of the site are TL 7690 5926.

The assessment was required to inform a planning application to demolish the existing barn and construct a new dwelling. This report presents the findings of the Preliminary Ecological Appraisal carried out by Aspen Ecology in January 2021.

2.2 Aims and Scope of Report

This report is a Preliminary Ecological Appraisal. According to CIEEM guidelines[1], a Preliminary Ecological Appraisal "*can be used as a scoping report (for non-Environmental Impact Assessment (EIA) projects), but should not be submitted as part of a planning application unless it can be determined that the project would have no significant ecological effects, no mitigation is required and no further surveys are necessary*."

This report is based on an extended Phase 1 habitat survey and desktop study aimed at assessing the suitability of the site to support protected species and notable habitats. This information allows an initial assessment of the biodiversity value of the site to be made, potential constraints to the proposed development to be identified and mitigation, compensation and enhancement measures to be developed.

The report assesses the compliance of the scheme with relevant local and national planning policy and addresses any potential impacts on legally protected species and habitats. Where potential for notable or protected species is identified, further surveys may be required to determine presence or likely absence and assess the conservation status of populations or assemblages present. The results of such work are required to fully assess the potential ecological impacts of the scheme.

2.3 Site Description

The site is located to the west of Wickhambrook Road in Hargrave, Suffolk. The site is a Barn formally used for commercial purposes and an adjacent timber shed. The building are within the curtilage of Moat House and surrounded by it's garden.

The local area is dominated by arable and pasture farmland with Moat Farm sitting to the north of a small collection of residential properties to the south of the main village of Hargrave. A

[1] CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

number of ponds are present within the local landscape with two present within 50m of the site.

2.4 Planning Policy and Legislation

For the purposes of this report, protected species are taken to be those which are protected under UK legislation (The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[2], Wildlife and Countryside Act 1981[3]; Protection of Badgers Act 1992[4]).

Protected species, and Species of Principle Importance for conservation of biodiversity in England (SPIE species – formally Biodiversity Action Plan species), are a material consideration for individual planning consents under the National Planning Policy Framework[5] (NPPF), which places responsibility on LPAs to aim to conserve and enhance biodiversity in and around developments, promote the enhancement of natural and local environments through planning, and achieve net gains for biodiversity.

2.4.1 Planning Policy

2.4.1.1 National Policy

The National Planning Policy Framework (NPPF) sets out the government's requirements for the planning system in England. A number of sections of the NPPF are relevant when taking into account development proposals and the environment. As set out within Paragraph 14 of the NPPF "*At heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking*". However, Paragraph 119 goes on to state that "*The presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined*".

The general impetus of the NPPF in relation to ecology and biodiversity is for development proposals to not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 109 states that the planning system should contribute to and enhance the natural environment by "…*minimising impacts on biodiversity and providing net gains in biodiversity where possible*..."

Paragraph 118 states that "*when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity*". A number of principles are set out in Paragraph 118 including the principle that where harm cannot be adequately avoided then it should be mitigated for, or as a last resort, compensated for. Where impacts occur on nationally designated sites, the benefits must clearly outweigh any adverse impact and incorporating biodiversity in and around developments should be encouraged. Protection of

[2] HMSO (2019) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations. HMSO, London.
[3] HMSO (1981) Wildlife and Countryside Act (as amended). HMSO, London.
[4] HMSO (1992) Protection of Badgers Act, HMSO London.
[5] National Planning Policy Framework (2012)

irreplaceable habitats, such as ancient woodlands and those sites proposed as SPAs, SACs and Ramsar sites or acting as compensation for SPAs, SACs and Ramsar sites, should receive the same protection as European sites.

In addition to the NPPF, Circular 06/05 provides guidance on the application of the law relating to planning and nature conservation as it applies in England. Paragraph 98 states "*the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat*". Whilst paragraph 99 states "*it is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted*".

2.4.1.2 Local Policy

The site is covered by West Suffolk District Council (formally part of the St Edmundsbury Borough Council area). The Adopted local plans covering the former St Edmundsbury and Forest Heath areas (and all related policy documents, including guidance and SPD's) will continue to apply to those parts of the West Suffolk Council area until a new Local Plan for West Suffolk is adopted. This is currently scheduled for mid-2023.

Local planning policy within the former St Edmundsbury Borough Council is provided by the Core Strategy 2010. A single overarching policy within the Core Strategy makes specific reference to ecology and biodiversity:

- **Policy CS2:** Sustainable Development

A high quality, sustainable environment will be achieved by designing and incorporating measures appropriate to the nature and scale of development, including:

The protection and enhancement of natural resources:

A) making the most resource efficient use of land and infrastructure;

B) protecting and enhancing biodiversity, wildlife and geodiversity, and avoiding impact on areas of nature conservation interest in both rural and built up areas;

C) identifying, protecting and conserving: a network of designated sites including the Breckland Special Protection Area (SPA)* and other sites of national and local importance; Biodiversity Action Plan (BAP) habitat and species; wildlife or green corridors, ecological networks; and other green spaces will be identified, protected and habitats created as appropriate;

D) conserving and, wherever possible, enhancing the character and quality of local landscapes and the wider countryside and public access to them, in a way that recognises and protects the fragility of these resources;

E) conserving and, wherever possible, enhancing other natural resources including, air quality and the quality and local distinctiveness of soils;

F) protecting the quality and availability of water resources;

G) maximising the efficient use of water including recycling of used water and rain water harvesting;

H) maximising the potential of existing and new sources of energy from biomass including timber and other energy crops; and Sustainable design of the built environment:

I) providing the infrastructure and services necessary to serve the development;

J) incorporating the principles of sustainable design and construction in accordance with recognised appropriate national standards and codes of practice to cover the following themes:-

- Energy and CO2 Emissions – seeking, where feasible and viable, carbon neutral development, low carbon sources and decentralised energy generation;
- Water – ensuring water efficiency by managing water demand and using such waste water reuse methods as rainwater harvesting and grey water recycling;
- Materials - minimising the use of resources and making use of local materials;
- Surface Water Run-off – incorporating flood prevention and risk management measures, such as sustainable urban drainage;
- Waste – adhering to the waste hierarchy during construction and following development to prevent waste generation and ensure reuse, recovery and recycling;
- Pollution – remedying existing pollution or contamination and preventing further pollution arising from development proposals;
- Transport – minimising the need for travel and ensuring a balance between transport infrastructure and pedestrians;
- Health and Wellbeing – ensuring that the development enhances the quality of life of future occupants and users;
- Ecology – valuing and enhancing the ecological features of the development site, where appropriate.

K) ensuring that developments and their occupants are capable of managing the impact of heat stress and other extreme weather events;

L) making a positive contribution towards the vitality of the area through an appropriate mix of uses. In areas of strategic growth this will include employment, community, retail, social, health and recreation facilities (including the protection and provision of informal and formal recreation, parks, open spaces and allotments);

M) creating a safe environment which enhances the quality of the public realm;

N) making a positive contribution to local distinctiveness, character, townscape and the setting of settlements;

O) conserving or enhancing the historic environment including archaeological resources.

Where appropriate, site specific and area targets, along with detail of viability, to meet national standards and codes, will be set out in the Development Management document, Area Action Plans and the Rural Site Allocations document.

* Only development that will not adversely affect the integrity of the SPA will be permitted. In applying this policy a buffer zone has been defined that extends 1,500m from the edge of those parts of the SPA that support or are capable of supporting stone curlews, within which:- a) Permission may be granted for the re-use of existing buildings and for development which will be completely masked from the SPA by existing development; alternatively b) Permission may be granted for other development not mentioned in sub paragraph (a) provided it is demonstrated by an appropriate assessment that the development will not adversely affect the integrity of the SPA.

A further 1,500m buffer zone has been defined which extends around those areas (shown on the Proposals Map) outside of the SPA which have supported 5 or more nesting attempts by stone curlew since 1995 and as such act as supporting stone curlew habitat, within which permission may be granted

in accordance with a) and b) above. Additionally within this zone, where it can be shown that proposals to mitigate the effects of development would avoid or overcome an adverse impact on the integrity of the SPA or qualifying features, planning permission may be granted provided the Local Planning Authority is satisfied that those proposals will be implemented. In these areas development may also be acceptable providing alternative land outside the SPA can be secured to mitigate any potential effects.

Development at Risby (which lies partly within the 1,500m stone-curlew buffer) will be possible if it is fully screened from the Breckland SPA by existing development. A project level appropriate assessment should be undertaken to ensure no adverse effect upon the integrity of the SPA.

A 400m buffer zone has been defined around those parts of the SPA that support or are capable of supporting nightjar and woodlark. Any development proposal within this zone will need to clearly demonstrate that it will not adversely affect the integrity of the SPA.

3 Methodology

3.1 Site Survey

The site survey was undertaken by Mary Power BSc (Hons) MSc MCIEEM, a full member of the Chartered Institute of Ecology & Environmental Management, subject to the CIEEM Professional Code of Conduct and licensed by Natural England to survey for great crested newts (WML-CL08; Level 1) and bats (WML-CL18; Level 2).

During the survey on 11th January 2021 the temperature was 4°C; the wind was Beaufort scale 0-1, 90% cloud cover and good visibility.

The survey was undertaken in accordance with Guidelines for Preliminary Ecology Appraisal[6] and the broad methodology and principles of the Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Survey[7], which included mapping habitat types and identifying plant species observed on the site, including Wildlife and Countryside Act Schedule 9 invasive plant species.

The Phase 1 Habitat Map in Appendix B shows main habitat types, and features of interest identified as target notes.

The potential for presence of protected, Species of Principal Importance in England (SPIE) and rare species was assessed as follows:

Amphibians - Known ponds (where access could be gained) within 250m of the site (unless ecologically separated by significant barriers) were addressed for potential to support breeding amphibians where accessible. Habitat on the site, was surveyed for potential to support amphibians during their terrestrial or aquatic phase. 250m is a standardised search radius to

[6] CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester
[7] JNCC (2010) Handbook for Phase 1 habitat survey: a technique for environmental audit (revised reprint) JNCC: Peterborough.

assist in the assessment of the potential of a low impact site and its surrounding habitat to support great crested newt, based on current Natural England guidance[8].

Bats – Habitat within, and adjacent to, the site boundary was assessed for potential to support roosting, foraging and commuting bats, aided by aerial photographs of the surrounding landscape. The survey conformed to current Bat Conservation Trust guidelines[9].

Dormice – the site was assessed for potential to support dormice: Wooded/scrub areas or hedges with good under-storey/shrub layer and a diversity of foraging opportunities covering the active dormouse season.

Reptiles – Habitats were assessed for potential to support foraging or breeding reptiles and hibernation or refuge opportunities[10][11].

Invertebrates - The site was surveyed for high quality aquatic, deadwood or other habitats which could be used by significant assemblages of invertebrates, or by invertebrates identified in the data search. During the Phase 1 survey there was no attempt made to identify species present and where a site supports features that may be of importance to invertebrates then further Phase 2 surveys may be required to assess the importance of the site.

Flora and habitats - A walkover survey identified broad vegetation types, which were then classified against Phase 1 habitat types, where appropriate. Any invasive species[12] encountered as an incidental result of the survey are noted.

Water voles and otters – Water bodies within impact distance of the site were assessed for potential to support water voles and otters.

[redacted]er

Birds - The assessment of breeding birds and wintering birds on the site was based on the suitability of habitat present, evidence of nesting such as old or currently active nests and the presence of bird species that may potentially nest within the available habitat.

Adjacent habitat - Aerial photographs, available maps and survey of the area outside the site boundary (where access was available) was used to identify any habitat in the wider landscape which could be impacted by proposed works.

3.2 Desk Study and Biodiversity Information Consultation

A 2km radius search for statutory designated sites was conducted using “MAGIC”, the Multi-Agency Geographic Information system for the Countryside[13]. The search radius was extended to 13km for sites previously designated under European Legislation: Special Areas

[8] English Nature (2001) Great Crested Newt Mitigation Guidelines. Peterborough
[9] Collins, J. (Ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (Third Edition). The Bat Conservation Trust, London.
[10] Froglife (1999) Reptile Survey. An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation.
[11] Gent, A.H. and Gibson, S.D., eds. (1998) Herpetofauna Workers’ Manual. Peterborough, Joint Nature Conservation Committee.
[12] Plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).
[13] http://defra.magic.gov.uk

of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites, where the potential risk of impact to the qualifying features (species or habitats) of these sites may extend over a wider area.

Suffolk Biodiversity Information Service (SBIS) were consulted for records of protected and locally rare species within a 2km radius of the site (data provided on 11th January 2021). The site is covered by the Local BAP for Suffolk.

4 Results and Discussion

4.1 Desk Study

MAGIC[14], was accessed (8th January 2021), to identify the presence of statutory designated sites and habitats.

The site lies within an Impact Risk Zone (IRZ), requiring assessment of planning applications for likely impacts on SSSIs. Consultation with Natural England is required for: *Airports, helipads and other aviation proposals. Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t. And General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.*

As the application is for the demolition of an existing former commercial property and adjacent timber shed and construction of a single dwelling, consultation will not be necessary.

No Statutory designated sites were located within 2km of the site, and a single site designated under European legislation (SPAs, SACs and Ramsar site) was recorded within 13km of the site (see Table 4.1). Three non-statutory County Wildlife Sites were located within 2km of the site (detailed in Table 4.2).

A single site with a granted European Protected Species Licence was recorded on MAGIC within 5km of the site boundary (detailed in Table 4.3).

Table 4.1: European Sites within 13km.

Site Name	Designation	Approx. distance from Site	Description
Breckland	SAC & SPA	SAC: 12.9km N SPA: 6.87km N	SAC: Annex I habitats that are a primary reason for selection of this site • Inland dunes with open Corynephorus and Agrostis grasslands • Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation • European dry heaths • Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites).

[14] http://defra.magic.gov.uk

Site Name	Designation	Approx. distance from Site	Description
			SPA: The site qualifies under article 4.1 of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain populations of the following species listed in Annex I in any season: Stone curlew: 115 pairs – breeding Nightjar: 415 males – breeding Woodlark: 430 pairs - breeding

Table 4.2: Non-Statutory Designated sites within 2km.

Site Name	Designation	Approx. distance from Site	Description
Easter Wood	CWS	1.6km SW	Easter Wood, which is partly enclosed by medieval wood banks consists entirely of a coppice with standards structure. Standards of oak and ash dominate the canopy, below which is a tall coppice layer of ash and maple. Hazel forms a very dense understorey which provides a good nesting habitat for many woodland birds. Along the western margin is an area of elm scrub, which although affected by Dutch elm disease, is now showing signs of healthy regeneration. The ground flora is dominated by dog's-mercury, enchanter's-nightshade and bramble.
Roadside Nature Reserve 31	CWS	1.5km NE	Crested cow-wheat & Pyramidal orchid. This site is also a Roadside Nature Reserve.
Roadside Nature Reserve 206	CWS	1.2km S	Boulder clay flora - Crested Cow-wheat, Sulphur Clover. This site is also a Roadside Nature Reserve.

Table 4.3: Granted Natural England European Protected Species Mitigation Licenses within 5km

Licence number	Species	Approx. distance from Site	Details
EPSM2010-1695	Common pipistrelle & brown long-eared bats	2.5km W	Destruction of a resting place

4.2 Biodiversity Information Consultation

A full list of SPIE (formally UK BAP) & protected mammals, amphibians, invertebrates and plants is shown below in Table 4.4. A reduced list of UK BAP and protected birds is shown; these have been selected based on their likelihood of being recorded at the site, given the habitat types present. No records of reptiles were provided.

Table 4.5: Protected, SPIE and locally scare species records (SBIS, 11th Jan 2021).

Species	Protection	Records: Date and distance to the site
Bats		
Barbastelle *Barbastella barbastellus*	CHS(EU Exit)R 2019; WCA; SBAP	Single record (2012) 1.5km NW.
Brown long-eared bat *Plecotus auratus*	CHS(EU Exit)R 2019; WCA; SBAP	Three records (2014-2016). Closest record 1.1km SE.
Common pipistrelle *Pipistrellus pipistrellus* Including *Pipistrellus sp.*	CHS(EU Exit)R 2019 & WCA;	Six records (2012-2016). Closest record 270m SE.
Soprano pipistrelle *Pipistrellus pygmaeus*	CHS(EU Exit)R 2019; WCA; SBAP	Three records (2012-2016). Closest record 1.5km N.
Other Mammals		
Hedgehog *Erinaceous europaeus*	SPIE; SBAP	Eighteen records (2005-2017). Closest record 250m NW.
Amphibians		
Great crested newt *Triturus cristatus*	CHS(EU Exit)R 2017; WCA; SPIE; SBAP	Five records (2018). Closest record 110m NE.
Reptiles		
No reptile records		
Nesting and protected, WCA, SPIE birds		
A large number of birds were identified in the desk study, many of which would not use habitats at the site. The following SPIE/SBAP species have been recorded within 2km, and could use habitats within the site for nesting or foraging: **SPIE/BAP and Red-listed Birds of Conservation Concern (BoCC)**: Yellowhammer, linnet, marsh tit, yellow wagtail, house sparrow, tree sparrow, turtle dove, starling, spotted flycatcher, song thrush. **SPIE/BAP and Amber-listed Birds of Conservation Concern (BoCC):** Reed bunting, bullfinch, dunnock. **WCA Schedule 1 birds:** Fieldfare, redwing, barn owl.		
Protected and SPIE plants		
The following plants listed as Vulnerable or Endangered on the IUCN Red List for England/GB were recorded within 2km of the site. Shepherds needle *Scandix pecten-veneris*, sticking chamomile *Anthemis cotula*, corn chamomile *Anthemis arvensis*, dwarf spurge *Euphorbia exigua*, sulphur clover *Trifolium ochroleucon*, crested cow-wheat *Melampyrum cristatum* (also SPIE), And the WCA Schedule 8 species bluebell *Hyacinthoides non-scripta*.		

Species	Protection	Records: Date and distance to the site
Protected and SPIE invertebrates		
Invertebrates	SPIE	Stag beetle

SBAP = Suffolk Biodiversity Action Plan; SPIE = Species of Principal Importance in England; CHS(EU Exit)R = Conservation of Habitats and Species (Amendment) (EU Exit) Regulations; WCA = Wildlife and Countryside Act.

4.3 Potential for Protected Species and Habitats

The site was assessed to identify whether the proposals could potentially impact on protected or locally rare species or habitats, either during the construction, or operational phase.

4.3.1 Habitats and Flora

The survey was undertaken in January, which is outside the optimum botanical survey season and although broad species assemblages and habitat types could be readily identified, early flowering species would not be identifiable. No rare or priority plant species were recorded during the survey.

The site comprised a block and timber barn and adjacent timber shed. The Barn and shed are located adjacent to a residential property (Moat House) and set within it's garden. Habitats surrounding the site include amenity grassland, hedgerows and hard standing.

4.3.1.1 Amenity grassland

Grassland surrounding the site (TN3) to the west and south had a short sward height (<5cm), species were dominated by grasses including perennial rye-grass *Lolium perenne*, cocks foot *Dactylis glomerata* and annual meadow-grass *Poa annua*. Occasional forbs included white clover *Trifolium repens*, creeping buttercup *Ranunculus repens* and daisy *Bellis perennis*.

4.3.1.2 Hedgerows

A cypress *Cuppressus sp*. hedgerow trimmed to a height of approximately 1.5m was present to the east of the barn. Other native species hedgerow were present surrounding the residential curtilage.

4.3.1.3 Trees

There were no trees within the site. A small orchard of fruit trees (TN4) was present within the garden of Moat House to the south west of the site and mature and semi-mature trees were present at the boundaries of the curtilage. No trees will be impacted by the proposals.

4.3.1.4 Invasive Flora and WCA Schedule 9 Species

No invasive species or species listed on Schedule 9 of the Wildlife and Countryside Act (1981 as amended) were recorded at the site.

4.3.2 Bats

All UK species of bats are protected under the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Common, &

soprano pipistrelle, barbastelle and brown long-eared bats have been recorded in the local area.

4.3.2.1 Roosting Bats - buildings

The Barn (TN1) was of block construction with vertical timber cladding to the exterior, which was generally very well sealed. The pitched corrugated asbestos type roof was in a good state of repair and had multiple rooflights creating a well-lit interior.

Metal window and timber door frames were generally very well sealed into the surround blockwork and timber cladding. Potential crevice roosting opportunities were present associated with the fascias/drip edges on the northern and southern elevation. However significant moss growth on the bottom edge of the fascia/drip edge suggests that bats do not use these features.

Internally there is no enclosed void, the roof is unlined and supported on steel joists; no roosting opportunities were recorded.

The timber shed (TN2) adjacent to the barn was of single skin timber construction with a shallow pitched timber roof. The felt roof covering had largely come away from the roof resulting in water damage and disintegration of some sections. Photovoltaic panels were present on the southern aspect of the roof.

Although no access was possible into the timber shed, the internal structure could be easily viewed through large windows on the southern aspect. Internally, the roof was unlined and supported on trussed timber supports. Numerous holes and gaps in the roof boards provided access internally, however the light levels were high and water damage was present to a significant part of the roof structure.

No signs indicating the presence of roosting bats was recorded associated with either building. The buildings were not considered suitable for hibernating bats.

Given the lack of signs indicating the presence of bats and the low suitability of the existing building for bats it is considered that there is a negligible risk that roosting bats would be present. No further surveys are considered necessary.

4.3.2.2 Roosting Bats - trees

There were no trees within the site.

4.3.2.3 Foraging and Commuting Bats

The site provides poor quality froing habitat as it consists of only buildings, however the surrounding garden provides moderate quality foraging habitat for bats with areas sheltered habitat associated the orchard and potential foraging resources associated with the ponds.

The site is isolated from any good quality habitat in the surrounding area, surrounded by arable fields and horse grazed paddocks. Given the small size of the site and the lack of good quality foraging or commuting habitat it is unlikely to represent a significant foraging resource in the wider landscape.

Due to the lack of roosting opportunities within the buildings and the lack of any signs indicating the presence of bats it is considered that there is a negligible risk of bats being present within the buildings. No further surveys are considered necessary however, precautionary lighting recommendations are provided to minimise the risk of causing disturbance to any bats that may use the site during and post-development (see Section 5.2.for more detail).

4.3.3 Reptiles

All UK reptile species are protected under the Wildlife and Countryside Act 1981, with two species afforded higher levels of protection under the European Habitat Regulations.

The site does not provide any suitable habitat for reptiles as it comprises buildings; however the surrounding garden habitats provide some habitat, areas associated with the ponds and hedgerows providing potential shelter and foraging opportunities.

Adjacent habitats are of similar poor quality for reptiles with horse grazed paddocks to the north, arable fields to the west and residential and commercial properties to the south.

Given the lack of suitable habitat within the site and the poor quality of surrounding habitats, it is considered unlikely that reptiles will be present or will be significantly impacted by the proposals. No further survey is necessary.

4.3.4 Amphibians

There are no waterbodies within the site, however there are two ponds within 50m (TN5 & TN6) with a further six ponds within 250m.

There are records of great crested newts in the surrounding area, with the closest record from 110m to the north east. The ponds within 50m of the site both provide suitable breeding habitat for great crested newts and as there is a known population within dispersal distance, it is likely that great crested newts visit these ponds and could be present in the surrounding terrestrial area.

The site is approximately 0.1ha, using Natural England's Rapid Risk Assessment the proposed development is 'likely' to cause an offence.

Component	**Likely effect** (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	**Notional offence probability score**
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	0.01 - 0.1 ha lost or damaged	0.3
Land 100-250m from any breeding pond(s)	0.01 - 0.1 ha lost or damaged	0.01
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.3
Rapid risk assessment result:	**AMBER: OFFENCE LIKELY**	

However '*the risk assessment tool has been developed as a general guide only, and it is inevitably rather simplistic. The following factors are not taken into consideration for sake of simplicity, though they will often have an important role in determining whether an offence would occur: terrestrial habitat quality, timing and duration of works, detailed layout of*

development in relation to newt resting and dispersal. The following factors could decrease the risk: poor terrestrial habitat, small development footprint, short construction period'.

The proposed development involves the demolition of existing buildings and the construction of a dwelling on the same footprint. There will be no loss of garden habitat or any impact to the existing ponds. The existing building and immediate hard standing surroundings provide poor quality habitat for amphibians including great crested newts. The footings of the buildings appear to be in a good state of repair and no potential access into wall structures was recorded at ground level.

It is considered unlikely that the site supports great crested newts or that the species would be significantly impacted by the proposals in the long term. Given the poor quality of the site it is considered unlikely that great crested newts would be harmed or disturbed by the proposals, however, given the known presence of great crested newts in the surrounding area and the presence of ponds within 50m, it is recommended that the demolition is undertaken in a sensitive and precautionary way to minimise the risk of causing harm to any great crested newts that may be present in the surrounding area (see Section 5.2.for more detail).

4.3.5 Birds

4.3.5.1 BAP/SPIE/Red-list Birds

A number of local BAP, national SPIE, and Schedule 1 bird records were provided by SBIS from the local area. The site itself provides poor quality habitat for foraging birds however the surrounding garden could support foraging and nesting Species of Principle Importance (SPIE), such as house sparrow, and song thrush. Schedule 1 birds such as fieldfare and redwing could also forage in the surrounding area.

4.3.5.2 Nesting Birds

All nesting birds and their eggs are protected under the Wildlife & Countryside Act 1981. The buildings provide poor quality nesting habitat. There were no access points into the main barn, and although birds could access the interior of the timber shed, no sings of birds were seen internally.

Due to the small scale of the site, it is considered unlikely that a significant assemblage of breeding birds would be present. No further precautions are considered necessary.

4.3.6 Other Mammals

[redacted]

4.3.6.2 Hedgehogs

Hedgehogs have been recorded locally, and could use habitats within the surrounding garden for foraging.

The proposals involve demolition of existing buildings which were not considered to provide any suitable habitat for hedgehogs. Precautionary methods (Section 5), should be followed during the construction phase to minimise the risk of causing harm to this (and other nocturnal) species that may use the surrounding garden habitats.

4.3.6.3 Hares

Brown hares (SBAP and SPIE species) generally use arable land and long grassland and are therefore unlikely to use the site or surrounding garden habitats.

It is not considered that the development will cause habitat fragmentation or any obstruction to hare movement, due to its location and scale. No further survey or precaution is necessary.

4.3.6.4 Dormice

There are no records of dormice within the local area and habitats within the site were not suitable to support dormice. Although potential foraging sources were present in hedgerows surrounding the adjacent garden habitats, these lacked the cover and connection to more mature woodland required by dormice.

The site is not connected to any other suitable habitat in the local area, therefore no further surveys or precautions are considered necessary.

4.3.6.5 Otter/Water Vole

The site does not contain any suitable habitat for otter or water vole.

Otter and water vole will not be impacted by the proposals and no further survey or precautions are necessary.

4.3.7 Invertebrates

Habitats on the site were unlikely to support a significant assemblage of invertebrates due to the small size lack of vegetation cover. No further surveys are considered necessary.

4.3.8 Impact on County Wildlife Sites & European Protected Sites

The proposed development will not impact on any county wildlife sites due to the distance between the site and the wildlife sites in the local area.

Breckland SAC and SPA lies within 13km of the site, due to the distance to these designated sites it is considered unlikely that there would be any direct impacts from the proposals; however as the proposals involve creation of an additional residential dwelling at the site there is a risk that there could be in-direct impacts due to the increase in recreational pressure on the designated sites. Due to the small scale of the site (one additional dwelling) it is considered that these potential impacts are negligible, however an HRA screening assessment should be carried out by the Appropriate Authority to confirm this.

4.4 Limitations and Assumptions

The baseline conditions reported and assessed in this document represent those identified during a single site survey, on the 11th January 2020. A reasonable assessment of habitats can be made during a single survey; however, seasonal variations cannot be observed. The survey provides an overview of the likelihood of protected species occurring on the site: Where no evidence is found, this does not mean that species are not present, or using the site. Further surveys are only recommended if there is a significant likelihood that protected species may be present and impacted by the proposed development, based on the suitability of the habitat and any direct evidence.

All areas of the site were accessible on the day of the survey, including internal inspection of the building (although internal inspection of the timber shed was not possible the interior could be viewed by large windows on the southern aspect). All constraints and limitations have been taken into account within conclusions and recommendations.

The desk study used records and historical data provided by SBIS, which depend on the availability of recorders and survey effort in the area, and do not list all species likely to be present. Data supplement the site visit, but absence of records does not confirm absence of species.

5 Recommendations

5.1 Further Survey

No further surveys are considered necessary. The proposed development will only impact existing buildings of low ecological value.

5.2 Precautionary Methods

5.2.1 Great crested newts

The demolition of the existing buildings (the lower walls: 1m to the ground and any demolition of foundations) should be undertaken during the amphibian active season: March to October, to minimise the risk of disturbing hibernating great crested newts.

All stored materials at the site should be stored on hard standing and off the ground (on pallets) to prevent creating new shelter and hibernation opportunities.

Any loose rubble/debris should be taken off site or stored securely in skips to prevent creating new shelter or hibernation opportunities.

5.2.2 Nocturnal Animals

Any deep holes or foundations left uncovered overnight should have an escape ramp (secured scaffold board), to enable any nocturnal animals that become trapped to escape.

5.2.3 Sensitive Lighting

To minimise risk of disturbance to potential foraging and commuting bats using the surrounding garden habitats (both during and post development), external lighting should be minimised as follows:

- Any task lighting (during construction) should not be directed at the boundary vegetation, trees or ponds.
- Any necessary security lighting should be set on short timers and be sensitive to large moving objects only.
- Lighting should be low-level, bollard-type, or directed downward and shielded to minimise light spillage.
- Hoods, cowls or directional lighting should be used to avoid light directed at the sky or towards the boundary shrubs or mature trees.
- Lighting times should be limited, to provide dark periods.
- If the new access or parking areas will be lit, low-level, bollard-style lighting should be considered.
- Low pressure sodium security lights with glass glazing are recommended, as these produce the least amount of UV light. Avoid white and blue wavelengths of the light spectrum. The brightness of the lamps should be kept as low as feasibly possible for security and safety only[15][16].

5.3 Enhancement Recommendations

These additional recommendations are not legal requirements but would enhance the value of the site for wildlife, as encouraged through the NPPF, and to help achieve Suffolk BAP targets.

5.3.1 Wildlife Attracting Planting

Additional tree and hedge/shrub-planting at the site boundaries of the surrounding garden would strengthen these boundaries increasing foraging opportunities for birds and invertebrates.

The following native fruit and berry bearing species could be used: hazel *Corylus avellana*, crab apple *Malus sylvestris*, dog rose *Rosa canina*, guelder rose *Viburnum opulus*, blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna* and spindle *Euonymus europaeus*.

5.3.2 Bird Boxes

Bird boxes could be installed on the new building. These should be installed at least 3m above the ground and should avoid direct sunlight (not directly south-facing), prevailing wind and be out of reach of cats and other predators:

- Smaller, open-fronted box, made to BTO dimensions (for spotted flycatcher and song thrush – Suffolk BAP species).
- Nest boxes with 32mm holes for house sparrow (SPIE species) could be added to the outbuildings. These should be located close together for this colonial nesting species, in a sheltered, minimally disturbed area (on the western aspect).

[15] BCT (2014) Artificial lighting and wildlife: Interim Guidance: Recommendations to help minimise the impact artificial lighting.
[16] Institution of Lighting Professionals (2011) Guidance Notes for the Reduction of Obtrusive Light GN01:2011.

5.3.3 Bat Boxes

Bat boxes could be installed on the new building. Woodcrete boxes such as the Beaumaris Woodstone box are suitable for crevice roosting species and would be suitable for installing externally to the building, or Vivara Pro Build-in Woodstone Bat Tube could be installed integrally within the walls of the new building. Bat boxes should ideally be erected at least 3m above the ground in a southerly direction (south-east to south-west).

5.3.4 Hibernacula

Shelter habitat and/or hibernacula could be created adjacent to the nearby ponds or along the northern boundary of the surrounding garden habitats to provide shelter and over-winter habitat for great crested newts that are known to be present in the surrounding area.

Habitat piles created from logs or inert rubble can be placed around the pond perimeter. Hibernacula can be created by digging a depression (2m x 1m to a depth of 0.5m) and filling with inert rubble and hard wood logs and building up to 0.5m above ground. The mound should be turfed/ covered with seeded soil, with one side open to allow reptiles access to gaps created within. Ground works should be undertaken within the amphibian active season (March - October)and overseen by an appropriately licensed ecologist.

6 Conclusion

The site is of low ecological value, however the surrounding garden habitats could be used by nesting and foraging birds, foraging bats, and breeding great crested newts. Due to the scale, location and existing habitats on the site, it is considered unlikely that an protected species or habitat will be impacted by the proposals, however, precautionary working methods are recommended to minimise the risk of creating additional habitat that could be used by protected species or causing any disturbance during demolition works. The site could be enhanced for local wildlife through inclusion of some or all of the enhancement suggestions.

7 Appendix A – Legislation

7.1 Habitat Regulations

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 transpose EU Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) and the Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive) into domestic law, making it an offence to deliberately capture, kill or disturb wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

7.2 Wildlife & Countryside Act

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act.

Sites of Special Scientific Interest (SSSI) are designated under this Act.

Special Protection Areas (SPA) are strictly protected sites, designated under the Birds Directive, for rare and vulnerable birds and for regularly occurring migratory species.

7.3 Natural Environment & Rural Communities Act

The NERC 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations.

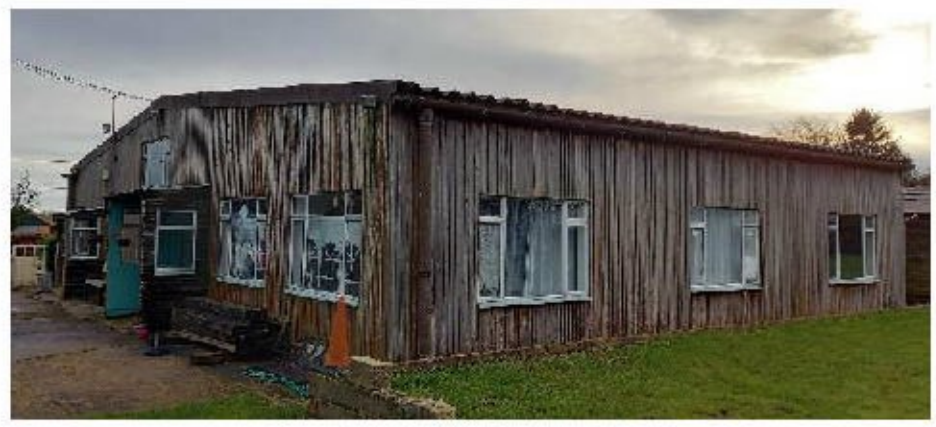
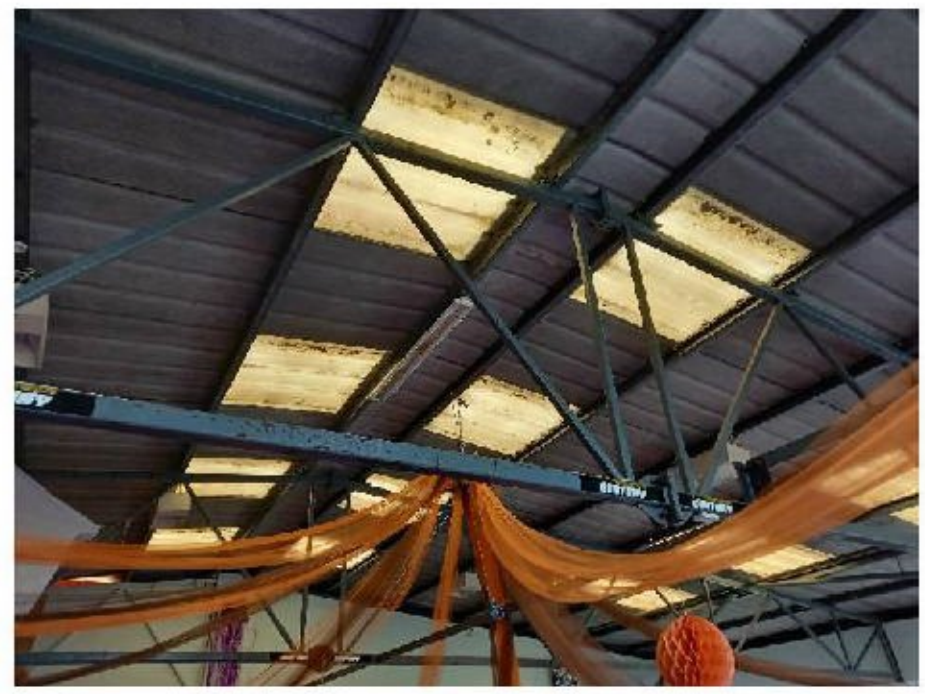
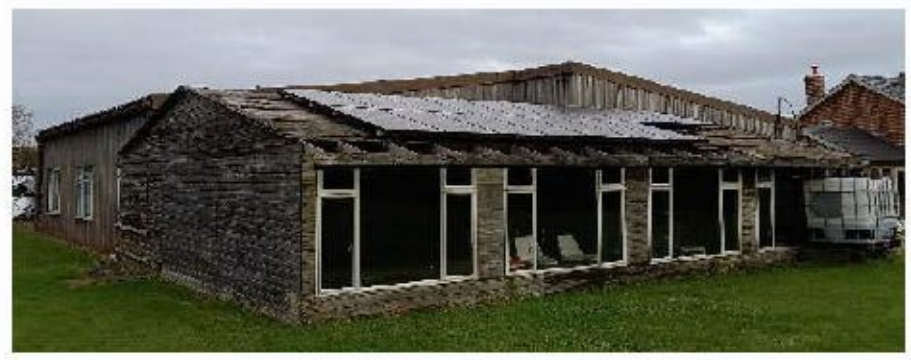
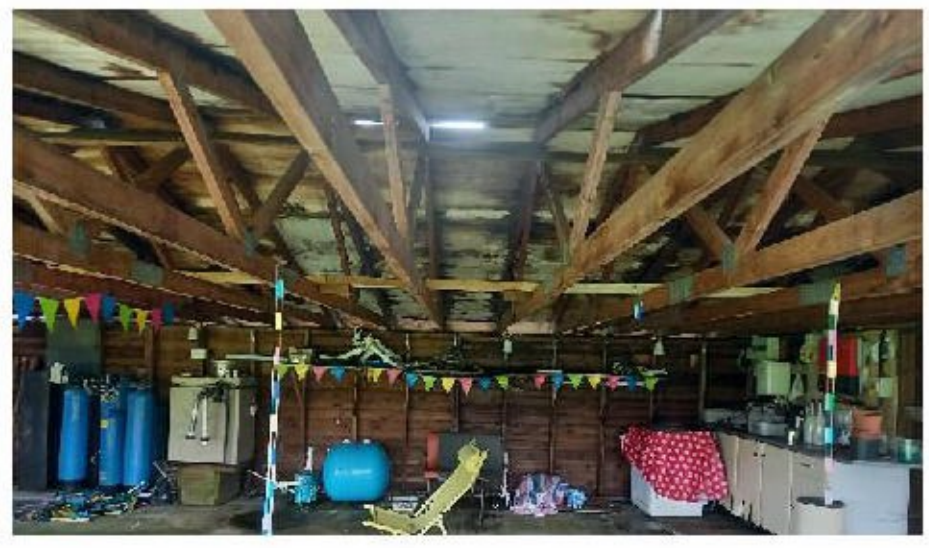
7.4 Biodiversity Action Plans

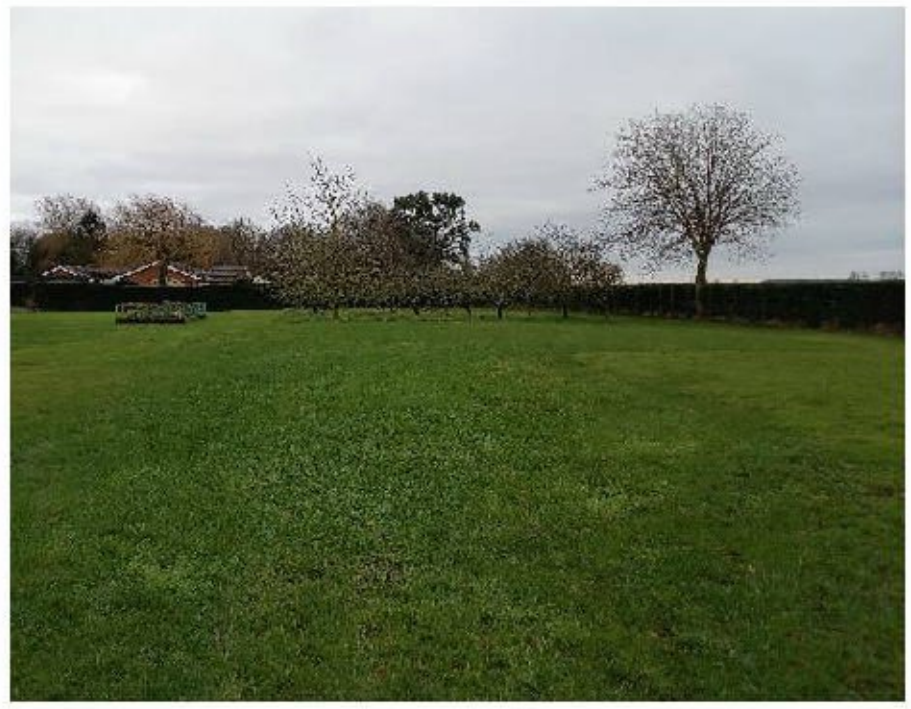
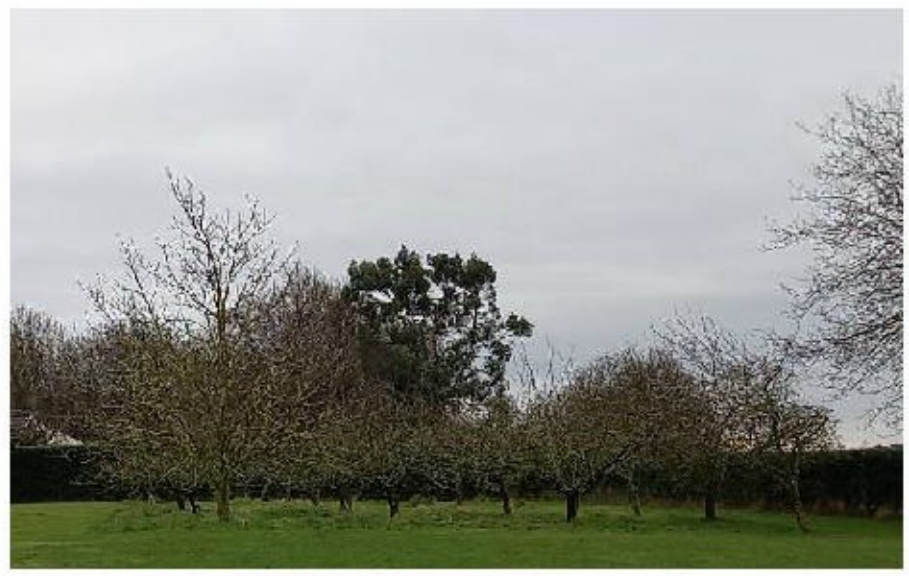
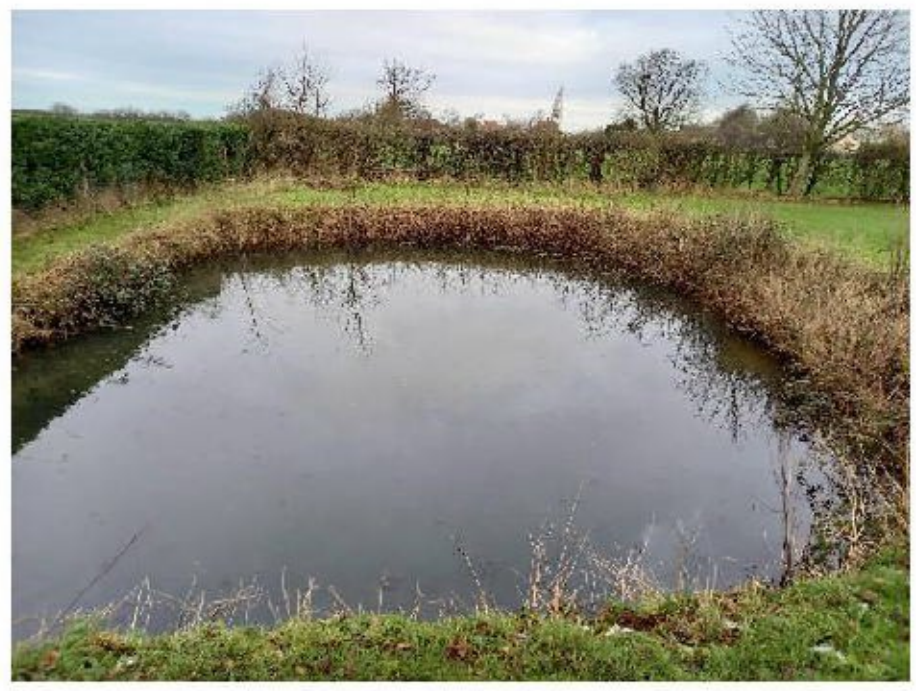
The UK Biodiversity Action Plan (UKBAP) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory.

There is no longer a UK Biodiversity Action Plan; this has been replaced by the UK Post-2010 Biodiversity Framework (2012). The England Biodiversity Strategy has been replaced by Biodiversity 2020: A strategy for England's wildlife and ecosystem services (2011). As a result, the BAP process has been devolved to local level with each county deciding its own way forward.

8 Appendix B - Phase 1 Habitat Survey Plan

Target Notes

Target note	Habitat Description	Photo
1	The Barn a former commercial property is of block construction with a pitched corrugated asbestos type roof. Externally the wall are clad in timber which is very well sealed. Roof lights within the roof create a well lit interior with no enclosed void. The roof is supported on steel joists with no suitable roosting opportunities.	
1a	Internal view of the Barn	
2	Shed of single skin timber construction with a shallow pitched roof. Damage to the roof has resulted in eater damage internally. No enclosed void internally, the roof is supported on trussed timber joists with no suitable roosting opportunities.	
2a	Internal view of the shed	

3	Regularly mown amenity grassland with a sward height or <5cm. Species dominated by grasses including perennial rye-grass *Lolium perenne*, cocks foot *Dactylis glomerata* and annual meadow-grass *Poa annua*. Occasional forbs included doves foot cranes bill *Geranium molle*, daisy *Bellis perennis*, white clover *Trifolium repens* and ribwort plantain *Plantago lanceolata*.	
4	Small well managed orchard	
5	Garden pond approximately 100m2 with moderate water quality. Aquatic vegetation included pond weed *Potamogeton sp.*. Ruderal and scattered scrub formed marginal planting including rose Rosa sp. and bramble Rubus fruticosus.	

6	Pond set within amenity grassland adjacent to Wickhambrook Road. Approximately 100m2 with two modified edges crating vertical banks to the east and west. Aquatic vegetation was dominated by dickweed Lemna sp. and fools watercress *Apium nodiflorum*.