



Wellington Farm
Bradnop
Staffordshire
ST13 7NG

Preliminary Ecological Appraisal

CTD ARCHITECTS

VERSION 2

Final

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Executive Summary

BiOME Consulting Ltd was commissioned by CTD Architects Ltd in August 2021 to undertake a Preliminary Ecological Appraisal in relation to the construction of a holiday lodge at Wellington Farm, Bradnop (the 'site'). The ecology surveys detailed within this report were completed in order to determine the baseline ecological conditions of the site, with particular attention given to the possible presence of protected, controlled or otherwise notable species.

The site was located to the south of Wellington Farm and included a single field. The western section of the field was flat and comprised closely mown grass. In the east of the site a bank was present where longer grass was present. The holiday lodge is proposed to be located on an area that was closely mown grass at the time of the site survey.

The ecological issues identified during the completed surveys were:

General Mitigation; Standard pollution control measures should be implemented during construction to protect habitat on/adjacent to the site. Retained trees on site should be protected in line with BS 5837:2012.

Bats; Habitats with the potential to support foraging and/or commuting bats around the site periphery were identified. Measures to ensure that impacts are minimised so far as practicably possible should be employed during and following construction.

Badger and other Mammals; The site could provide foraging habitat for Badgers (and other animals) and this species should be considered during development of the site, with appropriate mitigation implemented to minimise the risk of harm.

Breeding Birds; A Barn Owl box is located around 30m to the north of the proposed lodge location. It is believed that this box is managed by the Staffordshire Barn Owl Group (SBOG), although it appeared as though this box was not currently used. It is recommended that the SBOG is contacted, and the box is moved to a location elsewhere in the vicinity, outside of the breeding bird season.

Opportunities exist to create small habitat areas and to use native species in any landscape planting and to enhance the site for bat and bird species through the incorporation of bat/bird boxes on retained trees.

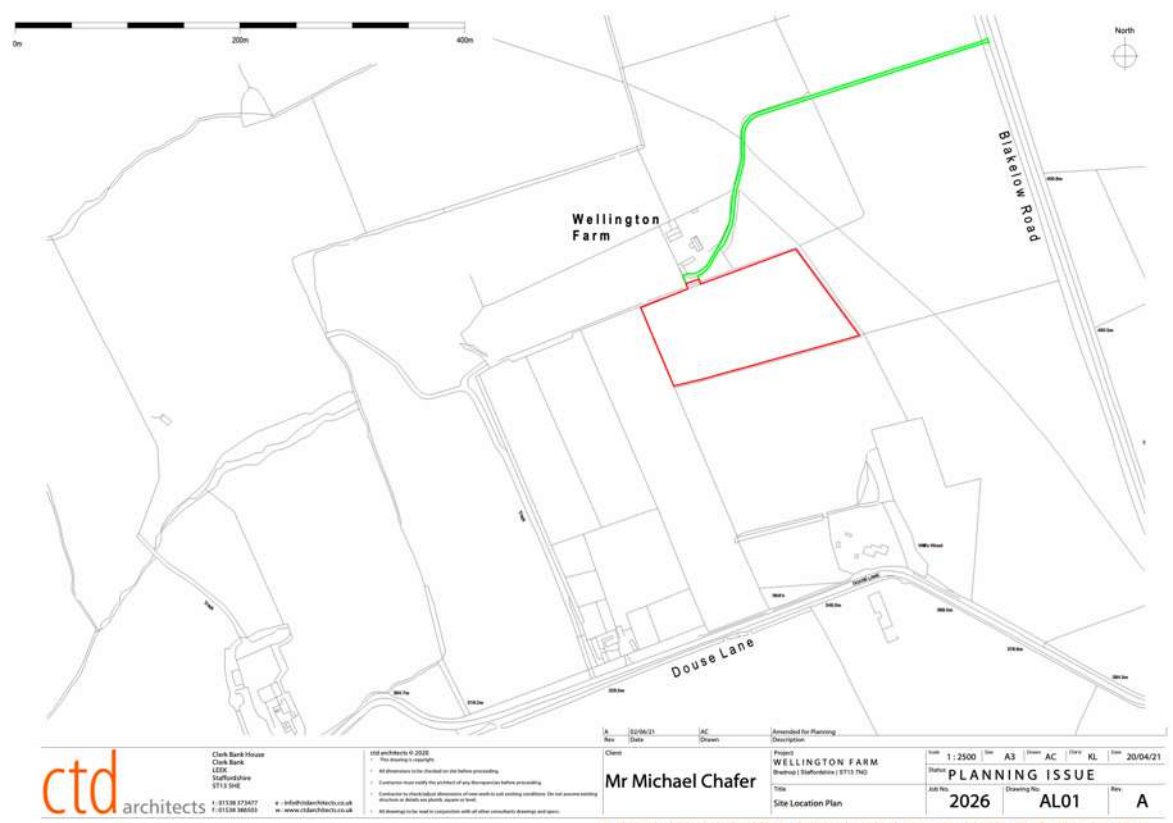
The findings of this report are considered valid for a period of 12 months. If development is delayed beyond this, an updated ecological assessment will be required.

1. Introduction

BiOME Consulting Ltd was commissioned by CTD Architects Ltd in August 2021 to undertake a Preliminary Ecological Appraisal (PEA) in relation to the construction of a holiday lodge at Wellington Farm, Bradnop (the 'site') (**Figure 1**). The location of the lodge is centred on National Grid Reference SK 02352 56047.

The ecology surveys detailed within this report were completed in order to determine the baseline ecological conditions of the site, with particular attention given to the possible presence of protected, controlled or otherwise notable species. The results have been used to identify further ecological work required to enable the proposed works at the site to proceed lawfully.

Figure 1. Site location (red line indicates location of the site)



1.1. Site Description

The site (**Figure 1**) was located to the south of Wellington Farm and included a single field. The western section of the field was flat and comprised closely mown grass. In the east of the site a bank was present where longer, unmanaged grass was present. The holiday lodge is proposed to be located on an area that was closely mown grass at the time of the site survey (**Photograph 1**).

Pastoral farmland dominated the wider area.

Photograph 1. The site, viewed from southwestern boundary, showing site boundary (red line) and proposed holiday lodge location (blue)



1.2. Development Proposal

It is proposed to construct a single holiday lodge in the north of the site (**Figure 2**).

Figure 2. Development proposal



2. Legislative Context

Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

The Habitats Regulations convey special protection to a number of species, which are listed in Schedule 2 of the Regulations and are referred to as European Protected Species (EPS). Those potentially relevant to the Project include:

- All UK resident bat species;
- Common (Hazel) Dormouse *Muscardinus avellanarius*;
- Great Crested Newt *Triturus cristatus* (GCN);
- Otter *Lutra Lutra*;
- Marsh Fritillary *Euphydryas aurinia*.

Regulation 43 makes it an offence to:

- Deliberately capture, injure or kill any wild animal of a EPS;
- Deliberately disturb wild animals of such a species;
- Deliberately take or destroy the eggs of such a species;
- Damage or destroy a breeding site or resting place of such an animal.

Disturbance in the context of the offences above is disturbance which is likely to impair the ability of the animals to survive, to breed or reproduce, to nurture their young, to hibernate, to migrate; or to affect significantly the local distribution of the species.

Licences can be granted by the relevant Statutory Nature Conservation Organisation (SNCO) for developments (sometime referred to as EPS Licences or Derogation Licences) providing the purposes of the licence is for "preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment".

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) provides protection to both EPSs and other species including wild birds, Water Voles *Arvicola amphibius* and reptiles.

All wild birds, their nests and eggs are protected, with some rare species afforded extra protection from disturbance during the breeding season (these species are listed in Schedule 1 of the Act). It is illegal to take any wild bird or damage or destroy the nests and eggs of breeding birds. There are certain exceptions to this in respect of wildfowl, game birds and certain species that may cause damage.

In England and Wales Water Voles are listed on Schedule 5 of the Act, receiving full protection since 2008. The Wildlife and Countryside Act 1981 together with amending legislation, lists the following offences:

- Intentionally killing, injuring, or taking a Water Vole by any method.
- Intentionally or recklessly damaging or destroying a Water Vole place of shelter or protection.
- Intentionally or recklessly damaging disturbing a Water Vole whilst it is occupying such a structure or place it uses for shelter or protection.
- Intentionally or recklessly obstructing access to a Water Vole's place of shelter or protection.
- Selling, offering for sale, or possessing or transporting for the purposes of sale, any live or dead Water Vole, or any part or derivative, or advertising any of these for buying or selling.

All native reptile species in the UK are subject to partial protection from intentional or reckless killing or injury only.

The Act also includes provisions for the control of invasive non-native species (INNS). Under these provisions it is an offence to:

- Release or allow to escape into the wild any animal which is not ordinarily resident or a regular visitor to Great Britain or is included in Schedule 9 of the Act.

- Plant or otherwise cause to grow in the wild any plant which is included in Schedule 9 of the Act.

People undertaking works in proximity to invasive non-native plant species should take all reasonable steps and exercise all due diligence to avoid committing an offence.

The Invasive Alien Species (Enforcement and Permitting) Order 2019

The order came into effect on the 1 December 2019 to allow for enforcement of EU Regulations (Regulation (EU) No. 1143/2014 on the prevention and management of the introduction and spread of invasive alien species in England and Wales) also known as the IAS Regulations.

It lists 66 species which are of European Union concern. There are currently 19 species listed in the Order:

- Chinese Mitten Crab *Eriocheir sinensis*
- Red Swamp Crayfish *Procambarus clarkii*
- Crayfish Signal *Pacifastacus leniusculus*
- Spiny Cheek Crayfish *Orconectes limosus*
- Muntjac Deer *Muntiacus reevesi*
- Ruddy Duck *Oxyura jamaicensis*
- Egyptian Goose *Alopochen aegyptiacus*
- Grey Squirrel *Sciurus carolinensis*
- Himalayan Balsam *Impatiens glandulifera*
- Fanwort (otherwise known as Carolina Water Shield) *Cabomba caroliniana*
- Giant Hogweed *Heracleum mantegazzianum*
- Water Hyacinth *Eichhornia crassipes*
- Parrots Feather *Myriophyllum aquaticum*
- Floating Pennywort *Hydrocotyle ranunculoides*
- Floating Water Primrose *Ludwigia peploides*
- Water Primrose *Ludwigia grandiflora*
- Giant Rhubarb *Gunnera tinctoria*
- Curly Waterweed *Lagarosiphon major*
- Nuttall's Waterweed *Elodea nuttallii*

Natural Environment and Rural Communities (NERC) Act 2006

The UK Biodiversity Plan (BAP) was a programme designed to help conserve the UK's biodiversity. It led to the production of 436 action plans between 1995 and 1999 to help many of the UK's most threatened species and habitats to recover. A review of the UK BAP priority list in 2007 led to the identification of 1,150 species and 65 habitats that met the BAP criteria at UK level.

Currently 56 Habitats of Principal Importance and 943 Species of Principal Importance are included within Schedule 41 of the NERC Act 2006 and these include species and habitats which were identified in the UK BAP and which continue to be considered to represent the conservation priorities of England in the UK Post-2010 Biodiversity Framework.

National Planning Policy Framework (NPPF) 2019

The NPPF aims to minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. Chapter 15 'Conserving and enhancing the natural environment' details what local planning policies should seek to consider with regard to planning applications:

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

170 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);

170 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;

174 b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity;

175 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;

175 d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity."

3. Methodologies

3.1. Desk Study

Details in relation to internationally designated sites within 5km and nationally designated sites with 2km were obtained from www.magic.gov.uk.

Biological records data were also obtained from Staffordshire Ecological Record (SER), including:

- Sites of Biological Importance (SBIs) and Biodiversity Alert Sites (BASs) within 1km.
- Protected species within 1km, covering European and UK protected species, Species of Principal Importance, species occurring on the UK Biodiversity Action Plan (BAP).
- Staffordshire BAP¹ and species listed on the Red Data Lists.

Habitats and Species of Principal Importance included within Section 41 of the Natural Environment and Rural Communities (NERC) Act and Local Biodiversity Action Plan (LBAP) priority habitats and species were also reviewed to compare to those habitats and species recorded within the site during the survey or recorded as having potential to be present due to habitat suitability.

3.2. Preliminary Ecological Appraisal Survey

A PEA site survey^{2,3} was undertaken on 6 August 2021 by an experienced ecologist, Martyn Owen MCIEEM. Martyn holds survey licenses in relation to Great Crested Newts *Triturus cristatus* (GCN) (2016-19752-CLS-CLS), bats (2016-1974-CLS-CLS) and a variety of Schedule 1 birds (including Barn Owl *Tyto alba*). This survey was completed in suitable weather conditions (overcast and dry). Prior

1 Staffordshire Biodiversity Action Plan [online] available at: www.sbap.org.uk (accessed 6 August 2021)

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

3 CIEEM (2017) *Guidelines for preliminary ecological appraisal* [online] available at: <https://www.cieem.net/guidance-on-preliminary-ecological-appraisal-gpea/> (accessed 6 August 2021)

to the completion of the site survey, aerial imagery was reviewed⁴ to provide an indication of habitat types present in the area.

During the survey all areas within the site were walked and habitat types assessed. Signs of protected species, invasive plants (*i.e.* those included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)) and other notable species were also searched for, as well as noting habitats considered to have the potential to support protected species.

The ultimate purpose of this PEA was to identify potentially valuable habitats and plant species assemblages, and to identify the presence and/or potential for protected/controlled species. This report presents an assessment of the ecological significance of the features present and discusses the potential for the site to support legally protected species and/or species of conservation interest which may be impacted by the project.

3.3. Bats - Trees

No tree works are proposed to facilitate development. However, to evaluate the potential suitability of trees in areas that may be indirectly impacted a Preliminary Ground Level Inspection (PGLI) survey was completed in accordance with relevant guidelines⁵. This required the detailed inspection of the exterior of trees from ground level to look for features that bats could use for roosting, in addition to any bat evidence.

The potential suitability of trees to be impacted (*i.e.* via lighting/noise/vibration) for roosting bats which could be adversely impacted by the proposed development, was assessed in line with relevant guidelines⁵ and allocated to one of the categories detailed within **Table 1**.

⁴ Google Maps [online] available at: <https://www.google.co.uk/maps> (accessed 6 August 2021)

⁵ Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn.). The Bat Conservation Trust, London

Table 1. Guidelines for assessing the potential suitability of proposed development sites for bats

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure/tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate	A structure/tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure/tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

3.3.1. Foraging and Commuting Habitat

An assessment was made of the suitability of the site and the surrounding landscape to support foraging and/or commuting bats. The assessment was based on the presence of key habitat features such as woodland, scrub, hedgerows, grassland and open water, which are highly attractive to bats. Of potential importance is the presence of unlit (semi-)natural vegetation and habitat linkage between the site and the surrounding landscape.

The quality of bat foraging and commuting habitat has been assessed using the criteria detailed in **Table 2**.

Table 2. Valuing bat foraging and commuting habitat

Grading Criteria	Reason
Optimal Quality	Presence of optimal habitat features such as unlit woodland, scrub, hedgerows, grassland and open water with excellent linkage to similar habitats within the wider landscape. Presence of high potential buildings/trees and/or known roosts within immediate landscape. Sites are generally rural in character.

Grading Criteria	Reason
Moderate Quality	Presence of optimal habitat features such as woodland, scrub, hedgerows, grassland and open water with reasonable linkage to similar habitats within the wider landscape. Limiting factors may include size of site.
Low Quality	Presence of some limited habitat features such as scrub or hedgerows, with minimal linkage to suitable habitats within the wider landscape.
Poor Quality	No suitable habitat present or, if present, highly degraded/fragmented. Minimal unlit areas with no linkage to suitable habitat beyond site. Generally urban in character.

3.4. Limitations

The findings presented in this study represent those at the time of survey and reporting, and data collected from available sources. Ecological surveys are limited by factors which affect the presence of plants and animals, such as the time of year, migration patterns and behaviour.

4. PEA Results

The results of the desk study (Section 4.1) and the site surveys (Section 4.2) are presented below.

4.1. Desk Study

4.1.1. Designated Sites

There were two internationally designated sites within 5km and six non-statutory sites within the 1km search area. No nationally designated sites are present within the 2km search area. Details are provided within **Table 3**.

Table 3. Designated site details

Site	Approx. distance from site centre/direction	Description
Internationally Designated Sites (5km)		
South Pennine Moors Special Area of Conservation (SAC)	3.1km/NE	Annex I habitats that are a primary reason for selection of this site <u>4030</u> European dry heaths <u>7130</u> Blanket bogs (*if active bog) *Priority feature <u>91A0</u> Old sessile oak woods with Ilex and Blechnum in the British Isles Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site <u>4010</u> Northern Atlantic wet heaths with <i>Erica tetralix</i> <u>7140</u> Transition mires and quaking bogs

Site	Approx. distance from site centre/direction	Description
Peak District Moors (South Pennine Moors Phase 1) Special Protection Area (SPA)	3.1km/NE	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 population of a species listed in Annex I, in any season: Merlin <i>Falco columbarius</i> ; 30 - 36 pairs - breeding 1990/1998 2.3 - 2.8% Golden Plover <i>Pluvialis apricaria</i> ; 435 - 445 pairs - breeding 1990/1998 1.9 - 2.0% Short-eared Owl <i>Asio flammeus</i> ; 22 - 25 pairs - breeding 1990/1998 2.2 - 2.5%
Non-Statutory Sites (1km)		
White Lea Farm Local Wildlife Site (LWS)	0.4km/	An area of semi-improved neutral grassland, which slopes in an easterly direction away from the Morridge, and a smaller area of marshy grassland to the south.
Rue Hayes Valley LWS	0.7km/E	A mosaic of dry acid grassland and dry heath along the steep slopes, with marshy grassland in the valley bottom. A large field supporting a mixture of marshy and semi-improved grassland adjoins the valley, also supporting a diverse vegetation community.
Rue Hayes Meadow LWS	0.8km/E	A hay field supporting semi-improved neutral grassland supporting a diverse assemblage of herbs and grasses. Sweet vernal-grass, crested dog's-tail, yellow oat-grass, Yorkshire-fog, common bent and tufted hair-grass are some of the commonest grasses.
White Lea Farm (brook east of) LWS	0.6km/NE	A section brook with a variety of habitats lining the banks - broadleaved woodland, marshy grassland, semi-improved neutral grassland and linear tracts of marginal vegetation.
Wormlow (north-west of) LWS	1.0km/NW	Stream with steep sloping banks, grazed by cattle.
Fairfield (east of) LWS	0.6km/S	Semi-improved flushed grassland at the base of south facing slopes.

Taking into account the nature of the proposal and the locations/qualifying features of the identified designated sites, no impacts in relation to designated sites are anticipated and no further works are required. Designated sites are not considered further within this report.

4.2. PEA/PRA Site Survey

3.2.2 Habitats

The area of the site to be directly impacted was closely mown amenity grassland (Photograph 2). Habitats in the wider areas were also dominated by grasses, which was unmown to the east and comprised predominantly Cocksfoot *Dactylis glomerata* with infrequent thistles *Cirsium* sp. and docks *Rumex* sp. A hedgerow (which will not be directly impacted) was present to the north of the site which included Lime *Tilia* sp., Hawthorn *Crataegus monogyna* and Sycamore *Acer pseudoplatanus* trees (Photograph 3). A small ditch/stream was present adjacent to this hedgerow (Photograph 4).

The desk study results in relation to plants are summarised within Table 4.

Table 4. Desk study records – plants

Species	Number of Records	Most Recent Record
Bluebell <i>Hyacinthoides non-scripta</i>	1	2000
Bramble <i>Rubus obesifolius</i>	1	2002
Bramble <i>Rubus painteri</i>	1	2002
Bramble <i>Rubus turritus</i>	3	2008

Photograph 2. Location of proposed holiday lodge



Photograph 3. Hedgerow with trees adjacent to location of proposed holiday lodge



Photograph 4. Ditch/stream adjacent to site



3.2.3 Species

4.2.1.1. Bats

All bat species are European Protected Species (EPS) protected under the Conservation of Habitats and Species Regulations 2010 (as amended) and receive protection under the Wildlife and Countryside Act 1981 (as amended).

Preliminary Ground Level Assessment

All trees in areas where disturbance could potentially occur were assessed; no trees with Potential Roost Features (PRFs) were noted and all were therefore classed as being of negligible value to roosting bats (Table 1). No further work in relation to roosting bats is considered necessary.

Foraging/Commuting Habitat

The survey identified a number of linear features (hedge/fence lines) and habitats (farmyard, fields) adjacent to the site which will be used by foraging and/or commuting bats.

Overall, the site was assessed to provide **LOW** quality habitat (Table 2) for foraging/commuting bats. However, habitats of increased value were present in close proximity and measures will need to be employed during and post-construction to ensure that impacts are minimised to foraging/commuting bats (Section 5).

Desk Study

The desk study returned records of a small number of bat species (Table 5).

Table 5. Desk study records - bats

Species	Number of Records	Most Recent Record
Bats Chiroptera	1	1981
Brandt's Bat <i>Myotis brandtii</i>	1	2019
Noctule Bat <i>Nyctalus noctula</i>	1	2019
Common Pipistrelle <i>Pipistrellus pipistrellus sensu stricto</i>	2	2019

4.2.1.2. Badger *Meles meles*

Badgers are protected through the Protection of Badgers Act 1992, which makes it an offence to recklessly take, injure or kill a Badger or cause disturbance to its sett. Furthermore, Badgers are afforded protection from ill-treatment, which has been defined to include preventing a Badger accessing its sett, as well as causing the loss of significant foraging resources within a Badger territory. Badgers are also protected through this species' inclusion on Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), which prohibits their killing or taking by certain methods.

No evidence of Badger was present within the site/adjacent areas, however, the possible presence of occasional foraging Badgers within the site is considered

possible, if present in the wider area. The desk study returned two records of this species, most recently in 1985.

No further survey work is considered necessary, however, mitigation is required during the construction period to ensure no Badgers are harmed.

4.2.1.3. Other Section 41 Mammals

In England many of the rarest and most threatened species are included within Section 41 of the 2006 Natural Environment and Rural Communities Act. Although these species are afforded no additional legal protection, their rarity renders them an important consideration for planning applications. Section 40(1) of this Act imposes a duty to conserve biodiversity; *'Every public authority must, in exercising its function, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'*. Section 40(3) of the Act explains that *'Conserving biodiversity includes, in relation to living organism or type of habitat, restoring or enhancing a population or habitat'*.

It is likely that Hedgehogs *Erinaceus europaeus* are resident in the local area. Optimal habitats for other Section 41 mammal species are absent from the site and immediate surrounding area. The desk study returned 12 records of Brown Hare *Lepus europaeus*, most recently in 2019.

Taking into account the abundance of similar habitats in the vicinity, the potential for impacts to Hedgehog, or any other Section 41 mammal species within the site, is considered highly unlikely.

No further survey work in relation to other Section 41 mammals is considered necessary. Mitigation is proposed to ensure that no mammals are harmed, if present, during construction.

4.2.1.4. Amphibians

A number of amphibian species are legally protected under Section 9 of the Wildlife and Countryside Act 1981, as listed under Schedule 5. Great Crested Newts (GCN) and Natterjack Toads *Epidalea calamita* are also afforded additional protection as EPS, as defined under the EC Habitats and Species Directive 92/43/EEC.

No ponds were present (as indicated by Ordnance Survey mapping) within the site or within 250m (the typical ranging distance for the majority of a GCN population from a breeding pond⁶) of the proposed lodge location.

An assessment of habitats for their suitability to support GCN and other amphibians within the site was completed. Development will be entirely restricted to closely mown amenity grassland, which is sub-optimal for amphibians. Access will be achieved via the existing driveway and laydown areas will be situated on closely mown grassed areas.

Management of the site will continue in its current form until development takes place.

Amphibians are considered likely absent from the site. However, in the apparently unlikely event that amphibians are encountered works must cease and ecological advice sought.

4.2.1.5. Reptiles

Reptiles are protected under Schedule 5 of the Wildlife and Countryside Act 1981. Section 9(1) of the Wildlife and Countryside Act 1981 prohibits the killing, injuring or taking by any method. All native reptiles are also S41 priority species.

Habitats favoured by reptiles tend to be sunny, well-drained and often south-facing. Typical habitats include grass and heather heathland, chalk downland, coppiced woodland, sand dunes, disused allotments, suburban wasteland, road/railway embankments, golf course roughs, rough grassland, open woodland and woodland edge, immature plantation forestry, sea cliffs, moorland, disused quarries, non-intensive farmland and wild gardens. In addition, Grass Snakes *Natrix helvetica* favour damp habitats⁷.

Taking into account the nature of the habitats within the areas of the site to be impacted (unsuitable for any reptile species), the potential for impacts to any reptilian species on site is considered highly unlikely. No further works are

⁶ English Nature (2001). *Great Crested Newt Mitigation Guidelines*

⁷ Froglife (1999). *Froglife Advice Sheet 10; Reptile Survey. An introduction to planning, conducting and interpreting surveys for snake and lizard conservation*

considered necessary. However, in the apparently unlikely event that reptiles are encountered works must cease and ecological advice sought.

4.2.1.6. Birds

All wild birds (defined as species which are resident or are visitors to the United Kingdom (UK), but generally not game birds) are protected by the Wildlife and Countryside Act 1981 (as amended). As far as planning and development is concerned, it is an offence to kill, injure or take any wild bird. Some species, listed in Schedule 1 of the Act, are protected by special provisions because of their rarity and it would constitute an offence to disturb them while nesting (which includes nest building). It is also an offence to disturb dependent young of a Schedule 1 bird.

A number of bird species were recorded in and around the site:

- Blackbird *Turdus merula*
- Blue Tit *Cyanistes caeruleus*
- Magpie *Pica pica*
- Robin *Erithacus rubecula*
- Swallow *Hirundo rustica*
- Wood Pigeon *Columba palumbus*
- Wren *Troglodytes troglodytes*

A Barn Owl *Tyto alba* box was present on a tree, around 30m to the north of the proposed lodge location. There was no external evidence of use. No potential nesting habitat for other Schedule 1 species was noted in areas where disturbance could occur.

The desk study returned records of 33 bird species, as detailed Table 6.

Table 6. Desk study records - birds

Species	Number of Records	Most Recent Record
Lesser Redpoll <i>Acanthis cabaret</i>	2	2003
Skylark <i>Alauda arvensis</i>	18	2013
Kingfisher <i>Alcedo atthis</i>	1	2008
Wigeon <i>Anas penelope</i>	1	2006
Mallard <i>Anas platyrhynchos</i>	1	2000

Species	Number of Records	Most Recent Record
Pink-footed Goose <i>Anser brachyrhynchus</i>	6	2019
Short-eared Owl <i>Asio flammeus</i>	9	2012
Hen Harrier <i>Circus cyaneus</i>	1	2018
Reed Bunting <i>Emberiza schoeniclus</i>	1	2012
Merlin <i>Falco columbarius</i>	2	2003
Peregrine <i>Falco peregrinus</i>	2	2011
Hobby <i>Falco subbuteo</i>	6	2005
Kestrel <i>Falco tinnunculus</i>	5	2013
Snipe <i>Gallinago gallinago</i>	4	2017
Oystercatcher <i>Haematopus ostralegus</i>	2	2012
Willow Ptarmigan <i>Lagopus lagopus</i>	2	2015
Lesser Black-backed Gull <i>Larus fuscus</i>	1	2007
Linnet <i>Linaria cannabina</i>	2	2013
Red Kite <i>Milvus milvus</i>	2	2019
Grey Wagtail <i>Motacilla cinerea</i>	1	2012
Spotted Flycatcher <i>Muscicapa striata</i>	4	2013
Curlew <i>Numenius arquata</i>	15	2013
House Sparrow <i>Passer domesticus</i>	1	2004
Tree Sparrow <i>Passer montanus</i>	4	2008
Grey Partridge <i>Perdix perdix</i>	3	2013
Redstart <i>Phoenicurus phoenicurus</i>	3	2014
Golden Plover <i>Pluvialis apricaria</i>	7	2013
Tawny Owl <i>Strix aluco</i>	2	2004
Starling <i>Sturnus vulgaris</i>	5	2005
Redwing <i>Turdus iliacus</i>	1	2019
Fieldfare <i>Turdus pilaris</i>	1	2019
Barn Owl	6	2017
Lapwing <i>Vanellus vanellus</i>	21	2013

4.2.1.7. Invertebrates

A number of invertebrate species are afforded legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). These species are protected from intentional killing, injuring or taking, possession or control, intentional damage/destruction of any structure or place used for shelter or

protection, intentional disturbance while occupying such a structure/place, selling or offering for sale or buying. Numerous species are also included on Section 41 of the NERC Act.

The desk study returned records of two butterflies, three caddis flies, one mollusc and 28 species of moth all of which are relatively common (i.e. none protected at European or national level).

Taking into account the nature of the habitats on-site/nearby and the results of the desk study it is considered highly unlikely that significant populations/species of invertebrates are present and no further works relating to invertebrates are considered necessary. Invertebrates are not considered further within this report.

4.2.1.8. Invasive Plants

No non-native invasive plant species listed on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) were observed during the survey.

No further work in relation to invasive plants is considered necessary. Invasive plants are not considered further within this report.

5. Conclusions and Recommendations

A PEA site survey/complimentary desk study have been completed to inform the construction of a detached holiday lodge at Wellington Farm, Bradnop. These surveys identified the below detailed ecological issues.

5.1. General Mitigation

Standard pollution control measures should be implemented during construction to protect habitats on/adjacent to the site.

Retained trees on site should be protected in line with BS 5837:2012⁸.

5.2. Bats

Habitats with the potential to support foraging and/or commuting bats around the site periphery were identified.

To minimise impacts to bats during construction, works during the period between 15 minutes before sunset and 15 minutes after sunrise should be avoided/minimised so far as practicably possible. If temporary lighting is necessary, it should be directed to where it is needed, and light spillage avoided.

To ensure that impacts commuting/foraging bats from permanent lighting are minimised so far as practicably possible, lighting should be directed to where it is needed and light spillage avoided. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only.

The height of lighting columns in general should be as short as is possible as light at a low level reduces any ecological impact. However, there are cases where a taller column will enable light to be directed downwards at a more acute angle and thereby reducing horizontal spill. For access lighting this can take the form of low-level lighting that is as directional as possible and below 3 lux at ground level.

Light levels should be as low as possible and if lighting is not needed, it should be avoided.

⁸ BS 5837 (2012). *Trees in Relation to Design, Demolition and Construction*

Many security lights are fitted with movement sensors which, if well installed and aimed, will reduce the amount of time a light is on each night. This is more easily achieved in a system where the light unit and the movement sensor are able to be separately aimed. If the light is fitted with a timer this should be adjusted to the minimum to reduce the amount of 'lit time'. The light should be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible. A shield or hood can be used to control or restrict the area to be lit. Avoid illuminating at a wider angle as this will be more disturbing to foraging and commuting bats and other wildlife.

5.3. Badger and other mammals

The site could provide foraging habitat for Badgers and other animals and this species should be considered during development of the site, this should include:

- covering trenches at the conclusion of each working day, or include a means of escape for any animal falling into excavations, and
- any temporarily exposed open pipe system should be capped in such a way as to prevent Badgers gaining access.

5.4. Breeding Birds

A Barn Owl box is located around 30m to the north of the proposed lodge location. It is believed that this box is managed by the Staffordshire Barn Owl Group. It appears as though this box is not currently used. It is recommended that the SBOG is contacted and the box is moved to a location elsewhere in the vicinity outside the breeding bird season.

No evidence of nesting birds, or habitats with the potential to support nesting birds were present in areas to be impacted.

5.5. Opportunities for Enhancement

The National Planning Policy Framework (NPPF) sets out national planning policies for the protection of biodiversity (and geological) conservation through the planning system. A key principle of NPPF is that, '*Opportunities to incorporate biodiversity in and around developments should be encouraged*'. Taking the requirements of NPPF into account, opportunities should be sought where possible for nature conservation enhancement at this site.

Opportunities may exist to create small habitat areas and to use native species in any landscape planting. Opportunities also exist to enhance the site for bat and bird species through the incorporation of bat/bird boxes on retained trees. S41 priority species such as the House Sparrow *Passer domesticus* could potentially benefit from the provision of appropriate boxes. Such measures would therefore be beneficial to nature conservation and show compliance with the policy guidance.

Appendix A Desk Study Data

A legend to the map showing Nature Conservation Sites and Species

Introduction

These colours are used on the site alert mapping within the SWT GIS, but SER cannot guarantee the same colours are used in any other mapping system, particularly those based on ArcView.

Statutory Designations from Natural England's web-site

	National Nature Reserves	★	NNR (boundary not available owing to OS restrictions)
	Sites of Special Scientific Interest	★	SSSI (boundary not available owing to OS restrictions)
	Local Nature Reserves	★	LNR (boundary not available owing to OS restrictions)

Non-statutory Designations from the Staffordshire Grading System (1995 onwards)

	Site of Biological Importance (ex Grade 1 SBI) equivalent to "Local Wildlife Site"
	Biodiversity Alert Site (ex Grade 2 SBI)
	Proposed/potential Site of Biological Importance

Geological Sites

	Regionally Important Geological/geomorphological Site (= Local Geological Site)
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Staffordshire Wildlife Trust Sites

	SWT Nature Reserves
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Other Nature Reserves

	Royal Society for the Protection of Birds
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Ancient Woodland Inventory

	Ancient & Semi-natural Woodland
	Ancient Replanted Woodland

Species Information

	Mammals excluding those listed below		Amphibians and reptiles excluding those below
	Otter (<i>Lutra lutra</i>)		Great Crested Newt (<i>Triturus cristatus</i>)
	Badger (<i>Meles meles</i>) - not normally supplied		Native Crayfish (<i>Austropotamobius pallipes</i>)
	Water Vole (<i>Arvicola terrestris</i>)		Flowering plants except those below
	All bat species		Bluebell (<i>Hyacinthoides non-scripta</i>)
	All bird species		Butterflies and Moths
	Any other protected species (precise to 100m)		BAP Species Records (precise to 100m)
	All Protected Species Records (precise to 1km)		BAP Species Records (precise to 1km)

Notes:

The Local Nature Reserve and other nature reserve boundaries can overlay the current grading when both layers are actively visible

Where there are multiple species records for the same grid reference the dot for one species may obscure the dots for other species - all species records will be displayed in the accompanying spreadsheet

Not all the above categories may be present on the accompanying map

Version 2.0 July 2011

Nature Conservation Sites and Species within 1km of Wellington Farm [ST13 7NG] (SK 02336 56014)

Note: Badger records are excluded, and only 100m precision sightings are plotted

