

## Extended Phase 1 Survey Report

CALA Homes Ltd

Land at Fewcott Road, Fritwell

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### Northamptonshire Office

8 Melbourne House  
Corbygate Business Park  
Weldon, Corby  
Northamptonshire  
NN17 5JG

01536 408 840  
info@lgluk.com

[www.lgluk.com](http://www.lgluk.com)



### Oxfordshire Office

Greystones House  
Burford Road  
Chipping Norton  
Oxfordshire  
OX7 5UY

01608 648 657  
info@lgluk.com



INVESTORS  
IN PEOPLE

Bronze

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## DOCUMENT CONTROL SHEET

Ecological Team	
<b>Thomas Haynes MSc CIEEM</b>	Associate Director & Principal Ecological Consultant
<b>Andy Carr MSc PhD</b>	Ecological Consultant
<b>Sophie Amphlett BSc (Hons) MSc ACIEEM</b>	Assistant Ecological Consultant
<b>Gill Wooloff</b>	Project Administrator

Originating Author:	Date:	Version	Notes:
Andy Carr	08/11/2018	D1	Original Report
Reviewed By:			
Sophie Amphlett	12/11/2018	D1	Quality control
Approved for Issue By:			
Andy Carr	12/11/2018	V1	Final Report

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It should be noted that the information above provides details of the Site's current ecological situation. In the event that the proposed development does not commence within 12 months of the date of this report, further advice should be sought from a suitably qualified ecologist as to whether the information provided requires updating in light of changing ecological conditions.

## Executive Summary

Lockhart Garratt Ltd was commissioned by CALA Homes Ltd to carry out an updated Extended Phase 1 Habitat Survey including desk study for land at Fewcott Road, Fritwell, Oxfordshire.

There is one Statutory site designated for its nature conservation interest within 2km of the Site, the Ardley Cutting and Quarry SSSI located approximately 0.9km to the south-west. The closest non-statutory designation of wildlife conservation interest is the Upper Heyford Airfield Local Wildlife Site, located 1.7km to the south of the Site. A range of protected mammal, amphibian and bird species were identified within 2km of the Site by the desk study.

The Extended Phase 1 Survey was undertaken on 21<sup>st</sup> September 2018. The habitat within the Site consisted of buildings, hard-standing, improved and semi-improved grassland, scattered trees, hedgerows and tall ruderal vegetation.

This report considers the ecological conditions within the Site in the context of a potential future planning application for the redevelopment of the Site to provide new residential dwellings with associated open space.

Overall it is considered that subject to the implementation of the recommendations and enhancements set out within this report, an overall net gain in biodiversity at the Site may be achieved. Recommendations, in this context, are as follows:

- Two ash trees (T1 and T2), documented as having bat roosting potential, cannot be retained during the development, further bat surveys are recommended to assess the use of potential bat roosts in these trees before they are felled.
- Clearance and construction works should be scheduled outside of the main bird breeding season (March to August inclusive). If in the event works need to proceed within this period, then specialist advice from a suitably qualified ecologist should be sought.
- A habitat manipulation exercise should be undertaken in order to safeguard any reptiles which may be present within the Site.
- Any landscape planting should incorporate native species, including those species known to provide foraging opportunities for breeding birds and nectar sources for invertebrates.
- Bat and bird boxes should be provided within the new development; the detailed specifications will be provided by a suitably qualified ecologist.

## Table of Contents

<b>1. INTRODUCTION .....</b>	<b>7</b>
Terms of Instruction.....	7
Report Limitations .....	7
Documents Provided.....	7
Qualifications .....	7
Site Description .....	7
Aim of the Study.....	8
<b>2. METHODOLOGY .....</b>	<b>9</b>
Desk Study.....	9
Extended Phase 1 Habitat Survey .....	9
Faunal Surveys.....	9
Badger Appraisal.....	10
Bats.....	10
Great Crested Newt .....	11
Principles of Ecological Evaluation .....	12
<b>3. LEGISLATION AND PLANNING POLICY OVERVIEW .....</b>	<b>14</b>
Legislation .....	14
Policy .....	14
National Planning Policy Framework (England) .....	14
<b>4. DESK STUDY RESULTS.....</b>	<b>16</b>
Sites of Nature Conservation Interest .....	16
Protected Species .....	16
<b>5. PHASE 1 HABITAT SURVEY RESULTS .....</b>	<b>19</b>
Field Survey Limitations .....	19
Habitat Descriptions .....	19
<b>6. EVALUATION OF ECOLOGICAL CONTEXT .....</b>	<b>23</b>
The Site .....	23
<b>7. HABITAT EVALUATION .....</b>	<b>24</b>
<b>8. FAUNAL EVALUATION .....</b>	<b>25</b>
Desk Study.....	25

<b>9. RECOMMENDATIONS, FURTHER SURVEYS AND ENHANCEMENTS.....</b>	<b>29</b>
Overview .....	29
Designated Sites .....	29
Habitats and Species Recommendations and Enhancements.....	29
Further surveys.....	Error! Bookmark not defined.
<b>10. REFERENCES AND BIBLIOGRAPHY.....</b>	<b>31</b>
Appendix 1: Desk Study Results.....	32
Appendix 2: Phase 1 Plan .....	33
Appendix 3: Photo Record.....	34
Appendix 4: Relevant Legislation.....	35

## 1. INTRODUCTION

### Terms of Instruction

- 1.1. Lockhart Garratt Ltd was commissioned by CALA Homes Ltd to provide a preliminary ecological assessment of land at Fewcott Road, Fritwell in respect of proposed redevelopment of the site to provide new residential dwellings with associated open space.

### Report Limitations

- 1.2. This is an ecological report and as such no reliance should be given to comments relating to buildings, engineering, soils or other unrelated matters.

### Documents Provided

- 1.3. As background information the following documentation was provided:
- Proposed Site Plan: Ref No SK.01 (24.07.18).

### Qualifications

- 1.4. The authors of this report are detailed below:
- Andy Carr MSc PhD – Primary Author/Primary Surveyor
  - Sophie Amphlett BSc (Hons) MSc ACIEEM - Reviewer
  - Gill Woolloff - Admin

### Site Description

- 1.5. The area proposed for development is located at OS grid reference SP 529 290, hereafter referred to as “the Site”. The assessment covered the whole of the Site, which is approximately 1.5ha in area.
- 1.6. At the time of the assessment the Site mostly comprised of buildings, improved and semi-improved grassland, trees, scrub and hard-standing.
- 1.7. The Site was bound by Hodgson Close and Fritwell Road to the north, arable land to the east, grassland associated with a neighbouring farm to the south and west.
- 1.8. The Site location plan is provided below at **Figure 1**.



**Figure 1: Site Location Plan**

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### **Aim of the Study**

- 1.9. The purpose of this report is to provide an assessment of ecological features present within the Site, to identify any ecological constraints and provide appropriate mitigation, compensation and avoidance measures to ensure no net loss in biodiversity as a result of the proposals.



## 2. METHODOLOGY

- 2.1. The methodology for the ecological assessment was split into three main areas: a desk study, habitat survey and faunal survey. These are discussed in more detail below.

### **Desk Study**

- 2.2. Existing ecological information on the Site and surrounding area was requested from the Thames Valley Environmental Records Centre (TVERC). The purpose of the desk study was to collect baseline information to identify statutory and non-statutory designated sites, legally protected species and species of conservation concern within a 2km radius of the Site in line with CIEEM Guidelines for Preliminary Ecological Appraisal (2017). Full information is provided in **Appendix 1**.
- 2.3. A review of online resources, including the Multi Agency Geographic Information for the Countryside (MAGIC) database was also undertaken to establish the ecological context for the Site (21/09/2018). The MAGIC website was also reviewed to identify any designated sites of European Importance within 5km of the Site.
- 2.4. In addition, Ordnance Survey and aerial mapping was reviewed to identify any ponds within 500m of the Site.

### **Extended Phase 1 Habitat Survey**

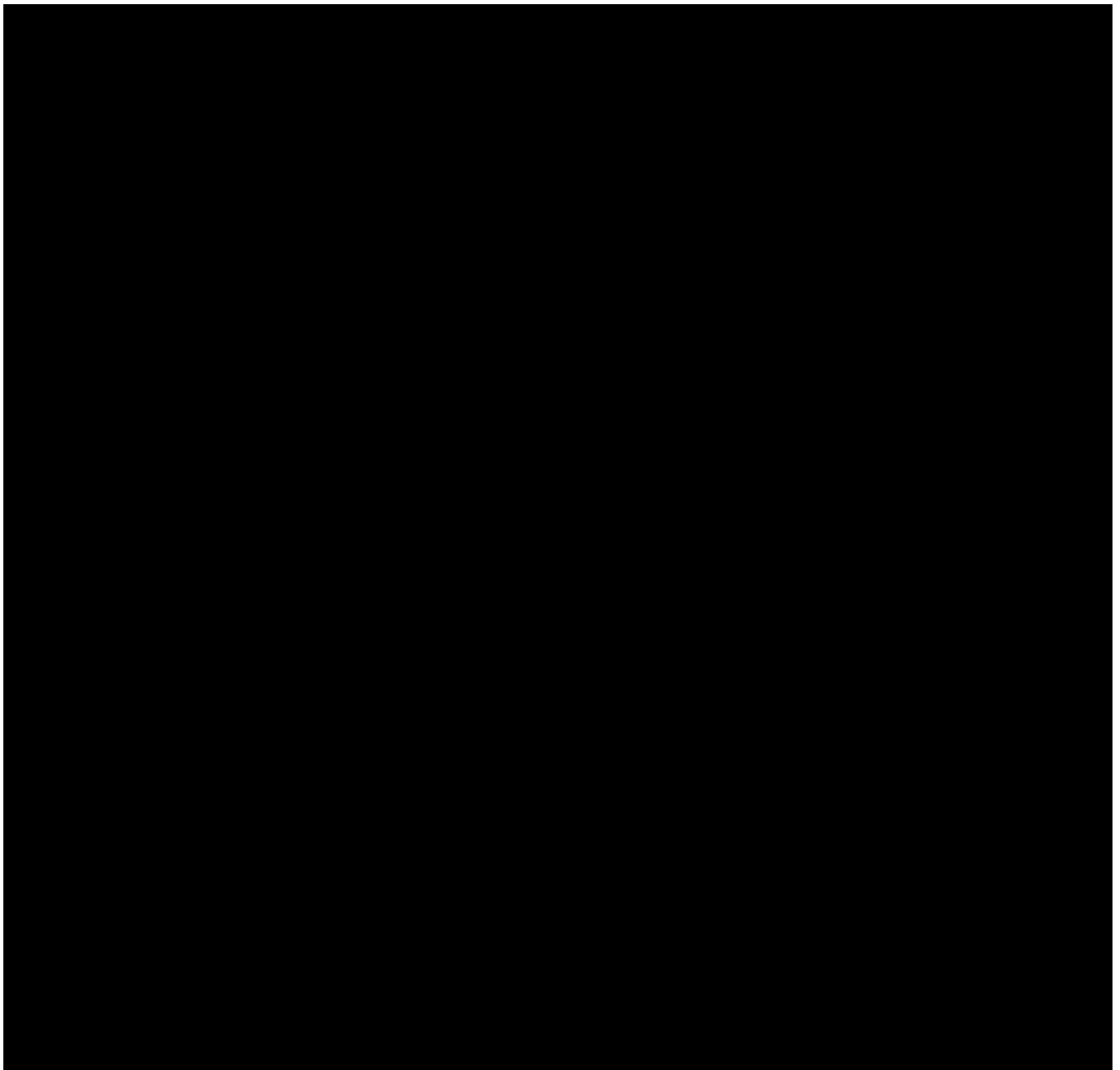
- 2.5. An Extended Phase 1 Habitat Survey was undertaken by Andy Carr on 21/09/2018 in order to ascertain the general ecological value of the Site and to determine the need for further assessment.
- 2.6. The Phase 1 Habitat Survey was undertaken in accordance with standard methodology (JNCC, 2010<sup>1</sup>). The Phase 1 methodology involves the classification of habitat types based on the vegetation present. The Site was classified into areas of similar botanical community types, with a representative species list provided for each habitat type identified. In addition invasive weeds were also searched for during the Phase 1 Habitat Survey, as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).
- 2.7. The information is presented in accordance with the standard Phase 1 Habitat Survey format with habitat descriptions and a habitat map, provided in **Appendix 2**. In addition, target notes providing supplementary information, for example relating to species, composition, structure and management are also presented on the habitat map.
- 2.8. All of the species that occur within each habitat type would not necessarily be detectable during survey work carried out at any given time of year. The botanical work was undertaken outside the optimal survey period for botanical work, however given the habitat types present, it is considered that a robust assessment was undertaken.

### **Faunal Surveys**

- 2.9. General faunal activity was recorded during the Phase 1 field survey, including mammals and birds observed or heard. Specific attention was also paid to the potential presence of any protected, rare or notable species, as described below.

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<sup>1</sup> Joint Nature Conservation Committee (2010). Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit.



## **Bats**

### ***Tree Assessment***

- 2.13. A preliminary ground-based assessment of all suitable trees located on or immediately adjacent to the study area was undertaken to determine their potential to support roosting bats (for details on the location of trees with bat roost potential refer to highlighted trees on the Phase 1 plan in **Appendix 2**).
- 2.14. All suitable features such as cracks and splits in limbs, hollows and cavities, natural holes, woodpecker holes, loose bark and dense ivy were assessed using binoculars and high powered torches where appropriate. Evidence of bat roost themselves, including droppings, feeding remains and urine staining were also searched for during the assessment.
- 2.15. Where no direct or indirect evidence of roosting bats were confirmed, trees were categorised as being of high, medium, low or negligible potential to support roosting bats based on the type

and number of suitable bat features present, in accordance with best practice guidance, Bat Conservation Trust (2016) Bat Surveys: Good Practice Guidelines 3<sup>rd</sup> Edition.

- 1) *High potential*– one or more potential roosting features present within a structure, with enough suitable surrounding commuting and foraging habitat and which is large enough to be able to shelter a large number of bats on a regular basis. These include maternity and hibernation roosts.
- 2) *Moderate potential* - one or more potential roosting features present within a structure that is likely to shelter a number of bats, but unlikely to support a roost of high conservation status.
- 3) *Low potential* – one or more potential roost features present within a structure yet is not surrounded by suitable commuting and foraging habitat and does not provide enough protection and space to shelter large number of bats. This also includes trees with no visible potential roost features but is of adequate age and structure to offer limited roosting potential.
- 4) *Negligible potential* – whereby no evidence of bats was observed and no suitable features for bats are supported, such that their presence is considered negligible.

#### **Building Inspection**

- 2.16. All buildings within the Site were subject to external and internal inspection to search for evidence of bat activity where safe to do so.
- 2.17. Internal voids within the structure(s) were subject to an internal inspection, whereby the surveyor used ladders, high-powered torches, mirrors and an endoscope to search for evidence of current or historic use by bats. Particular attention was paid to gaps between rafters and beams. Specific searches were undertaken for bat droppings, which can indicate current or past use by bats and indicate the extent of use.
- 2.18. An exterior inspection was undertaken in order to search for any signs of use by bats, such as droppings or staining, and to identify any potential access points. Binoculars were used to inspect any inaccessible areas more closely.

#### **Great Crested Newt**

- 2.19. Accessible ponds within 250m of the Site were assessed for their suitability to support great crested newt *Triturus cristatus*. The assessment was undertaken in accordance with the methodology and criteria set out by Oldham et al. (2000), which hypothesises the likely presence of great crested newt in ponds based on a number of parameters, such as pond size, location, shading, presence of fish and wildfowl and macrophyte cover.
- 2.20. Data from the field assessment are used to calculate a Habitat Suitability Index (HSI), represented by a number from zero to one, as demonstrated in **Table 1** below.

**Table 1: HSI Categories of Pond Suitability**

HSI Score	Pond Suitability for GCN
<0.5	Poor
0.5-0.59	Below Average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

### Principles of Ecological Evaluation

- 2.1. The evaluation of ecological features and an assessment of likely impacts should be based on available resources and the professional judgement of the ecologist concerned. Ecological value of features should be undertaken in accordance with the approach outlined in the Guidelines for Ecological Impact Assessment in the United Kingdom (CIEEM, 2016).
- 2.2. A five-point evaluation scale has been applied to assist with the identification of key features of ecological significance in relation to the proposed development. This is an arbitrary scale based upon characteristics of ecological importance as listed in CIEEM (2016), which experience has shown is effective at this level of assessment.
- 2.3. The five-point scale is outlined below:
  - Low value;
  - Moderate value;
  - High value (Local/District importance e.g. Local Wildlife Site);
  - Very high value (County importance e.g. Local Nature Reserve); and
  - Exceptional value (National importance e.g. Site of Special Scientific Interest (SSSI)).
- 2.4. In evaluating ecological features and resources, geographic frame of reference is considered. The value of an ecological feature is determined within a defined geographical frame of reference:
  - International & European;
  - National;
  - Regional;
  - County, Metropolitan, vice-county or other local authority area; or,
  - Local.
- 2.5. Ecological features may be defined as:
  - Statutorily protected (Natura 2000, National Nature Reserve, Sites of Special Scientific Interest and Local Nature Reserves) or locally designated sites (Local Wildlife Sites or Sites of Importance to Nature Conservation);

- Sites and features of biodiversity value not designated in this way such as ancient woodland; or
- Species of biodiversity value or other significance, including those protected and controlled by law.

### 3. LEGISLATION AND PLANNING POLICY OVERVIEW

- 3.1. Full details of relevant biodiversity legislation and policy is provided at **Appendix 4**, including legislation related to particular species. A summary of the legislative and planning context which has been used to inform this ecological assessment is provided below.

#### Legislation

- 3.2. A number of tiers of legislation protect wildlife and habitats within England and Wales, the highest of which being European legislation. A summary of relevant legislation is provided below.
- 3.3. **The Wildlife and Countryside Act 1981 (as amended)** is the primary piece of national legislation which pertains to the protection of flora, fauna and the countryside. The Act is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and the Council Directive 79/409/EEC on the conservation of wild birds (Birds Directive) are implemented in Great Britain.
- 3.4. **The Natural Environment and Rural Communities Act 2006 (NERC)** made provision for all public authorities, including local planning authorities, to consider biodiversity in their roles. Local planning authorities are to ensure that there is no net loss of biodiversity on a site, no net loss in habitat connectivity and must aim to enhance biodiversity. Section 41 established a list of the species and habitats of principal importance for the purpose of conserving biodiversity.
- 3.5. **The Conservation of Habitats and Species Regulations 2017** consolidates all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law.

#### Policy

- 3.6. The planning policy framework that relates to nature conservation in Fritwell is provided at two levels; nationally through the National Planning Policy Framework (NPPF) and locally through policies in the Cherwell Local Plan 2011 – 2031.
- 3.7. Further information on legislation, relevant policy and other instruments is provided at **Appendix 4**

#### National Planning Policy Framework (England)

- 3.8. The NPPF (2018) sets out the Government's national policies on the protection of biodiversity conservation through the planning system. It replaces previous NPPF published in 2012 and other national planning policy, including Planning Policy Statement 9 (Biodiversity and Geological Conservation) (PPS9), which was published in 2005.
- 3.9. The key element of the NPPF is that 'the plans and decisions should apply a presumption in favour of suitable development' (paragraph 11). It should be noted that this presumption '*does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined*' (paragraph 177).
- 3.10. NPPF states that '*the planning system should contribute to and enhance the natural and local environment*' by '*minimising impacts on and providing net gains in biodiversity, including by*

*establishing coherent ecological networks that are more resilient to current and future pressures'* (paragraph 170).

## 4. DESK STUDY RESULTS

- 4.1. The full information collected during the desk study from the Thames Valley Environmental Records Centre (TVERC) is presented in **Appendix 1** and summarised below.

### Sites of Nature Conservation Interest

- 4.2. The Site itself is not subject to any statutory or non-statutory nature conservation designation.
- 4.3. The records search identified 1 statutory protected site and 2 non-statutory sites with 2km of the Site, as summarised in **Table 2** below.

**Table 2: Summary of Ecology Designations**

Site Name	Designation	Proximity to Project	Description
<b>Ardley Cutting and Quarry</b>	SSSI	0.9km South-west	Railway cutting of geological interest for its exposures of Jurassic rocks and ecological interest associated with limestone grassland, scrub, ancient woodland and wetland.
<b>Upper Heyford Airfield</b>	LWS	1.7km South	A large area of grassland which ranges in diversity, with some areas which are calcareous in character. Contains large populations of Bee Orchids and Dwarf Thistle.
<b>Ardley Quarry (North)</b>	LGS	1.7km	A disused quarry of geological interest.
<b>Key:</b>  <b>SSSI: Site of Special Scientific Interest</b>  <b>LWS: Local Wildlife Site</b>  <b>LGS: Local Geological Site</b>			


### Protected Species

- 4.4. **Table 3** below provides an extract of the protected species which have been found within 2km of the Site. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.



**Table 3: Summary of Protected Species**

Species/Group	No. of Records	Date of Most Recent Record	Distance of Closest Record (Km)	Legislation / Conservation Status
<b>Herpetofauna</b>				
<b>Common Frog</b> <i>Rana temporaria</i>	1	2001	2.4km	WCA 5 S9(5) (sale only)
<b>Common Toad</b> <i>Bufo bufo</i>	1	2001	2.4km	NERC S.41, UK BAP, WCA 5 S9(5) (sale only)
<b>Great Crested Newt</b> <i>Triturus cristatus</i>	142	2014	1.9km	CHSR, CRoW, NERC S.41, UK BAP, WCA 5 S9
<b>Palmate Newt</b> <i>Lissotriton helvesticus</i>	1	2001	2.4km	WCA 5 S9(5) (sale only)
<b>Smooth Newt</b> <i>Lissotriton vulgaris</i>	4	1991	1.9km	NERC S.41, UK BAP, WCA 5 S9(5), CHSR
<b>Mammals</b>				
<b>[REDACTED]</b> <b>[REDACTED]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>
<b>Hedgehog</b> <i>Erinaceus europaeus</i>	1	2006	0.3km	NERC S.41, UK BAP
<b>Long-eared bat, Brown</b> <i>Plecotus auritus</i>	1	2013	0.3km	CHSR, CRoW, EC Directive Annex IV, WCA 5 S9, NERC S.41, UK BAP
<b>Pipistrelle, Common</b> <i>Pipistrellus pipistrellus</i>	1	2013	0.3km	CHSR, CRoW, EC Directive Annex IV, WCA 5 S9, NERC S.41
<b>Polecat</b> <i>Mustela putorius</i>	1	2009	1.3km	NERC S.41
<b>Birds</b>				
<b>Fieldfare</b> <i>Turdus pilaris</i>	3	2007	1.9km	CRoW, WCA 1i, BoCC_red
<b>Hen Harrier</b> <i>Circus cyaneus</i>	1	2004	<10km	WCA 1i

Species/Group	No. of Records	Date of Most Recent Record	Distance of Closest Record (Km)	Legislation / Conservation Status
Kingfisher <i>Alcedo atthis</i>	1	2008	2km	CRoW, WCA 1i
Kite, Red <i>Milvus milvus</i>	1	2010	2.3km	CRoW, WCA 1i
Owl, Barn <i>Tyto alba</i>	1	2004	<10km	CRoW, WCA 1i
Peregrine Falcon <i>Falco peregrinus</i>	1	2010	2.2km	WCA 1i
Whimbrel <i>Numenius phaeopus</i>	1	2001	2.3km	WCA 1i
<p><b>Key:</b>  <b>CRoW:</b> Countryside and Rights of Way Act, 2000: Protection of certain birds and animals.  <b>WCA 1i:</b> Wildlife and Countryside Act (1981) (as amended); Birds protected by special penalties at all times, species specific.  <b>WCA 5 S9 (5):</b> Wildlife and Countryside Act (1981) (as amended); Protected animals (other than birds). Protection limited to selling, offering for sale, processing or transporting for purpose of sale, or advertising for sale, any live or dead animal, or any part of, or anything derived from, such animal.  <b>UK BAP:</b> United Kingdom Biodiversity Action Plan  <b>NERC S.41:</b> Natural Environment and Rural Communities Act 2006, Section 41: Habitats and Species of Principal Importance in England    <b>CHSR:</b> The Conservation of Habitat and Species Regulations 2017 (as amended)</p>				

## 5. PHASE 1 HABITAT SURVEY RESULTS

- 5.1. The Phase 1 field survey was conducted on 21/09/2018 in reasonable weather conditions (30% cloud cover, Beaufort scale 5).

### **Field Survey Limitations**

- 5.2. Time of year for botanical surveys was acceptable and all faunal species are considered active during the survey period. Full site access was achieved including surrounding areas of interest.

### **Habitat Descriptions**

- 5.3. The Phase 1 Habitat Survey Map detailing the location of the above habitats and other features of ecological interest is presented in **Appendix 2**. The habitat descriptions below should be read in conjunction with this plan, associated target notes and photo record in **Appendix 3**.
- 5.4. Habitats identified during the Phase 1 Habitat Survey are detailed below in alphabetical order (not in order of ecological importance):

- Buildings
- Hard-standing
- Hedgerows
- Improved grassland
- Ponds (off-site)
- Recolonising vegetation
- Semi-improved grassland
- Tall ruderal
- Trees

### ***Buildings***

- 5.5. Two buildings were present within the Site, both single-storey horse stables. Both buildings were assessed for their potential to support roosting bats.
- 5.6. Building one (**B1**) was of breeze block and wooden construction with a pitched roof clad with corrugated asbestos. There was an open vaulted ceiling and several plastic skylights. A small extension to the building was present at the northern elevation, which had a flat roof which was used for log storage.
- 5.7. Building two (**B2**) was a wooden structure used for storage at the time of survey. The roof was flat with chip-board and corrugated metal panels.
- 5.8. The buildings were light and draughty, offering potential to support roosting bats, however did offer some potential to support nesting birds.
- 5.9. Overall both B1 and B2 were categorised as having Negligible Suitability in line with BCT Guidelines (2016).

### ***Hard-standing***

- 5.10. The Site contained several areas of hard-standing, used for access to the stables, which comprised limited vegetation, save for some opportunistic species.
- 5.11. This habitat was of negligible ecological value.

### **Hedgerows**

- 5.12. Several hedgerows were present within the Site, including those bounding the Site to the south, east and west.
- 5.13. Hedgerow **H1** was located in the north-east of the Site and was unmanaged and largely overgrown with scrub. Maturing Ash *Fraxinus excelsior* ( $n = 2$ ) and a dead Elder *Sambucus nigra* ( $n = 1$ ) tree were present along this hedgerow. The hedgerow reached up to approximately 4 m in height and included: Blackthorn *Prunus spinosa*, Alder *Alnus glutinosa*, Elder, Hawthorn *Crataegus monogyna*, Apple *Malus pumila*, Sycamore *Acer pseudoplatanus* and Dog-rose *Rosa canina*. The ground flora mostly comprised tall ruderal species, as detailed below. Other species included Ivy *Hedera helix*, Cleavers *Galium aparine*, Ground-ivy *Glechoma hederacea* and Cow Parsley *Anthriscus sylvestris*.
- 5.14. Remnants of a stonewall was present at the west of the hedgerow.
- 5.15. Hedgerow **H2** ran along the southern boundary of the Site and separated the Site from the neighbouring farm track. The hedgerow was unmanaged and reached up to 6 m in height, with a gap of approximately 3 m. A wooden fence ran through its centre. Species present included Hawthorn, Ash, Sycamore, Blackthorn, Willow *Salix* spp., Rose, Horse Chestnut *Aesculus hippocastanum* and patches of dense Bramble.
- 5.16. A ditch ran along the southern extent of the hedgerow, which was dry at the time of survey and beyond the Site boundary. The ditch was approximately 1 m deep, with gently sloping banks and was largely full of leaf litter.
- 5.17. Hedgerow **H3** was located along the southern boundary of the Site and was unmanaged and tall, reaching over 6m in height. The species composition was similar to that of H2, with additional species noted including Elder and Bittersweet *Solanum dulcamara*.
- 5.18. Hedgerow H1 was the most species rich hedgerow, had mature trees and the remains of a stonewall. Although not considered 'important' under the hedgerow regulations 1997, the combination of features increases the suitability for faunal species to commute and rest. All hedgerows qualify as Priority Habitat under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.
- 5.19. Hedgerow H1 is of medium ecological value (justified by the different features within i.e. deadwood, stonewall and mature trees). Hedgerow H2 and 3 are of lower ecological importance.

### **Improved grassland**

- 5.20. Several areas of improved grassland were present within the Site, including the grassland to the west of the buildings and the horse-grazed field in the north of the Site. Overall the sward height in these areas was low, reaching up to 10 cm.
- 5.21. Species present included Perennial Ryegrass *Lolium perenne*, Meadow Buttercup *Ranunculus acris*, White Clover *Trifolium repens*, Dandelion *Taraxacum officinale* agg., Knotgrass *Polygonum aviculare*, Greater Plantain *Plantago major*, Docks *Rumex* spp. and White Dead-nettle *Lamium album* were present around the periphery and a group of Blackthorn, Hawthorn and Ash saplings were present within the north of the horse-grazed field.

5.22. Overall this habitat was of low ecological value.

***Ponds (off-site)***

- 5.23. Two ponds were located within 250 m of the Site. Pond **P1** was approximately 130 m to the south-west of the Site and Pond **P2** approximately 200 m to the south-west, both were located within the grounds of Lodge Farm. Both ponds were used for fishing, with evidence of fishing activity at the time of survey.
- 5.24. Both ponds were assessed for their potential to support Great Crested Newt using Habitat Suitability Index criteria. Pond P1 had low suitability and probability of use (HIS = 0.484; pond suitability for GCN = poor; predicted probability for GCN = 0.03). Pond P2 had low suitability and probability of use (HIS = 0.49; pond suitability for GCN = poor; predicted probability for GCN = 0.03).
- 5.25. Both ponds were identified as having 'poor' suitability to support Great Crested Newt, with both ponds being used as fishing lakes. No further assessment is required in respect of the species.

***Semi-improved grassland***

- 5.26. Much of the Site comprised semi-improved grassland. The grassland was unmanaged, with a taller sward height reaching up to 1 m in height. The grassland had a strong ruderal element in places, particularly around the field margins and also patches were scattered throughout.
- 5.27. Species present included Perennial Ryegrass, Cock's-foot *Dactylis glomerata*, Couch Grass *Elytrigia repens*, Yorkshire Fog, Timothy *Phleum pratense*, False Oat-grass *Arrhenatherum elatius*, *Agrostis* sp., Meadowgrasses *Poa* spp., White Clover, Dandelion, Ribwort Plantain, Greater Plantain *Plantago major*, Cut-leaved Crane's-bill *Geranium dissectum*, Oxeye Daisy *Leucanthemum vulgare*, White Champion *Silene latifolia*, Meadow Buttercup, Wood Avens *Geum urbanum*, Field Bindweed *Convolvulus arvensis*, Creeping Thistle, Spear Thistle, Poppy Papaver sp., Red Dead-nettle *Lamium purpureum*, Common Nettle, White Dead-nettle *Lamium album*, Rosebay Willowherb *Chamerion angustifolium*, Burdock *Arctium* spp., Cleavers, Cow Parsley and Hogweed *Heracleum sphondylium*.
- 5.28. Within this area of semi-improved grassland a horse-exercise area was also present, comprising largely of bare earth.
- 5.29. Overall this habitat was of low ecological value, however did offer some suitable habitat for reptiles.

***Tall ruderal and recolonising vegetation***

- 5.30. An area of bare ground was present in the north-west corner and northern end of the Site, which was used for vehicle, rubble and rubbish storage. Recolonising vegetation and tall ruderal species were present within these areas, along with several brash piles, corrugated metal sheeting and wood piles.
- 5.31. Further tall ruderal and recolonising vegetation was present at the south-west of site. This area consisted of dense growth Thistle spp., and Timothy *Phleum pratense* surrounded by perennial ryegrass.
- 5.32. Overall this habitat was of low ecological value, however did offer some suitable habitat for reptiles.



## 6. EVALUATION OF ECOLOGICAL CONTEXT

### The Site

- 6.1. The Site itself is located at the east of Fritwell village and situated within an agricultural matrix. Amenity grassland is situated directly to the east. The M40 is located approximately 550m north-east and a disused airfield to the south. The hedgerows/tree lines and rivers/becks provide connectivity to the wider landscape; including woodland, water bodies, a railway line and designated sites

### Statutory Sites

- 6.2. There is one statutory site designated for its nature conservation interest within 2 km of the Site, the Ardley Cutting and Quarry SSSI located approximately 0.9 km to the south-west. The closest non-statutory designation of wildlife conservation interest is the Upper Heyford Airfield Local Wildlife Site, located 1.7km to the south of the Site.
- 6.3. The nearest designated site is Ardley Cutting and Quarry SSSI (situated 0.9 km south-west). It is designated for geological interest (Jurassic rocks) and biological interest associated with limestone grassland, scrub, ancient woodland and wetland habitats. Floral communities at the railway cutting diverse, providing good host plants for many locally uncommon butterfly species including small blue *Cupido minimus*, brown argus *Aricia agestis*, dark green fritillary *Argynnis aglaja*, green hairstreak *Callophrys rubi* and Duke of Burgundy *Hamearis Lucina*. The Cutting and adjacent quarry also support a large population of great crested newts.
- 6.4. Impact Risk Zones (IRZs) are a tool developed by Natural England to provide an initial assessment of the potential risks to SSSIs. The Site falls within one IRZ for the Ardley Cutting and Quarry SSSI, however the IRZ does not apply to residential developments and as such further advice need not be sought.
- 6.5. Given the distance between the Site and the designations, it is anticipated that there will be no negative impact on these or any other protected site.

## **7. HABITAT EVALUATION**

- 7.1. The majority of the habitat within the Site comprised buildings, hard-standing, improved and semi-improved grassland, hedgerows, trees and recolonising vegetation. Overall the habitats were largely of negligible to low ecological value.
- 7.2. The longer grasses and areas of rubble and wood piles did offer potential to support reptiles. A habitat manipulation exercise is recommended in respect of reptiles in order to safeguard reptiles during the clearance of the grassland.
- 7.3. The survey did not identify any habitats within the study area considered to be of local, regional or national ecological value.
- 7.4. Two maturing ash trees were considered as having roosting potential to support roosting bats and will be removed during the development. There is a risk roosting bats will be disturbed and potential roosts destroyed during felling.



## 8. FAUNAL EVALUATION

### **Desk Study**

- 8.1. The desk study located a variety of protected species records for the local area (see plan and details at **Appendix 1**).
- 8.2. The Site has been assessed on the suitability of the habitats to support such protected species and the likelihood of those species being present. **Table 4** below provides a summary account of protected species within the Site and local area.

### ***Amphibian***

- 8.3. There are no suitable ponds at the Site however two ponds are located close to the site. These ponds were assessed as offering poor potential for great crested newts.
- 8.4. There is suitable habitat on the Site although it is considered to be low potential given the condition of nearby ponds.
- 8.5. No further survey work for amphibians is required.

### ***Badger***

- 8.6. There was no evidence of badger activity.
- 8.7. The proposed development will not impact on badger populations.
- 8.8. No further survey work for badgers is required.

### ***Bats***

- 8.9. Two maturing ash trees were assessed as providing roosting opportunity.
- 8.10. These trees will be removed as part of the development. There remains a risk roosting bats will be disturbed and potential roosts destroyed during felling. The proposed development will have a negative (non-significant) impact on bats.
- 8.11. Further bat surveys are recommended to assess the use of potential roosts in these two ash trees prior to felling.

### ***Birds***

- 8.12. There is potential for birds to nest in the buildings and vegetation.
- 8.13. The Site had an assemblage of common bird species that may be impacted. The proposed development will have a negative (non-significant) impact if undertaken when birds are on the nest.
- 8.14. Clearance of habitat and demolition of buildings should be carried out outside of the bird nesting season.
- 8.15. No further survey work for birds is required.

### ***Reptiles***

- 8.16. No signs of reptiles were found at the Site.

- 8.17. There is suitable habitat (e.g. wood piles, stone wall) at the Site which will be removed. The proposed development will have a negative (non-significant) impact should reptiles be present during the removal of vegetation, wood piles and the remnants of a stone wall.
- 8.18. A habitat manipulation exercise should be undertaken in order to safeguard any reptiles which may be present within the Site.
- 8.19. No further survey work for reptiles is required.

***Otter***

- 8.20. There is no running water at the Site.
- 8.21. The development will have a neutral impact on otters.
- 8.22. No further survey work for otters is required.

***Water vole***

- 8.23. There is no running water at the Site.
- 8.24. The development will have a neutral impact on water voles.
- 8.25. No further survey work for water voles is required.

***Red fox***

- 8.26. A single red fox was disturbed during the survey.
- 8.27. No field signs that would indicate a fox den were found.
- 8.28. The development will have a neutral impact on red fox populations.
- 8.29. No further survey work for red fox is required.

**Table 4: Summary of Protected Species Associated with the Site**

Species	Recorded in desk study	Evidence on Site	Potential on Site to support presence	Impact on species	Likely Impact
<b>Amphibians</b>	Yes – records for great crested newt, common frog, palmate newt, smooth newt and common toad within 2km of the Site	None	Yes – there are no ponds or waterbodies within the Site however two ponds are located to the south-west.	<b>Low</b> – there is suitable terrestrial habitat on the Site, however the two nearby ponds offer ‘poor’ potential to support great crested newt.	Neutral
██████	████████████████████ ████████████████████	██████	██████████ ██████████ ██████████ ██████████ ██████	██████████ ██████████ ██████████ ██████████ ██████████	██████
<b>Bats</b>	Yes – records for common pipistrelle and brown long-eared bat.	None	Yes – trees within the Site offer low to negligible potential to support roosting bats.	<b>Low</b> - the buildings offer negligible potential to support roosting bats. Where practicable, trees should be retained under the proposals.	Negative (non-significant)
<b>Birds</b>	Yes – a number of birds have been recorded within the vicinity of the Site.	Yes – an assemblage of common bird species	Yes – there is potential for birds to be utilising the intact hedgerows, introduced shrubs and scattered trees for foraging and nesting.	<b>Low/Moderate</b> – suitable habitat for nesting, in the form of the buildings, is to be lost. Clearance of habitat should be carried out outside of the bird nesting season.	Negative (non-significant)
<b>Reptiles</b>	No records.	None	Yes – there is some potential for reptiles	<b>Low</b> – Yes – there is potential for reptiles to	Negative (non-significant)

Species	Recorded in desk study	Evidence on Site	Potential on Site to support presence	Impact on species	Likely Impact
			to be present on the Site.	be present within the tall ruderal vegetation and taller grasses.	
<b>Otter</b>	No records.	None	No – there is no running water on Site.	<b>Negligible</b> – as there is no potential on Site.	Neutral
<b>Water vole</b>	Yes- 1 record nearly 30 years old, 2km away.	None	No – there is no running water on Site.	<b>Negligible</b> – as there is no potential on Site.	Neutral
<b>Other faunal interest (e.g. fox, hare)</b>	Yes – hedgehog and polecat have been recorded within the vicinity of the Site.	A red fox was present on site.	Yes – there is potential small mammals.	<b>Low/Negligible</b> – suitable habitat will be incorporated into the new development.	Neutral

## 9. RECOMMENDATIONS, FURTHER SURVEYS AND ENHANCEMENTS

### Overview

- 9.1. Recommendations have been provided within this report that will safeguard the existing ecological interest features within the Site. Wherever possible, measures to enhance ecological and biodiversity value have also been set out.
- 9.2. Based on the survey effort undertaken to date, the presence and potential presence of protected species has been given due regard.
- 9.3. In conclusion, implementation of the measures provided within this report enable the proposals to accord with national and local planning policy for nature conservation.

### Designated Sites

- 9.4. Due to the distance between the Site and designated nature conservation sites in the local area it is considered highly unlikely that there will be any significant adverse effects on these sites as a result of the works. Therefore, no recommendations in relation to the designated sites are made.

### Habitats and Species Recommendations and Enhancements

- 9.5. The current proposed development will have a minor adverse impact on the habitats within the Site, with the loss of improved and semi-improved grassland, buildings, hard-standing, recolonising vegetation, trees and scrub. The boundary hedgerows will be retained and bolstered under the new proposal.
- 9.6. To provide an overall gain in biodiversity at the Site, it is recommended that the following enhancements are made:
  - It is recommended that tree T1, T2 and T3 be retained (locations provided in the Phase 1 Map at **Appendix 2**). **Should this not be possible, further inspection of these trees prior to felling is recommended in respect of bats.**
  - The landscaping scheme should incorporate native species of local provenance and species of acknowledged benefit to wildlife where practicable, providing shelter and foraging resources for a range of species, such as small mammals, birds and invertebrates.
  - Bat and bird boxes (a minimum of 15 of each) should be provided within the new development, the detailed specifications of which will be provided by a suitably qualified ecologist.
- 9.7. The Site comprised some areas of suitable reptile habitat, namely the tall ruderal vegetation, longer grasses, earth mounds and wood chip piles. Accordingly, precautionary measures should be taken to prevent the potential risk of harm to any reptiles should it be necessary for these habitat and features to be removed, as summarised below:
  - Areas of any longer grassland present at the time of works will be strimmed in a 2-stage process. Following a finger-tip search by a suitably qualified ecologist to ensure that no reptiles are present, the first strimming phase will cut the vegetation to ~10cm above

ground level carefully encouraging any reptiles passing through the vegetation to move into suitable off-site habitat away from the construction zone.

- The second strimming phase will be undertaken no less than 1 hour after completion of the first and will follow a second finger-tip search of the area by the ecologist before being cut to ground level.
- Rubble/earth/wood chip piles should be removed in a sensitive manner after being checked by an ecologist to ensure no reptiles are present.

9.8. **Nesting bird surveys will be required if vegetation cannot be cleared outside of the bird nesting season (March-September inclusive).** A suitably qualified and experienced ecologist will check the buildings and vegetation up to 48 hours in advance of removal. If nesting birds are recorded they will be protected from disturbance by the establishment of a suitable buffer zone which will remain in place until all nesting activity has been completed.

## 10. REFERENCES AND BIBLIOGRAPHY

Bat Conservation Trust (2016) Bat Surveys: Good Practice Guidelines 3rd Edition

British Standards Institution (2013). British Standard 42020:2013. Biodiversity – Code of Practice for planning and development.

CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

CIEEM (2017) Guidelines for Preliminary Ecological Appraisal (GPEA)

English Nature (2001) Great Crested Newt Mitigation Guidelines

Froglife (1999) Reptile Survey – Advice Sheet 10

JNCC (2010). Handbook for Phase 1 Habitat Survey: A technique for environmental audit.

JNCC (1998) The Herpetofauna Worker's Manual

Langton et al (2001) The Great Crested Newt Conservation Handbook

Mammal Society (2013) How to Find and Identify Mammals, 2nd Edition

Natural England (2004) Bat Mitigation Guidelines

## **Appendix 1: Desk Study Results**

Ref: TVERC.18.425



# BIODIVERSITY REPORT

Site: Fewcott Road, Fritwell

TVERC Ref: TVERC/18/425

Prepared for: Lockhart Garratt

On: 12/10/2018

By: Thames Valley Environmental Records Centre  
01865 815 451  
datasearch@tverc.org  
www.tverc.org

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## TABLE OF CONTENTS

The following are included in this report:

### GENERAL INFORMATION:

- ☒ Terms & Conditions
- ☒ Species data statements

### PROTECTED & NOTABLE SPECIES INFORMATION:

- ☒ Summary table of legally protected and notable species records within 2km search area
- ☒ Summary table of Invasive species records within 2km search area
- ☒ Species status key
- ☒ Data origin key

### DESIGNATED WILDLIFE SITE INFORMATION:

- ☒ A map of designated wildlife sites within 2km search area
- ☒ Descriptions/citations for designated wildlife sites
- ☒ Designated wildlife sites guidance

## TERMS AND CONDITIONS

The copyright for this document and the information provided is retained by Thames Valley Environmental Records Centre. The copyright for some of the species data will be held by a recording group or individual recorder. Where this is the case, and the group or individual providing the data is known, the data origin will be given in the species table.

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The data should be considered valid for a maximum 12 months from the date on the cover of this report. If the data is to be used after that time an update should be requested. The data must not be added to any permanent database system.

The absence of any species or habitat data for any site, area or location does not mean that any species or habitat is not present.

## MAPS

To reproduce the Ordnance Survey mapping you must hold a relevant licence for the use of Ordnance Survey mapping or it can be copied at a printers or copyshop that holds a licence to carry out search work (see the Ordnance Survey website).

## DATA STATEMENTS

### STATEMENT ON OXFORDSHIRE BAT GROUP DATA

TVERC has agreed an exchange of data with Oxfordshire Bat Group (OBG) which enables us to provide records belonging to them with the grid reference given to 1 km precision. Such records are indicated by the term “Confidential, refer to OBG for further details” in the location column and OBG in the data origin column of the species table. Enquirers are recommended to contact OBG for further information.

David Endacott  
27 Hedge Hill Road  
East Challow  
Wantage  
Oxon  
OX12 9SD

[davidendacott@hotmail.com](mailto:davidendacott@hotmail.com)

### STATEMENT ON OXFORDSHIRE BADGER GROUP DATA

TVERC has agreed an exchange of data with the Oxfordshire Badger Group (OBadG) which enables us to provide records belonging to them with the grid reference given to 1 km precision. Such records are indicated by the term “Confidential, refer to OBadG for further details” in the location column and OBadG in the data origin column of the species table. Enquirers are recommended to contact the group for further information.

For sett records: [settrecords.oxonbadgergroup@gmail.com](mailto:settrecords.oxonbadgergroup@gmail.com)

For road traffic accident records: [rtas.oxonbadgergroup@gmail.com](mailto:rtas.oxonbadgergroup@gmail.com)

### STATEMENT ON BIRD RECORDS IN OXFORDSHIRE (DATA MARKED AS “OOS” IN THE DATA ORIGIN COLUMN)

The majority of bird records in Oxfordshire, except those in the north of the county, have been provided by the Oxford Ornithological Society. Such records have a value of OOS in the data origin column. Please note that:

- a. Not all species are subject to the same degree of recording; the absence of records of a species in a given geographical area does not necessarily indicate absence of that species.
- b. Not all parts of the county are subject to the same degree of recording; the absence of records for a given area does not necessarily indicate the absence of bird species.
- c. Records of species regarded as sensitive have been provided with reduced information about location. Any requests for more precise information about the location of such “confidential” sites should be addressed directly to OOS ([www.oos.org.uk](http://www.oos.org.uk)) You can use the following email contacts [chairman@oos.org.uk](mailto:chairman@oos.org.uk) (the chairman) and [ian@recorder.fsnet.co.uk](mailto:ian@recorder.fsnet.co.uk) (the county bird recorder).

## STATEMENT ON WILDLIFE TRUST WATER VOLE DATA

Since 2008 data has been collected as positive or negative sections of watercourses. Positive sections crossing into search areas are included within the data. These are shown with the central grid reference for the stretch of watercourse. This may fall outside the search area but the stretch will be at least partly within the search area. The location information shows the beginning and end points of the stretch of watercourse.

## USE OF NBN ATLAS DATA

Commercial organisations and members of the public may refer to the National Biodiversity Network (NBN) Atlas for wildlife records and habitat and designated site information for their own private use.

Paragraph 165 of the National Planning Policy Framework states that 'planning policies and decisions should be based on up-to-date information about the natural environment and other characteristics of the area'. The NBN Atlas does not hold information on Local Wildlife Sites or priority habitats in this area and there are restrictions on public access to the majority of species records available via the NBN, so ecology reports without a data search from TVERC are at risk of non-compliance with the NPPF.

TVERC have advised planning authorities in Berkshire and Oxfordshire that ecology reports using only NBN data should not usually be validated and the NBN has requested that suspected breaches of NBN terms and conditions are reported to the NBN Data Access Officer, who will take appropriate action. Further detail is available on our website:

<http://www.tverc.org/cms/content/ecological-survey-reports-planning-applications>.

## STATEMENT ON GRID REFERENCES

The following types of grid references are provided:

- Six figure grid references. Many of these will be an assigned relatively central grid reference for a site though with small sites the assigned grid reference for a site could be close to the edge. The record may have come from anywhere within the site. Where additional location information is provided the reference may be more accurate or central to a subsite within the larger site. Where the location is not site based, the grid reference should be within 100 metres of the location.
- Four figure grid references. Generally these are 1km square records often with some location information to give an idea of which part of the 1km square the record was found. Sometime this information can be quite accurate. Where a large site is referred to the location should be in that part of the 1km square that is within the site. In some case these may be tetrad records with grid reference referring to a 2km x 2km square. This includes some confidential records from Oxford Ornithological Society. Other tetrad data is rarely included.

- Eight and ten figure grid references: These are generally accurately worked out to the location where the species was found. However for small and narrow sites eight figure grid references may be used as a central grid reference for a site.
- TVERC intends to start tagging data to qualify these grid references but at present only a limited amount of qualification is provided. 1km square records are tagged as 1km record and 2km square records are tagged as 2km record.

Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<b>Amphibians</b>									
<i>Lissotriton vulgaris</i>	Smooth Newt		WACA-Sch5-s9.5a			05/01/1985	07/08/1991	3	Present
<i>Triturus cristatus</i>	Great Crested Newt	HabDir-A2np HabDir-A4	HabReg-Sch2 WACA-Sch5-s9.4b/s9.4c/s9.5a	NERC-S41		29/03/1991	19/05/2016	54	414
<i>Rana temporaria</i>	Common Frog	HabDir-A5	WACA-Sch5-s9.5a			23/01/2015	23/01/2015	1	1
<b>Birds</b>									
<i>Cygnus olor</i>	Mute Swan				Bird-Amber	04/09/1989	05/10/2009	2	1
<i>Anser brachyrhynchus</i>	Pink-footed Goose				Bird-Amber	02/09/2001	02/09/2001	1	4
<i>Tadorna tadorna</i>	Shelduck				Bird-Amber	04/03/2011	04/03/2011	1	1
<i>Anas penelope</i>	Wigeon				Bird-Amber	02/10/2001	02/10/2001	1	Present
<i>Anas strepera</i>	Gadwall				Bird-Amber	02/10/2001	02/10/2001	1	10
<i>Anas crecca</i>	Teal				Bird-Amber	03/07/1982	02/10/2001	3	13
<i>Anas platyrhynchos</i>	Mallard				Bird-Amber	07/04/1994	23/04/2016	7	70
<i>Anas acuta</i>	Pintail		WACA-Sch1-p2		Bird-Amber	02/09/2001	02/10/2001	2	30
<i>Anas clypeata</i>	Shoveler				Bird-Amber	02/10/2001	02/10/2001	1	5
<i>Aythya ferina</i>	Pochard				Bird-Red	07/04/1994	02/10/2001	2	25
<i>Egretta garzetta</i>	Little Egret	BirdsDir-A1				13/07/2008	13/07/2008	1	2
<i>Perdix perdix</i>	Grey Partridge			NERC-S41	Bird-Red	15/07/1985	26/01/1998	9	9
<i>Coturnix coturnix</i>	Quail		WACA-Sch1-p1		Bird-Amber	06/10/1989	06/10/1989	1	1
<i>Milvus milvus</i>	Red Kite	BirdsDir-A1	WACA-Sch1-p1		RL-Global-post2001-NT	15/02/2005	04/08/2015	19	3
<i>Circus cyaneus</i>	Hen Harrier	BirdsDir-A1	WACA-Sch1-p1	NERC-S41		03/08/2004	03/08/2004	1	1
<i>Falco tinnunculus</i>	Kestrel				Bird-Amber	01/07/1990	31/05/2013	28	2
<i>Falco columbarius</i>	Merlin	BirdsDir-A1	WACA-Sch1-p1		Bird-Red	26/01/1998	26/01/1998	1	1
<i>Falco subbuteo</i>	Hobby		WACA-Sch1-p1			22/07/1982	07/04/2010	10	1
<i>Pluvialis apricaria</i>	Golden Plover	BirdsDir-A1				25/02/1990	03/02/2002	13	800
<i>Vanellus vanellus</i>	Lapwing			NERC-S41	Bird-Red	29/02/1992	21/12/2013	15	1800
<i>Gallinago gallinago</i>	Snipe				Bird-Amber	26/03/1986	01/05/2002	10	6
<i>Numenius arquata</i>	Curlew			NERC-S41	Bird-Red RL-Global-post2001-NT	25/08/1982	19/06/2008	6	2
<i>Scolopax rusticola</i>	Woodcock				Bird-Red	11/12/1997	11/12/1997	1	1
<i>Tringa ochropus</i>	Green Sandpiper		WACA-Sch1-p1		Bird-Amber	22/08/1982	22/08/1982	1	1
<i>Larus canus</i>	Common Gull				Bird-Amber	30/03/1996	30/06/2013	5	30
<i>Larus fuscus</i>	Lesser Black-backed Gull				Bird-Amber	06/11/1989	30/05/2016	7	80
<i>Larus hyperboreus</i>	Glaucous Gull				Bird-Amber	13/03/2011	13/03/2011	1	1
<i>Larus marinus</i>	Great Black-backed Gull				Bird-Amber	27/08/1995	27/08/1995	1	1

Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<i>Chroicocephalus ridibundus</i>	Black-headed Gull				Bird-Amber	30/03/2013	30/05/2016	5	1
<i>Streptopelia turtur</i>	Turtle Dove			NERC-S41	Bird-Red	30/07/1989	17/05/1997	4	2
<i>Cuculus canorus</i>	Cuckoo			NERC-S41	Bird-Red	05/02/2011	05/02/2011	1	2
<i>Tyto alba</i>	Barn Owl		WACA-Sch1-p1			11/01/1984	22/03/2008	6	1
<i>Strix aluco</i>	Tawny Owl				Bird-Amber	17/10/1985	08/09/2010	4	1
<i>Apus apus</i>	Swift				Bird-Amber	07/08/2007	2017	33	25
<i>Alcedo atthis</i>	Kingfisher	BirdsDir-A1	WACA-Sch1-p1		Bird-Amber	03/06/1984	18/11/2008- 18/11/2008	3	1
<i>Upupa epops</i>	Hoopoe		WACA-Sch1-p1			05/11/1999	17/05/1999	2	1
<i>Locustella naevia</i>	Grasshopper Warbler			NERC-S41	Bird-Red	26/04/1983	08/03/1987	7	1
<i>Phylloscopus trochilus</i>	Willow Warbler				Bird-Amber	04/11/1992	30/05/2016	34	10
<i>Alauda arvensis</i>	Skylark			NERC-S41	Bird-Red	29/02/2000	30/05/2016	19	40
<i>Delichon urbicum</i>	House Martin				Bird-Amber	10/06/1990	09/09/2007	5	150
<i>Anthus pratensis</i>	Meadow Pipit				Bird-Amber	21/01/2006	21/01/2006	2	9
<i>Motacilla flava</i>	Yellow Wagtail			NERC-S41	Bird-Red	05/02/2011	05/02/2011	1	1
<i>Motacilla cinerea</i>	Grey Wagtail				Bird-Red	02/05/1988	12/02/2011	5	2
<i>Prunella modularis</i>	Dunnock			NERC-S41	Bird-Amber	05/04/2006	30/05/2016	37	5
<i>Saxicola rubetra</i>	Whinchat				Bird-Red	30/04/1989	17/09/1996	3	1
<i>Turdus pilaris</i>	Fieldfare		WACA-Sch1-p1		Bird-Red	04/09/1989	28/11/2011	10	140
<i>Turdus philomelos</i>	Song Thrush			NERC-S41	Bird-Red	05/04/2006	23/04/2016	55	3
<i>Turdus iliacus</i>	Redwing		WACA-Sch1-p1		Bird-Red	22/02/2008	22/02/2008	1	10
<i>Turdus viscivorus</i>	Mistle Thrush				Bird-Red	29/11/1997	30/05/2016	3	14
<i>Muscicapa striata</i>	Spotted Flycatcher			NERC-S41	Bird-Red	15/05/1994	07/04/2011	3	2
<i>Poecile montana</i>	Willow Tit			NERC-S41	Bird-Red	02/12/1993	30/03/1996	2	2
<i>Poecile palustris</i>	Marsh Tit			NERC-S41	Bird-Red	18/09/1992	04/08/2015	16	9
<i>Sturnus vulgaris</i>	Starling			NERC-S41	Bird-Red	15/06/1995	07/08/2007	5	1000
<i>Passer domesticus</i>	House Sparrow			NERC-S41	Bird-Red	27/08/1995	30/06/2013	4	130
<i>Passer montanus</i>	Tree Sparrow			NERC-S41	Bird-Red	01/11/1989	20/08/2005	22	30
<i>Linaria cannabina</i>	Linnet			NERC-S41	Bird-Red	05/07/2010	14/05/2010	2	3
<i>Fringilla montifringilla</i>	Brambling		WACA-Sch1-p1			24/02/2002	24/02/2002	1	3
<i>Loxia curvirostra</i>	Common Crossbill		WACA-Sch1-p1			20/03/1994	20/03/1994	1	6
<i>Pyrrhula pyrrhula</i>	Bullfinch			NERC-S41	Bird-Amber	05/04/2006	30/05/2016	23	3
<i>Emberiza citrinella</i>	Yellowhammer			NERC-S41	Bird-Red	29/02/2000	04/08/2015	14	30
<i>Emberiza schoeniclus</i>	Reed Bunting			NERC-S41	Bird-Amber	25/06/1995	01/05/2002	5	22
<i>Emberiza calandra</i>	Corn Bunting			NERC-S41	Bird-Red	01/03/1991	17/07/2010	24	33
<b>Higher Plants - Flowering Plants</b>									



Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<i>Anacamptis morio</i>	Green-winged Orchid				RL-Eng-post2001-VU RL-GB-post2001-NT	19/06/1985	19/06/1985	3	Present
<i>Hyacinthoides non-scripta</i>	Bluebell		WACA-Sch8			Pre 1985	05/03/2009	5	1
<i>Luzula sylvatica</i>	Great Wood-rush				Oxon-Scarce	28/06/2011	28/06/2011	1	Present
<i>Briza media</i>	Quaking-grass				RL-Eng-post2001-NT	Pre 1985	29/05/2007	3	Present
<i>Glyceria declinata</i>	Small Sweet-grass				Oxon-Scarce	Pre 1985	Pre 1985	1	Present
<i>Hordelymus europaeus</i>	Wood Barley				Status-NS	Pre 1985	Pre 1985	1	Present
<i>Fragaria vesca</i>	Wild Strawberry				RL-Eng-post2001-NT	Pre 1985	05/11/2015	5	1
<i>Plantago media</i>	Hoary Plantain				RL-Eng-post2001-NT	Pre 1985	Pre 1985	2	Present
<i>Nepeta cataria</i>	Cat-mint				RL-Eng-post2001-VU RL-GB-post2001-VU	Pre 1985	Pre 1985	1	Present
<i>Clinopodium acinos</i>	Basil Thyme			NERC-S41	RL-Eng-post2001-VU RL-GB-post2001-VU	Pre 1985	07/12/1988	11	Present
<i>Mentha arvensis</i>	Corn Mint				RL-Eng-post2001-NT	Pre 1985	Pre 1985	2	Present
<i>Mentha suaveolens</i>	Round-leaved Mint				Status-NS RL-Eng-post2001-NT RL-GB-post2001-DD	Pre 1985	Pre 1985	1	Present
<i>Euphrasia nemorosa</i>	Eyebright				RL-Eng-post2001-NT	30/07/2007	27/08/2007	2	Present
<i>Onobrychis viciifolia</i>	Sainfoin				RL-Eng-post2001-VU RL-GB-post2001-NT	Pre 1985	29/05/2007	5	Present
<i>Lotus tenuis</i>	Narrow-leaved Bird's-foot-trefoil				Oxon-Scarce	Pre 1985	Pre 1985	1	Present
<i>Vicia sativa subsp. sativa</i>	Common Vetch				Oxon-Rare	Pre 1985	Pre 1985	3	Present
<i>Ononis spinosa</i>	Spiny Restharrow				RL-Eng-post2001-NT	26/07/1984	07/12/1988	3	Present
<i>Sagina apetala subsp. apetala</i>	Annual Pearlwort				Oxon-Scarce	28/06/2011	28/06/2011	1	Present
<i>Silene flos-cuculi</i>	Ragged-Robin				RL-Eng-post2001-NT	Pre 1985	Pre 1985	1	Present
<i>Euphorbia exigua</i>	Dwarf Spurge				RL-Eng-post2001-VU RL-GB-post2001-NT	Pre 1985	19/06/1985	4	Present
<i>Radiola linoides</i>	Allseed				RL-Eng-post2001-VU RL-GB-post2001-NT	Pre 1985	Pre 1985	1	Present
<i>Hypericum montanum</i>	Pale St John's-wort				Oxon-Rare RL-GB-post2001-NT	24/06/2007	24/06/2007	1	Present
<i>Epilobium roseum</i>	Pale Willowherb				Oxon-Rare	Pre 1985	Pre 1985	1	Present
<i>Helianthemum nummularium</i>	Common Rock-rose				RL-Eng-post2001-NT	22/06/1983	06/02/2004	2	Present
<i>Diplotaxis tenuifolia</i>	Perennial Wall-rocket				Oxon-Scarce	Pre 1985	Pre 1985	1	Present
<i>Gentianella amarella</i>	Autumn Gentian				RL-Eng-post2001-NT	09/02/2011	09/02/2011	1	Present
<i>Campanula rotundifolia</i>	Harebell				RL-Eng-post2001-NT	26/07/1984	26/07/1984	1	Present
<i>Carlina vulgaris</i>	Carline Thistle				RL-Eng-post2001-NT	22/06/1983	23/07/1985	2	Present
<i>Cichorium intybus</i>	Chicory				RL-Eng-post2001-VU	28/06/2011	28/06/2011	1	Present

Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<i>Anthemis cotula</i>	Stinking Chamomile				RL-Eng-post2001-VU RL-GB-post2001-VU	Pre 1985	Pre 1985	1	Present
<i>Valeriana officinalis</i>	Common Valerian				RL-Eng-post2001-NT	Pre 1985	28/06/2011	4	Present
<i>Dipsacus pilosus</i>	Small Teasel				Oxon-Scarce	Pre 1985	Pre 1985	1	Present
<i>Knautia arvensis</i>	Field Scabious				RL-Eng-post2001-NT	Pre 1985	30/07/2007	5	Present
<i>Succisa pratensis</i>	Devil's-bit Scabious				RL-Eng-post2001-NT	Pre 1985	Pre 1985	1	Present
<i>Sanicula europaea</i>	Sanicle				RL-Eng-post2001-NT	13/04/1988	13/04/1988	1	Present
<i>Oenanthe fistulosa</i>	Tubular Water-dropwort			NERC-S41	RL-Eng-post2001-VU RL-GB-post2001-VU	27/08/2007	27/08/2007	1	Present
<i>Oenanthe lachenalii</i>	Parsley Water-dropwort				Oxon-Rare RL-Eng-post2001-NT	Pre 1985	Pre 1985	1	Present
<b>Invertebrates - Ants, Bees, Sawflies &amp; Wasps</b>									
<i>Lasioglossum (Evylaeus) malachurum</i>	Sharp-collared Furrow Bee				Notable-B	29/07/2007	29/07/2007	1	Present
<i>Lasioglossum (Evylaeus) pauxillum</i>	Lobe-spurred Furrow Bee				Notable-A	29/07/2007	29/07/2007	1	Present
<b>Invertebrates - Beetles</b>									
<i>Tychius squamulatus</i>	A Beetle				Notable-B	31/05/2014	31/05/2014	1	1
<i>Tanymecus palliatus</i>	A Beetle				Notable-B	31/05/2014	31/05/2014	1	Present
<i>Magdalis (Panus) barbicornis</i>	Pear Weevil				Notable-A	22/06/2001	22/06/2001	1	Present
<i>Gyrinus natator</i>	A Beetle				RL-GB-post2001-RE	28/04/1985	05/01/1985	2	Present
<i>Scarodytes halensis</i>	A Beetle				Status-NS	05/01/1985	05/01/1985	1	Present
<i>Notiophilus quadripunctatus</i>	A Beetle				Notable-B	31/05/2014	31/05/2014	1	1
<i>Bembidion (Semicampa) gilvipes</i>	A Beetle				Notable-B	03/01/2000	03/01/2000	3	Present
<i>Bembidion (Diplocampa) clarkii</i>	A Beetle				Notable-B	28/05/1987	03/01/2000	5	Present
<i>Pterostichus (Pseudomaseus) anthracinus</i>	A Beetle				Notable-B	03/12/1993	13/03/1993	2	2
<i>Ophonus (Metophonus) schaubergerianus</i>	A Beetle				Notable-B	28/05/1987	28/05/1987	1	Present
<i>Anthracus consputus</i>	A Beetle				Notable-B	28/05/1987	20/06/1987	2	Present
<i>Lebia (Lamprias) chlorocephala</i>	A Beetle				Notable-B	03/01/2000	03/01/2000	2	Present
<i>Helophorus (Helophorus) granularis</i>	A Beetle				Status-NS	29/03/1991	29/03/1991	1	Present
<i>Helophorus (Helophorus) nanus</i>	A Beetle				Status-NS	29/03/1991	29/03/1991	1	Present
<i>Cryptocephalus aureolus</i>	A Beetle				Notable-B	30/06/1986	30/06/1986	1	Present

Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<i>Cryptocephalus frontalis</i>	A Beetle				Notable-A RL-GB-post2001-NT	30/06/1986	30/06/1986	1	Present
<i>Longitarsus parvulus</i>	Flax Flea Beetle				Notable-A	03/01/2000	03/01/2000	1	Present
<i>Oxystoma cerdo</i>	A Beetle				Notable-B	22/06/2001	22/06/2001	1	Present
<i>Protapion filirostre</i>	A Beetle				Notable-B	25/07/2000	25/07/2000	1	Present
<b>Invertebrates - Butterflies</b>									
<i>Erynnis tages</i>	Dingy Skipper			NERC-S41	RL-GB-post2001-VU	22/06/1983	13/06/2011	30	2
<i>Pyrgus malvae</i>	Grizzled Skipper			NERC-S41	RL-GB-post2001-VU	1985	21/05/2014	56	12
<i>Lasiommata megera</i>	Wall			NERC-S41	RL-GB-post2001-NT	22/06/1983	06/03/2003	17	1
<i>Coenonympha pamphilus</i>	Small Heath			NERC-S41	RL-GB-post2001-NT	22/06/1983	30/06/2017	167	6
<i>Cupido minimus</i>	Small Blue		WACA-Sch5-s9.5a	NERC-S41	RL-GB-post2001-NT	22/06/1983	13/06/2003	33	25
<i>Polyommatus bellargus</i>	Adonis Blue		WACA-Sch5-s9.5a		RL-GB-post2001-NT	1990	1990	1	Present
<b>Invertebrates - Molluscs</b>									
<i>Arion (Arion) ater</i>	Large Black Slug				RL-GB-post2001-DD	03/12/1993	07/01/2000	2	Present
<b>Invertebrates - Moths</b>									
<i>Malacosoma neustria</i>	Lackey			NERC-S41		28/04/1985	05/01/1985	2	Present
<i>Timandra comae</i>	Blood-vein			NERC-S41		06/03/1985	06/03/1985	2	Present
<i>Scotopteryx bipunctaria cretata</i>	Chalk Carpet			NERC-S41		23/07/1985	23/07/1985	1	Present
<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar			NERC-S41		26/07/1984	16/07/2002- 17/07/2002	8	1
<i>Chiasmia clathrata</i>	Latticed Heath			NERC-S41		22/06/1983	07/12/1988	22	Present
<i>Tyria jacobaeae</i>	Cinnabar			NERC-S41		22/06/1983	29/07/2017	14	10
<i>Tyta luctuosa</i>	Four-spotted			NERC-S41	RL-GB-pre94-VU	22/06/1983	19/06/1985	10	Present
<i>Acronicta psi</i>	Grey Dagger			NERC-S41		06/03/1985	06/03/1985	1	Present
<i>Hydraecia micacea</i>	Rosy Rustic			NERC-S41		29/08/2002- 30/08/2002	29/08/2002- 30/08/2002	1	1
<i>Diarsia rubi</i>	Small Square-spot			NERC-S41		16/07/2002- 17/07/2002	16/07/2002- 17/07/2002	1	1
<b>Mammals - Terrestrial (bats)</b>									
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	HabDir-A4	HabReg-Sch2 WACA-Sch5- s9.4b/s9.4c/s9.5a/s9.5b			03/01/2013	03/01/2013	1	Present
<i>Plecotus auritus</i>	Brown Long-eared Bat	HabDir-A4	HabReg-Sch2 WACA-Sch5- s9.4b/s9.4c/s9.5a/s9.5b	NERC-S41		03/01/2013	03/01/2013	1	Present
<b>Mammals - Terrestrial (excl. bats)</b>									

Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<i>Erinaceus europaeus</i>	West European Hedgehog			NERC-S41		11/12/2006	11/12/2006	1	1
<i>Meles meles</i>	Eurasian Badger		Badgers-1992			04/01/1985	01/05/2012-31/05/2012	8	2
<i>Mustela putorius</i>	Polecat	HabDir-A5	HabReg-Sch4	NERC-S41		14/04/2003	04/03/2009	2	1
<b>Reptiles</b>									
<i>Zootoca vivipara</i>	Common Lizard		WACA-Sch5-s9.1k/s9.5a	NERC-S41		06/08/2016	14/06/2016	3	2
<i>Natrix helvetica</i>	Grass Snake		WACA-Sch5-s9.1k/s9.5a	NERC-S41		26/05/2012	26/05/2012	1	1

Taxon Name	Common Name	Invasive Status	Earliest Record	Latest Record	No. of Records	Max. Abundance
<b>Birds</b>						
<i>Oxyura jamaicensis</i>	Ruddy Duck	INNS-Other-2015	20/07/2008	20/07/2008	1	1
<b>Invertebrates - Crustaceans</b>						
<i>Crangonyx pseudogracilis</i>	A Crustacean	INNS-Other-2015	15/04/1993	04/07/1997	2	Present

## SPECIES STATUS KEY

### EUROPEAN DIRECTIVES

- **BirdsDir-A1** - Species listed on Annex 1 of EC Directive 79/409/EEC on the Conservation of Wild Birds. This covers birds which are the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.
- **HabDir-A2, HabDir-A2np, HabDir-A4 & HabDir-A5** - Annex 2 and Annexes 4/5 respectively of the EC Habitats Directive. This is the Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora. The abbreviations have the following meanings:

<b>HabDir-A2</b>	Species which are endangered, the conservation of which the Community has a particular responsibility in view of the proportion of their natural range which falls within the territory of the Community. They require the designation of special areas of conservation.
<b>HabDir-A2np</b>	Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) whose conservation requires the designation of special areas of conservation. Note that the contents of this annex have been updated in April 2003 following the Treaty of Accession.
<b>HabDir-A4</b>	Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) in need of strict protection. They are protected from killing, disturbance or the destruction of them or their habitat. Note that the contents of this annex have been updated in April 2003 following the Treaty of Accession.
<b>HabDir-A5</b>	Animal and plant species of Community interest whose taking in the wild and exploitation may be subject to management measures.

### UK LEGISLATION: CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2010

- **HabReg-Sch2, HabReg-Sch4 and HabReg-Sch5.** This legislation translates the European Habitats Directive (see above) into UK law where species are listed in Schedule 2 (priority & non-priority), Schedule 4 and Schedule 5.

### UK LEGISLATION: WILDLIFE AND COUNTRYSIDE ACT 1981

#### Schedule 1 Wild Birds

This prohibits the intentional killing, injuring or taking of any wild bird and the taking, damaging or destroying of the nest (whilst being built or in use) or eggs. It prohibits possession of wild birds (dead or alive) or their eggs. In addition:

- **WACA-Sch1-p1** – There are additional penalties for offences relating to birds on this schedule and it is also an offence to disturb such birds at the nest or with dependent young.
- **WACA-Sch1-p2** – Covers the protection of birds which may be killed during the open season.

(Please note that some schedule 1 bird records will refer to species that do not breed in the county, e.g. over-wintering birds such as Redwing or Fieldfare. Although we include them in the annotated records, only they and their nests, eggs and dependent young enjoy extra protection under the W&C 1981 act. If you are in any doubt about the breeding status of a bird please contact us at TVERC)

## Schedule 5 Wild Animals

<b>WACA-Sch5-s9.1</b>	Covers intentionally killing, injuring or taking any wild animal included in Schedule 5
<b>WACA-Sch5-s9.1k</b>	Covers animals which are protected from intentional killing or injuring.
<b>WACA-Sch5-s9.1t</b>	Covers animals which are protected from taking.
<b>WACA-Sch5-s9.2</b>	Covers animals which are protected from being possessed or controlled (live or dead).
<b>WACA-Sch5-s9.4a</b>	Covers intentionally or recklessly disturbing of any wild animal included in Schedule 5. Also includes animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection.
<b>WACA-Sch5-s9.4b</b>	Covers animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.
<b>WACA-Sch5-s9.4c</b>	Covers animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.
<b>WACA-Sch5-s9.5a</b>	Covers animals which are protected from being sold, offered for sale or being held or transported for sale either live or dead, whole or part.
<b>WACA-Sch5-s9.5b</b>	Covers animals which are protected from being published or advertised as being for sale.

## Schedule 8 Wild Plants

- **WACA-Sch8** – Covers plants which are protected from intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).

## PRIORITY NERC S.41 2006

- **NERC-S41** Species “of principal importance for the purpose of conserving biodiversity” covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.

## OTHER DESIGNATIONS: RED LISTS

**Global Red List Species** (tagged **RL-Global**) - Species listed by the International Union for Conservation of Nature (IUCN) in the IUCN Red List of Threatened Species. Species included are from pre and post 1994 and post 2001 lists.

**GB Red List Species** (tagged **RL-GB**) - Species included in GB red lists. Species included are from pre and post 1994 and post 2001 lists. Please note not all taxon groups are currently covered, for example fungi.

**England Red List Species** (tagged **RL-Eng**) – Species included in England red lists. Out of the categories below, only CR, EN, VU, NT, DD and RE are used in the context of this Red List.

With all red lists, the date of the list used does not indicate when the species was designated, but which set of rules for designation were used. Due to the time required to produce a new red list for a species group, the rules used will often be much older than the date of the list.

## Abbreviations:

**EX** – Extinct A taxon is Extinct when there is no reasonable doubt that the last individual has died.

**EW** – Extinct in the Wild. Species known to survive only in cultivation, in captivity or as a naturalised population(s) well outside the past range.

**CR** – Critically Endangered (CR) Species facing an extremely high risk of extinction in the wild in the immediate future.

**EN** – Endangered: Species that are not Critically Endangered but is facing a very high risk of extinction in the wild in the near future.

**VU** – Vulnerable: A species is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future

**NT** – Near Threatened – A taxon considered likely to become endangered in the near future.

**NR** - Taxa with small populations that are not at present Endangered or Vulnerable, but are at risk

**LR(cd)** – Lower risk (conservation dependent)

**DD** – Data deficient – A taxon with insufficient data to make an assessment of its risk of extinction.

**RE** – Regionally Extinct – Taxa that are considered extinct within the region but populations exist elsewhere in the world.

**R** - Taxa with small populations that are not at present Endangered or Vulnerable, but are at risk.

**Inde** – indeterminate – based on a pre 1994 category: Taxa which are known to be Endangered, Vulnerable or Rare but with insufficient data to place them in one of the categories.

**Insu** – Insufficiently known - based on a pre 1994 category which equates to data deficient.

**Thre** - Taxa which are not known to occur naturally outside Britain. Taxa within this category may also be in any of the other RDB categories or not threatened at all.

Species included here are from information compiled by JNCC (The Joint Nature Conservation Committee).

## OTHER DESIGNATIONS: NATIONALLY NOTABLE SPECIES

This covers invertebrate species not falling within IUCN categories but never the less uncommon in Britain.

**Nationally Notable A** (Tagged **Notable-A**): Taxa which occur in <30 10 km (hectad) squares or for less well recorded groups within <7 vice counties.

**Nationally Notable B** (Tagged **Notable-B**): Taxa which don't fall within IUCN categories but are uncommon in Britain and occur in 31-100 10 km sq/ or for less or for less well recorded groups between 8 and 20 vice counties

**Notable** (Tagged **Notable**): Taxa known to be scarce (occurring in between 16 and 100 10km squares) but for which there is insufficient information to assign them to the above categories.

This designation comes from the National Biodiversity Network (NBN) species dictionary but is supported by JNCC.



## OTHER DESIGNATIONS: NATIONALLY RARE OR SCARCE SPECIES

This designation covers species that are recognised to occur in only a few locations in Britain. Note species reported in this section may also appear on red lists.

**Rare** (tagged as **Status-NR**) = occurring in 15 or fewer hectads (10 km squares) in the UK

**Scarce** (tagged as **Status-NS**) = occurring in 16 – 100 hectads in the UK.

## OTHER DESIGNATIONS: BIRDS OF CONSERVATION CONCERN LISTS & RED LIST FUNGI

These lists were drawn up by leading governmental and non-governmental conservation organizations including the RSPB and British Trust for Ornithology. The most recent version was published in May 2009.

**Red List** (tagged Bird-Red) - species are those that are globally threatened, whose population or range has declined rapidly in recent years (i.e. by more than 50% in 25 years), or which have declined historically and not recovered.

**Amber List** (tagged Bird-Amber) - Amber list species are those whose population or range has declined moderately in recent years (by more than 25% but less than 50% in 25 years), those whose population has declined historically but recovered recently, rare breeders (fewer than 300 pairs), those with internationally important populations in the UK, those with localised populations, and those with an unfavourable conservation status in Europe.

**Red List Fungi** – This designation uses the Red Data List of Threatened British Fungi (preliminary assessment) by Shelley Evans (BMS Conservation Officer). Species are designated as:

**Fungi Red-CR** – Critically Endangered

**Fungi Red-EN** – Endangered

**Fungi Red-NT** – Near Threatened

**Fungi Red-VU** – Vulnerable

These follow current IUCN guidelines (2001) as closely as possible but with adaptations to take into account the fungal lifestyle and associated practicalities of fungal recording.

## OTHER DESIGNATIONS: OXFORDSHIRE SCARCE & RARE PLANTS

A rare plant register for Oxfordshire was published under the title *Oxfordshire's Threatened Plants* (Pices Publications, June 2018). This 15 year study produced a list of rare and scarce plants for the county. TVERC is now including Oxfordshire records of these species in its Protected & Notable Species GIS layers. The definitions of rare and scarce are as follows:

**Oxon-Rare** – Any species found in 1-3 Oxfordshire tetrads (2km x 2km square) over the duration of the data collection phase of the study (2000 – 2010 inclusive)

**Oxon-Scarce** – Any species found in 4 – 10 Oxfordshire tetrads over the data collection phase of the study.

## OTHER DESIGNATIONS: LOCAL BAP SPECIES

For any Local Authority that has drawn up a list of BAP species. Designations will only apply to species recorded from the Local Authority area.

Currently, only Bracknell Forest Council have such a BAP list and relevant records are tagged **BF-LBAP**.

## INVASIVE NON-NATIVE SPECIES

Species appearing on the Environment Agency list of non-native invasive species 2014. Species may have the following designations:

**Priority Species:** Species affecting EA interests the most

**Rapid Response Species:** Very invasive species that are not yet established.

## DATA ORIGIN KEY (JULY 2018)

Data Origin Abbreviation	Origin Details
ABFG	Association of British Fungus Groups
AC	Academic Researcher
AN	Abingdon Natural History Society
ARC	Amphibian & Reptile Conservation
ANHSO	Ashmolean Natural History Society (& Rare Plant Group)
ARGUK	UK Amphibian & Reptile Groups
BAT	Bat Licence Returns (from licenced Bat Recorders)
BBG	Binfield Badger Group
BBOWT	Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust
BC	Butterfly Conservation (includes Upper Thames and National Data)
BDS	British Dragonfly Society
BENHS	British Entomological Natural History Society
BFC	Bracknell Forest Council
BFVT	Bracknell Forest Veteran Tree Survey
BGG	Bicester Green Gym
BIG	Berkshire Invertebrate Group
BLS	British Lichen Society
BLWS	Berkshire Local Wildlife Sites Project
BMERC	Bucks & Milton Keynes Environmental Record Centre
BMG	Berkshire Mammal Group
BOC	Berkshire Bird Clubs
BOS	Banbury Ornithological Society
BRAG	Berkshire Reptile & Amphibian Group
BRC	Biological Record Centre (Monk's Wood)
BSBBG	Berks & South Berks Bat Group
BSBI	Botanical Society of the British Isles
BTC	Banbury Town Council
BTO	British Trust for Ornithology
BUWG	Bracknell Urban Wildlife Group
BWARS	Bees Wasps & Ants Recording Society
BWG	Besselsleigh Wood Group
CaIRS	National Calliphoridae Recording Scheme
CBT	Childe Beale Trust
CDC	Cherwell District Council
COS	County Ornithological Services (also known as BCS)
CRPG	Cotswold Rare Plant Group
CSP	Cherwell Swift Project
EA	Environment Agency (formally the National Rivers Authority)
EC	Professional Ecological Consultant
ESB	Earthworm Society of Great Britain
ET	The Earth Trust (formally the Northmoor Trust)
FFF	Friends of Faringdon Folly
FHT	Freshwater Habitat Trust
FLC	Friends of Longcot Churchyard
FROG	Froglife
FSO	Fungus Survey of Oxfordshire
FWAG	Farmland Wildlife Advisory Group
GCN	GCN Licence Return Records

## DATA ORIGIN KEY (JULY 2018)

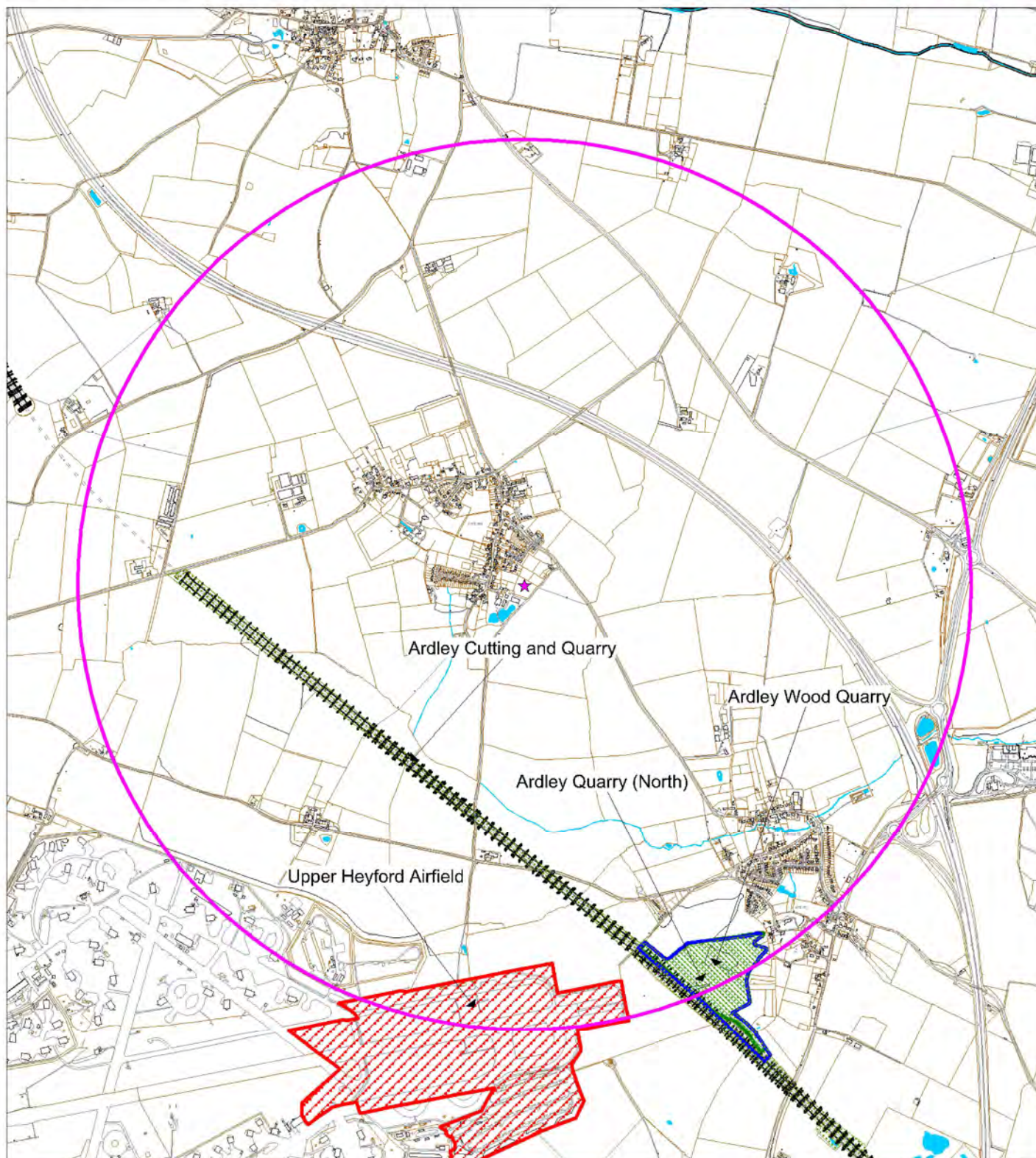
Data Origin Abbreviation	Origin Details
HA	Highways Agency
HWMT	Hurst Water Meadows Trust
IOSF	International Otter Survival Fund
IREC	IRECORD Website
LBRS	Longhorn Beetle Recording Scheme
LN	Local/National Expert (known to TVERC)
LWVP	Lower Windrush Valley Project
MGLG	Moor Green Lakes Group
MOD	Ministry of Defence
MOP	Member of the Public
MS	Mammal Society
NCRS	National (Trichoptera) Caddisfly Recording Scheme
NDD	National Dormouse Database
NE	Natural England/EN/NCC
NFC	Newbury Field Club
NHM	Natural History Museum
NNSS	Non-native Species Secretariat
NPD	National Ponds Database
NRG	Newbury Ringing Group
NT	National Trust
OBG	Oxfordshire Bat Group
OBRC	Oxfordshire Biological Record Centre
OBU	Oxford Brookes University
OCC	Oxfordshire County Council
OFG	Oxfordshire Flora Group
OLWS	Oxfordshire Local Wildlife Sites Project
OMG	Oxfordshire Mossing Group
OOS	Oxfordshire Ornithological Society
ORAG	Oxfordshire Reptile & Amphibian Group
OS	Otter Spotter Project
OSC	Oxford Swift City Project
OUNHM	Oxford University Natural History Museum
OUWG	Oxford Urban Wildlife Group
OX	Oxford City Council
OxMG	Oxford Mammal Group
PC	Pond Conservation
PL	Plantlife
PT	Plant Tracker (non-native plant tracking app.)
PTES	People's Trust for Endangered Species
RBC	Reading Borough Council
RBWM	Royal Borough of Windsor & Maidenhead
RDNHS	Reading and District natural History Society
RM	Reading Museum
RRS	Riverfly Recording Scheme
RSPB	Royal Society for the Protection of Birds
RUWG	Reading Urban Wildlife Group
RWP	Reading Woodlands Plan
SARS	Soldierflies and Allies Recording Scheme

## DATA ORIGIN KEY (JULY 2018)

Data Origin Abbreviation	Origin Details
ScRS	Scarabaeoidea Recording Scheme
SepRS	Sepsidae Recording Scheme
SO	Science Oxford
SODC	South Oxfordshire District Council
SW	Shotover Wildlife
TVERC	Thames Valley Environmental Record Centre
TVFG	Thames valley Fungus Group
TW	Thames Water
U	Unknown
UKWOT	UK Wild Otter Trust
VCH	Victoria County History (historical records)
VWH	Vale of White Horse District Council
VWT	Vincent Wildlife Trust
WB	West Berkshire District Council
WBBRS	Weevil & Bark beetle Recording Scheme
WBC	Wokingham Borough Council
WFG	Wychwood Flora Group
WIA	Wildlife in Ascot Group
WILDCRU	Wildlife Conservation Research Unit
WMUWG	Windsor & Maidenhead Urban Wildlife Group
WODC	West Oxfordshire District Council
WS	Wytham Survey
WT	Woodland Trust
WWT	Wildfowl & Wetlands Trust
YE	Dick Greenaway, concerning land owned by Yattendon Estate





# Fewcott Road, Fritwell Designated Wildlife Sites



-  Site of Special Scientific Interest
-  Local Wildlife Sites
-  Local Geological Site
-  Wildlife Trust Reserve

Scale: 1:25000

-  Search central grid reference
-  Search Area

Map produced by Thames Valley Environmental Records Centre in 2018  
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**COUNTY:** OXFORDSHIRE

**SITE NAME:** ARDLEY CUTTING AND QUARRY

**Status:** Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981(as amended)

**Local Planning Authorities:** Cherwell District Council, Oxfordshire County Council

**National Grid Reference:** SP540269

**Ordnance Survey Sheet 1:50,000:** 164 **1:10,000:** SP52 NW, NE

**Date Notified (Under 1949 Act):** 1972 **Date of Last Revision:**

**Date Notified (Under 1981 Act):** 1988 **Date of Last Revision:** 28 July 1999

**Area:** 40.13 ha 99.12 ac

**Other information:** Part of the site is managed by the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust

### **Description and Reasons for Notification**

This site lies in the eastern part of the Oxfordshire Cotswolds along a section of the London to Birmingham railway line. It is of geological interest for its exposures of Jurassic rocks and has biological interest associated with limestone grassland, scrub, ancient woodland and wetland habitats. The soils are mostly shallow loams of the Aberford Series, interrupted in places by bands of ill-draining clays and outcrops of Northants sands giving rise to changes in the flora.

The railway cutting and southernmost quarry constitute one of southern England's key sites for Jurassic strata. It has exposures ranging from the lowest Bathonian Chipping Norton Formation to the White Limestone Formation thus exhibiting the entire local Bathonian development with the exception of the Forest Marble.

The Chipping Norton Formation is composed of oolitic limestones, sandy limestones, and mudstones. The formation is deeply excavated by sand-filled channels which themselves are topped by rootlet horizons and a lignite, indicating a period of emergence as low, marshy land. The overlying Sharps Hill Formation here consists of a thin oyster-bearing clay horizon and indicates the return of marine conditions.

The Taynton Formation, consisting of flaggy, oolitic limestones and a basal oyster bed was deposited in a relatively inshore site under turbulent conditions. The Hampden Marly Formation contains a rich fauna of oysters and brachiopods at a number of horizons. The cutting is the only site where an ammonite has been recovered from this formation and places it in the *Procerites progacilis* Zone, correlating it with the Acuminata Beds of the South Cotswolds and Somerset. The uppermost White Limestone Formation consists of approximately seven metres of micritic and peloidal limestones with subsidiary marls and clays. The site is the type locality for the Ardley Member of this formation. The abundant gastropods, bivalves and brachiopods preserved in these limestones enable correlations with the White Limestone Formation to the south in the Cotswolds, and with the Blisworth Limestone Formation in Lincolnshire and Northamptonshire.

This is a key site for its fossil marker horizons, palaeontology, sedimentary features such as channels and emergent surfaces, and its stratigraphy. The rocks of Ardley enable the Bathonian sections of the Midlands to be correlated with those of the Oxford area and Cotswolds and as such is of national importance for the understanding of the Jurassic Period in Britain.

The limestone grassland on the steep banks of the railway cutting and the adjacent quarry forms the main biological interest. It is one of the largest limestone grassland sites in the Oxfordshire Cotswolds where unimproved grassland is now very

rare.

The grassland is a characteristically tall sward either dominated by upright brome *Bromopsis erectus* or a mixture of brome and tor-grass *Brachypodium pinnatum*. The grassland contains a variety of species associated with limestone grassland including quaking grass *Briza media*, basil thyme *Acinos arvensis*, clustered bellflower *Campanula glomerata*, dropwort *Filipendula vulgaris* and sainfoin *Onobrychis viciifolia*. Other species which are locally common in the sward include horseshoe vetch *Hippocrepis comosa*, kidney vetch *Anthyllis vulneraria*, glaucous sedge *Carex flacca*, blue fleabane *Erigeron acer*, bee orchid *Ophrys apifera*, green-winged orchid *Orchis morio* and cowslip *Primula veris*, as well as a number of well-established introductions such as dragon's teeth *Tetragonolobus maritimus*, elecampane *Inula helenium* and broad-leaved everlasting pea *Lathyrus latifolius*.

The flora of the woodland includes lords and ladies *Arum maculatum*, wood anemone *Anemone nemorosa* and the uncommon green hellebore *Helleborus viridis*. The eastern edge of the quarry has a near vertical rock face with a seasonally dry pool at its base. This pool is contiguous with a low lying, marshy section containing willow carr and a flora dominated by soft rush *Juncus effusus*, reedmace *Typha latifolia*, reed canary grass *Phalaris arundinacea*, and water mint *Mentha aquatica*.

The invertebrate fauna is particularly rich along the railway cutting, with large populations of calcareous grassland butterflies like small blue *Cupido minimus*, brown argus *Aricia agestis*, dark green fritillary *Argynnis aglaja*, green hairstreak *Callophrys rubi* and Duke of Burgundy *Hamearis lucina*, all of which are uncommon in Oxfordshire. There is also a colony of the nationally rare four-spotted moth *Tyta luctuosa* whose larvae feed on field bindweed *Convolvulus arvensis*, as well as the nationally uncommon leaf beetles *Cryptocephalus hypochaeridis* and *C. moraei*.

The Cutting and adjacent quarry also support a notably wide range of vertebrates. These include part of a large population of the internationally protected great crested newt *Triturus cristatus* which spreads into several adjacent quarries.



## Oxfordshire Local Wildlife Site Citation

### UPPER HEYFORD AIRFIELD

Site Code: 52I05

Grid Reference: SP519269

Area (ha): 74.41

Local Authority: Cherwell District Council

Last Survey Date(s): 2010, extension 2013

Date Selected or Reconfirmed: 2011, extension added 2014

### Site Description

The old airbase at Upper Heyford includes a very large area of grassland which ranges in diversity and includes some species-rich areas which are strongly calcareous in character. There are very large populations of bee orchid and dwarf thistle. Plants associated with the more species rich areas **are cowslip, greater knapweed, glaucous sedge, bird's foot trefoil, ox-eye daisy and lady's bedstraw. Other notable plants present at lower frequency are restharrow, devil's bit scabious, mouse-eared hawkweed, common eyebright, common centaury and hairy violet.** The most strongly calcareous areas have frequent upright brome salad burnet, abundant glaucous sedge and occasional patches of tor grass. In places the grassland lies on thicker soils and is much more neutral in character, lacking most of these species. There are further areas of such grassland outside the wildlife site.

In 2014 an extension was added that covered the old bomb stores area. The extension is fenced off from other areas of the site and has numerous turf covered bunkers. It includes areas of species-rich grassland, semi-improved grassland, broadleaved plantation woodland and a series of water tanks. A large population of great-crested newts have been recorded in the water storage tanks.

Species-rich areas of calcareous grassland include tor-grass, upright brome, musk thistle, fern-grass, greater knapweed, dwarf thistle, blue fleabane, field scabious, fairy flax, common restharrow, mouse-ear hawkweed and salad burnet.

In addition to the botanical interest a large number of skylark appear to be breeding in the grassland and curlew, grey partridge and corn bunting were also noted and almost certainly breed. Tree sparrow was also noted using the wildlife site in late October 1999. Meadow pipit also nests here.

There is additional interest in the occurrence of a collection of annual plants associated with cracks in the concrete runways and along the edges of the runways. Plants present include whitlow grass, parsley piert, dwarf spurge, field madder, sandwort, lesser toadflax, pearlwort and wall speedwell.

Perhaps of greatest interest is the occurrence of stork's bill which is very uncommon in Oxfordshire.

Some 14 species of butterfly were recorded from the site on the 23/7/99. These were Essex skipper, small skipper, large skipper, brimstone, large white, green-veined white, common blue, small tortoiseshell, peacock, marbled white, gatekeeper, meadow brown, ringlet and small heath.

SECTION 41 HABITATS OF PRINCIPAL IMPORTANCE: Lowland Calcareous Grassland

SECTION 41 SPECIES OF PRINCIPAL IMPORTANCE: Skylark, Linnet, Corn Bunting, Tree Sparrow, Grey Partridge, Great Crested Newt

LEGALLY PROTECTED SPECIES:

RED DATA BOOK SPECIES:

NATIONALLY SCARCE or NOTABLE SPECIES:

BIRDS OF CONSERVATION CONCERN:

Red list: Grey Partridge, Skylark, Linnet, Tree Sparrow and Corn Bunting.

Amber list: Kestrel, Curlew, Swallow and Yellowhammer

TYPICAL SPECIES OF LOWLAND CALCAREOUS GRASSLAND: Spring-sedge, Pyramidal Orchid, Heath False-brome, Quaking-grass, Upright Brome, Meadow Oat-grass, Downy Oat-grass, Crested Hair-grass, Burnet-saxifrage, Musk Thistle

## **Citation**

NAME: Ardley Quarry North

SITE CODE: LGS37

GRID REF: SP539273

DATE RECORDED: 9/3/2002

DISTRICT: Cherwell

RIGS STATUS: Approved 29/04/2002

PARISH COUNCIL: Ardley

SITE TYPE: Disused Quarry

REASONS FOR LISTING: Type section for Ardley. Member of White Limestone. Stratigraphic correlation (Midlands - Oxford area - Cotswolds). Fossil marker horizons, fossils, sedimentary features eg channels and emergent surfaces. Potential for education site, wide range of subjects; geology, industrial, biological. Industrial past, archaeology (earthworks). Wonderful rural location.

STRATIGRAPHY: Lowest Bathonian to White Limestone (except for Forest Marble), Middle Jurassic

# **GUIDANCE ON THE VARIOUS STATUTORY AND NON-STATUTORY WILDLIFE SITE DESIGNATIONS**

## **SITE DESIGNATIONS THAT PROTECT THE UK'S NATURAL HERITAGE THROUGH STATUTE**

### **LOCAL NATURE RESERVES (LNRs) (IN ENGLAND, SCOTLAND AND WALES)**

Under the National Parks and Access to the Countryside Act 1949 LNRs may be declared by local authorities after consultation with the relevant statutory nature conservation agency. LNRs are declared and managed for nature conservation, and provide opportunities for research and education, or simply enjoying and having contact with nature.

### **NATIONAL NATURE RESERVES (NNRS)**

NNRs contain examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them.

NNRs are declared by the statutory country conservation agencies under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981. In Northern Ireland, Nature Reserves are designated under the Amenity Lands Act (Northern Ireland) 1965.

### **RAMSAR SITES**

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. Originally intended to protect sites of importance especially as waterfowl habitat, the Convention has broadened its scope over the years to cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. The Convention adopts a broad definition of wetland, namely "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres". Wetlands "may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six metres at low tide lying within the wetlands".

There is only one Ramsar site in Berkshire or Oxfordshire, South West London Waterbodies.

### **SITES OF SPECIAL SCIENTIFIC INTEREST (SSSI) (ENGLAND, SCOTLAND AND WALES)**

The SSSI series has developed since 1949 as the national suite of sites providing statutory protection for the best examples of the UK's flora, fauna, or geological or physiographical

Produced by TVERC  
September 2012

features. These sites are also used to underpin other national and international nature conservation designations. Most SSSIs are privately-owned or managed; others are owned or managed by public bodies or non-government organisations.

Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs have been renotified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and the Nature Conservation (Scotland) Act 2004.

## **SPECIAL AREAS OF CONSERVATION (SAC) AND SITES OF COMMUNITY IMPORTANCE (SCI)**

SACs are designated under the EC Habitats Directive. SACs are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs in terrestrial areas and territorial marine waters out to 12 nautical miles are designated under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). New and/or amended Habitats sites which have been submitted to the European Commission by Government, but not yet formally adopted by the Commission, are referred to as candidate Special Areas of Conservation (cSACs). Sites which have been adopted by the EC, but not yet formally designated by governments of Member States are known as Sites of Community Importance (SCIs). In the UK, designation of SACs is devolved to the relevant administration within each country.

SACs, together with SPAs, form the Natura 2000 network.

## **SPECIAL PROTECTION AREAS (SPA)**

SPAs are classified by the UK Government under the EC Birds Directive. SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union. SPAs in terrestrial areas and territorial marine waters out to 12 nautical miles are classified under the Wildlife and Countryside Act 1981.

SPAs, together with SACs, form the Natura 2000 network.

## NON-STATUTORY NATURAL HERITAGE CONSERVATION DESIGNATIONS

### LOCAL WILDLIFE SITES

Local authorities for any given area may designate certain areas as being of local conservation interest. The criteria for inclusion, and the level of protection provided, if any, may vary between areas. Most individual counties have a similar scheme, although they do vary.

Most Local Wildlife Sites systems involve a panel of ecologists and others in the development of local criteria and the selection of the sites. Panels usually include a local government ecologist, an Natural England representative, the Local Wildlife Trust, the Local Environmental Record Centre and sometimes include a representative of local landowners and local naturalists.

**These sites, which may be given various titles such as 'County Wildlife Sites' (CWS), 'Local Wildlife Sites' (LWS), 'Local Nature Conservation Sites' (LNCS), 'Sites of Importance for Nature Conservation' (SINCs), or Sites of Nature Conservation Importance' (SNCIs), together with statutory designations, are defined in local plans under the Town and Country Planning system and the National Planning Policy Framework and are a material consideration when planning applications are being determined.**

As part of a national standardisation process these sites have recently been renamed as Local Wildlife Sites in Oxfordshire and Berkshire. Previously they were known as County Wildlife Sites in Oxfordshire and Wildlife Heritage Sites in Berkshire. Although the use of these names, especially in citations and descriptions, is being edited and replaced with Local Wildlife Sites or LWS it is likely that some references will remain to these former names until this is complete.

### PROPOSED LOCAL WILDLIFE SITES AND EXTENSIONS

These are also included on designated sites maps. They are areas thought to include important areas of UKBAP habitat or priority or protected species populations. Extensions are likely to have similar habitats to the adjacent Local Wildlife Sites. Local Authorities are made aware of these sites. They will not have been fully surveyed and taken to the selection panel as yet.

### NGO PROPERTIES / NATURE RESERVES

A variety of non-governmental organisations such as the John Muir Trust, Plantlife, the Royal Society for the Protection of Birds, Wildlife Trusts and Woodland Trust own or manage nature reserves or other areas of land that are important for biodiversity. These sites may be intended primarily for nature conservation, or for other purposes such as protection of landscape features or the provision public access to the countryside. These areas of themselves have no statutory basis, but a large number are also designated SSSIs / NNRs / SPAs / SACs / Ramsar sites, etc.

In Berkshire and Oxfordshire, BBOWT (Berks, Bucks & Oxon Wildlife Trust), Woodland Trust and RSPB sites fall into this category.

### LOCAL GEOLOGICAL SITES (LGS)

Local Geological Sites formerly known as Regionally Important Geological and Geomorphological Sites (RIGS) are the most important places for geology and geomorphology outside statutorily protected land such as Sites of Special Scientific Interest (SSSI). As part of a national

standardisation process these sites have recently been renamed as Local Geological Sites in Oxfordshire and Berkshire. Sites are selected under locally-developed criteria, according to their value for education, scientific study, historical significance or aesthetic qualities. Whilst not benefiting from statutory protection, LGS are equivalent to Local Wildlife Sites, and "...consideration of their importance becomes integral to the planning process".

## OTHER SITES

Occasionally other sites might be shown on maps. These are likely to be sites with some wildlife interest, usually managed by local groups, local authorities or town councils but which do not have a specific statutory or non-statutory designation.

Some local authorities within Oxfordshire and Berkshire have identified other sites which are protected through policies in their local plans, including Oxford Local Wildlife Sites in Oxford City and district wildlife sites in Cherwell.

## CONSERVATION TARGET AREAS/ BIODIVERSITY OPPORTUNITY AREAS

These landscape scale areas have been identified as supporting high concentrations of UKBAP habitats and species populations and the potential to restore habitats at a landscape scale. These areas act as a focus for targeting resources into habitat management and restoration.

## ANCIENT WOODLAND

Ancient woodland areas within Bracknell Forest and Wokingham Borough are from an updated layer of ancient woodland produced by TVERC for Bracknell Forest Council and Wokingham Borough Council in 2015-16. This data has been provided to Natural England but has not yet been made available and thus differs from that shown on the Magic Map Interactive Map. For information of the methodology for selecting ancient woodland areas please contact TVERC.

Taxon Name	Common Name	Invasive Status	Earliest Record	Latest Record	No. of Records	Max. Abundance
<b>Birds</b>						
<i>Oxyura jamaicensis</i>	Ruddy Duck	INNS-Other-2015	20/07/2008	20/07/2008	1	1
<b>Invertebrates - Crustaceans</b>						
<i>Crangonyx pseudogracilis</i>	A Crustacean	INNS-Other-2015	15/04/1993	04/07/1997	2	Present



Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<b>Amphibians</b>									
<i>Lissotriton vulgaris</i>	Smooth Newt		WACA-Sch5-s9.5a			05/01/1985	07/08/1991	3	Present
<i>Triturus cristatus</i>	Great Crested Newt	HabDir-A2np HabDir-A4	HabReg-Sch2 WACA-Sch5-s9.4b/s9.4c/s9.5a	NERC-S41		29/03/1991	19/05/2016	54	414
<i>Rana temporaria</i>	Common Frog	HabDir-A5	WACA-Sch5-s9.5a			23/01/2015	23/01/2015	1	1
<b>Birds</b>									
<i>Cygnus olor</i>	Mute Swan				Bird-Amber	04/09/1989	05/10/2009	2	1
<i>Anser brachyrhynchus</i>	Pink-footed Goose				Bird-Amber	02/09/2001	02/09/2001	1	4
<i>Tadorna tadorna</i>	Shelduck				Bird-Amber	04/03/2011	04/03/2011	1	1
<i>Anas penelope</i>	Wigeon				Bird-Amber	02/10/2001	02/10/2001	1	Present
<i>Anas strepera</i>	Gadwall				Bird-Amber	02/10/2001	02/10/2001	1	10
<i>Anas crecca</i>	Teal				Bird-Amber	03/07/1982	02/10/2001	3	13
<i>Anas platyrhynchos</i>	Mallard				Bird-Amber	07/04/1994	23/04/2016	7	70
<i>Anas acuta</i>	Pintail		WACA-Sch1-p2		Bird-Amber	02/09/2001	02/10/2001	2	30
<i>Anas clypeata</i>	Shoveler				Bird-Amber	02/10/2001	02/10/2001	1	5
<i>Aythya ferina</i>	Pochard				Bird-Red	07/04/1994	02/10/2001	2	25
<i>Egretta garzetta</i>	Little Egret	BirdsDir-A1				13/07/2008	13/07/2008	1	2
<i>Perdix perdix</i>	Grey Partridge			NERC-S41	Bird-Red	15/07/1985	26/01/1998	9	9
<i>Coturnix coturnix</i>	Quail		WACA-Sch1-p1		Bird-Amber	06/10/1989	06/10/1989	1	1
<i>Milvus milvus</i>	Red Kite	BirdsDir-A1	WACA-Sch1-p1		RL-Global-post2001-NT	15/02/2005	04/08/2015	19	3
<i>Circus cyaneus</i>	Hen Harrier	BirdsDir-A1	WACA-Sch1-p1	NERC-S41		03/08/2004	03/08/2004	1	1
<i>Falco tinnunculus</i>	Kestrel				Bird-Amber	01/07/1990	31/05/2013	28	2
<i>Falco columbarius</i>	Merlin	BirdsDir-A1	WACA-Sch1-p1		Bird-Red	26/01/1998	26/01/1998	1	1
<i>Falco subbuteo</i>	Hobby		WACA-Sch1-p1			22/07/1982	07/04/2010	10	1
<i>Pluvialis apricaria</i>	Golden Plover	BirdsDir-A1				25/02/1990	03/02/2002	13	800
<i>Vanellus vanellus</i>	Lapwing			NERC-S41	Bird-Red	29/02/1992	21/12/2013	15	1800
<i>Gallinago gallinago</i>	Snipe				Bird-Amber	26/03/1986	01/05/2002	10	6
<i>Numenius arquata</i>	Curlew			NERC-S41	Bird-Red RL-Global-post2001-NT	25/08/1982	19/06/2008	6	2
<i>Scolopax rusticola</i>	Woodcock				Bird-Red	11/12/1997	11/12/1997	1	1
<i>Tringa ochropus</i>	Green Sandpiper		WACA-Sch1-p1		Bird-Amber	22/08/1982	22/08/1982	1	1
<i>Larus canus</i>	Common Gull				Bird-Amber	30/03/1996	30/06/2013	5	30
<i>Larus fuscus</i>	Lesser Black-backed Gull				Bird-Amber	06/11/1989	30/05/2016	7	80
<i>Larus hyperboreus</i>	Glaucous Gull				Bird-Amber	13/03/2011	13/03/2011	1	1
<i>Larus marinus</i>	Great Black-backed Gull				Bird-Amber	27/08/1995	27/08/1995	1	1

Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<i>Chroicocephalus ridibundus</i>	Black-headed Gull				Bird-Amber	30/03/2013	30/05/2016	5	1
<i>Streptopelia turtur</i>	Turtle Dove			NERC-S41	Bird-Red	30/07/1989	17/05/1997	4	2
<i>Cuculus canorus</i>	Cuckoo			NERC-S41	Bird-Red	05/02/2011	05/02/2011	1	2
<i>Tyto alba</i>	Barn Owl		WACA-Sch1-p1			11/01/1984	22/03/2008	6	1
<i>Strix aluco</i>	Tawny Owl				Bird-Amber	17/10/1985	08/09/2010	4	1
<i>Apus apus</i>	Swift				Bird-Amber	07/08/2007	2017	33	25
<i>Alcedo atthis</i>	Kingfisher	BirdsDir-A1	WACA-Sch1-p1		Bird-Amber	03/06/1984	18/11/2008-18/11/2008	3	1
<i>Upupa epops</i>	Hoopoe		WACA-Sch1-p1			05/11/1999	17/05/1999	2	1
<i>Locustella naevia</i>	Grasshopper Warbler			NERC-S41	Bird-Red	26/04/1983	08/03/1987	7	1
<i>Phylloscopus trochilus</i>	Willow Warbler				Bird-Amber	04/11/1992	30/05/2016	34	10
<i>Alauda arvensis</i>	Skylark			NERC-S41	Bird-Red	29/02/2000	30/05/2016	19	40
<i>Delichon urbicum</i>	House Martin				Bird-Amber	10/06/1990	09/09/2007	5	150
<i>Anthus pratensis</i>	Meadow Pipit				Bird-Amber	21/01/2006	21/01/2006	2	9
<i>Motacilla flava</i>	Yellow Wagtail			NERC-S41	Bird-Red	05/02/2011	05/02/2011	1	1
<i>Motacilla cinerea</i>	Grey Wagtail				Bird-Red	02/05/1988	12/02/2011	5	2
<i>Prunella modularis</i>	Dunnock			NERC-S41	Bird-Amber	05/04/2006	30/05/2016	37	5
<i>Saxicola rubetra</i>	Whinchat				Bird-Red	30/04/1989	17/09/1996	3	1
<i>Turdus pilaris</i>	Fieldfare		WACA-Sch1-p1		Bird-Red	04/09/1989	28/11/2011	10	140
<i>Turdus philomelos</i>	Song Thrush			NERC-S41	Bird-Red	05/04/2006	23/04/2016	55	3
<i>Turdus iliacus</i>	Redwing		WACA-Sch1-p1		Bird-Red	22/02/2008	22/02/2008	1	10
<i>Turdus viscivorus</i>	Mistle Thrush				Bird-Red	29/11/1997	30/05/2016	3	14
<i>Muscicapa striata</i>	Spotted Flycatcher			NERC-S41	Bird-Red	15/05/1994	07/04/2011	3	2
<i>Poecile montana</i>	Willow Tit			NERC-S41	Bird-Red	02/12/1993	30/03/1996	2	2
<i>Poecile palustris</i>	Marsh Tit			NERC-S41	Bird-Red	18/09/1992	04/08/2015	16	9
<i>Sturnus vulgaris</i>	Starling			NERC-S41	Bird-Red	15/06/1995	07/08/2007	5	1000
<i>Passer domesticus</i>	House Sparrow			NERC-S41	Bird-Red	27/08/1995	30/06/2013	4	130
<i>Passer montanus</i>	Tree Sparrow			NERC-S41	Bird-Red	01/11/1989	20/08/2005	22	30
<i>Linaria cannabina</i>	Linnet			NERC-S41	Bird-Red	05/07/2010	14/05/2010	2	3
<i>Fringilla montifringilla</i>	Brambling		WACA-Sch1-p1			24/02/2002	24/02/2002	1	3
<i>Loxia curvirostra</i>	Common Crossbill		WACA-Sch1-p1			20/03/1994	20/03/1994	1	6
<i>Pyrrhula pyrrhula</i>	Bullfinch			NERC-S41	Bird-Amber	05/04/2006	30/05/2016	23	3
<i>Emberiza citrinella</i>	Yellowhammer			NERC-S41	Bird-Red	29/02/2000	04/08/2015	14	30
<i>Emberiza schoeniclus</i>	Reed Bunting			NERC-S41	Bird-Amber	25/06/1995	01/05/2002	5	22
<i>Emberiza calandra</i>	Corn Bunting			NERC-S41	Bird-Red	01/03/1991	17/07/2010	24	33
<b>Higher Plants - Flowering Plants</b>									

Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<i>Anacamptis morio</i>	Green-winged Orchid				RL-Eng-post2001-VU RL-GB-post2001-NT	19/06/1985	19/06/1985	3	Present
<i>Hyacinthoides non-scripta</i>	Bluebell		WACA-Sch8			Pre 1985	05/03/2009	5	1
<i>Luzula sylvatica</i>	Great Wood-rush				Oxon-Scarce	28/06/2011	28/06/2011	1	Present
<i>Briza media</i>	Quaking-grass				RL-Eng-post2001-NT	Pre 1985	29/05/2007	3	Present
<i>Glyceria declinata</i>	Small Sweet-grass				Oxon-Scarce	Pre 1985	Pre 1985	1	Present
<i>Hordelymus europaeus</i>	Wood Barley				Status-NS	Pre 1985	Pre 1985	1	Present
<i>Fragaria vesca</i>	Wild Strawberry				RL-Eng-post2001-NT	Pre 1985	05/11/2015	5	1
<i>Plantago media</i>	Hoary Plantain				RL-Eng-post2001-NT	Pre 1985	Pre 1985	2	Present
<i>Nepeta cataria</i>	Cat-mint				RL-Eng-post2001-VU RL-GB-post2001-VU	Pre 1985	Pre 1985	1	Present
<i>Clinopodium acinos</i>	Basil Thyme			NERC-S41	RL-Eng-post2001-VU RL-GB-post2001-VU	Pre 1985	07/12/1988	11	Present
<i>Mentha arvensis</i>	Corn Mint				RL-Eng-post2001-NT	Pre 1985	Pre 1985	2	Present
<i>Mentha suaveolens</i>	Round-leaved Mint				Status-NS RL-Eng-post2001-NT RL-GB-post2001-DD	Pre 1985	Pre 1985	1	Present
<i>Euphrasia nemorosa</i>	Eyebright				RL-Eng-post2001-NT	30/07/2007	27/08/2007	2	Present
<i>Onobrychis viciifolia</i>	Sainfoin				RL-Eng-post2001-VU RL-GB-post2001-NT	Pre 1985	29/05/2007	5	Present
<i>Lotus tenuis</i>	Narrow-leaved Bird's-foot-trefoil				Oxon-Scarce	Pre 1985	Pre 1985	1	Present
<i>Vicia sativa subsp. sativa</i>	Common Vetch				Oxon-Rare	Pre 1985	Pre 1985	3	Present
<i>Ononis spinosa</i>	Spiny Restharrow				RL-Eng-post2001-NT	26/07/1984	07/12/1988	3	Present
<i>Sagina apetala subsp. apetala</i>	Annual Pearlwort				Oxon-Scarce	28/06/2011	28/06/2011	1	Present
<i>Silene flos-cuculi</i>	Ragged-Robin				RL-Eng-post2001-NT	Pre 1985	Pre 1985	1	Present
<i>Euphorbia exigua</i>	Dwarf Spurge				RL-Eng-post2001-VU RL-GB-post2001-NT	Pre 1985	19/06/1985	4	Present
<i>Radiola linoides</i>	Allseed				RL-Eng-post2001-VU RL-GB-post2001-NT	Pre 1985	Pre 1985	1	Present
<i>Hypericum montanum</i>	Pale St John's-wort				Oxon-Rare RL-GB-post2001-NT	24/06/2007	24/06/2007	1	Present
<i>Epilobium roseum</i>	Pale Willowherb				Oxon-Rare	Pre 1985	Pre 1985	1	Present
<i>Helianthemum nummularium</i>	Common Rock-rose				RL-Eng-post2001-NT	22/06/1983	06/02/2004	2	Present
<i>Diploxys tenuifolia</i>	Perennial Wall-rocket				Oxon-Scarce	Pre 1985	Pre 1985	1	Present
<i>Gentianella amarella</i>	Autumn Gentian				RL-Eng-post2001-NT	09/02/2011	09/02/2011	1	Present
<i>Campanula rotundifolia</i>	Harebell				RL-Eng-post2001-NT	26/07/1984	26/07/1984	1	Present
<i>Carlina vulgaris</i>	Carlina Thistle				RL-Eng-post2001-NT	22/06/1983	23/07/1985	2	Present
<i>Cichorium intybus</i>	Chicory				RL-Eng-post2001-VU	28/06/2011	28/06/2011	1	Present

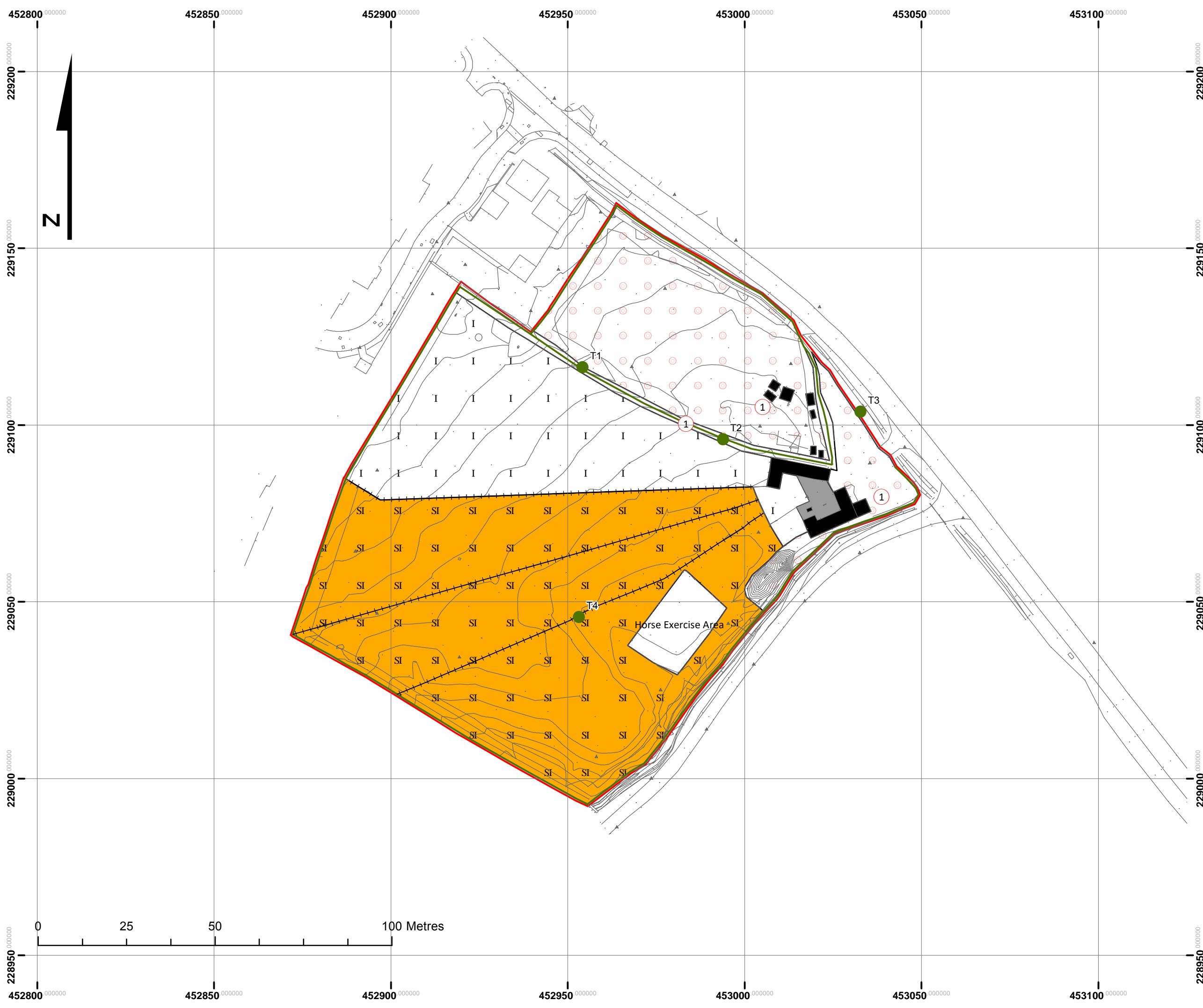
Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<i>Anthemis cotula</i>	Stinking Chamomile				RL-Eng-post2001-VU RL-GB-post2001-VU	Pre 1985	Pre 1985	1	Present
<i>Valeriana officinalis</i>	Common Valerian				RL-Eng-post2001-NT	Pre 1985	28/06/2011	4	Present
<i>Dipsacus pilosus</i>	Small Teasel				Oxon-Scarce	Pre 1985	Pre 1985	1	Present
<i>Knautia arvensis</i>	Field Scabious				RL-Eng-post2001-NT	Pre 1985	30/07/2007	5	Present
<i>Succisa pratensis</i>	Devil's-bit Scabious				RL-Eng-post2001-NT	Pre 1985	Pre 1985	1	Present
<i>Sanicula europaea</i>	Sanicle				RL-Eng-post2001-NT	13/04/1988	13/04/1988	1	Present
<i>Oenanthe fistulosa</i>	Tubular Water-dropwort			NERC-S41	RL-Eng-post2001-VU RL-GB-post2001-VU	27/08/2007	27/08/2007	1	Present
<i>Oenanthe lachenalii</i>	Parsley Water-dropwort				Oxon-Rare RL-Eng-post2001-NT	Pre 1985	Pre 1985	1	Present
<b>Invertebrates - Ants, Bees, Sawflies &amp; Wasps</b>									
<i>Lasioglossum (Evylaeus) malachurum</i>	Sharp-collared Furrow Bee				Notable-B	29/07/2007	29/07/2007	1	Present
<i>Lasioglossum (Evylaeus) pauxillum</i>	Lobe-spurred Furrow Bee				Notable-A	29/07/2007	29/07/2007	1	Present
<b>Invertebrates - Beetles</b>									
<i>Tychius squamulatus</i>	A Beetle				Notable-B	31/05/2014	31/05/2014	1	1
<i>Tanymecus palliatus</i>	A Beetle				Notable-B	31/05/2014	31/05/2014	1	Present
<i>Magdalis (Panus) barbicornis</i>	Pear Weevil				Notable-A	22/06/2001	22/06/2001	1	Present
<i>Gyrinus natator</i>	A Beetle				RL-GB-post2001-RE	28/04/1985	05/01/1985	2	Present
<i>Scarodytes halensis</i>	A Beetle				Status-NS	05/01/1985	05/01/1985	1	Present
<i>Notiophilus quadripunctatus</i>	A Beetle				Notable-B	31/05/2014	31/05/2014	1	1
<i>Bembidion (Semicampa) gilvipes</i>	A Beetle				Notable-B	03/01/2000	03/01/2000	3	Present
<i>Bembidion (Diplocampa) clarkii</i>	A Beetle				Notable-B	28/05/1987	03/01/2000	5	Present
<i>Pterostichus (Pseudomaseus) anthracinus</i>	A Beetle				Notable-B	03/12/1993	13/03/1993	2	2
<i>Ophonus (Metophonus) schaubergerianus</i>	A Beetle				Notable-B	28/05/1987	28/05/1987	1	Present
<i>Anthracus consputus</i>	A Beetle				Notable-B	28/05/1987	20/06/1987	2	Present
<i>Lebia (Lamprias) chlorocephala</i>	A Beetle				Notable-B	03/01/2000	03/01/2000	2	Present
<i>Helophorus (Helophorus) granularis</i>	A Beetle				Status-NS	29/03/1991	29/03/1991	1	Present
<i>Helophorus (Helophorus) nanus</i>	A Beetle				Status-NS	29/03/1991	29/03/1991	1	Present
<i>Cryptocephalus aureolus</i>	A Beetle				Notable-B	30/06/1986	30/06/1986	1	Present

Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<i>Cryptocephalus frontalis</i>	A Beetle				Notable-A RL-GB-post2001-NT	30/06/1986	30/06/1986	1	Present
<i>Longitarsus parvulus</i>	Flax Flea Beetle				Notable-A	03/01/2000	03/01/2000	1	Present
<i>Oxystoma cerdo</i>	A Beetle				Notable-B	22/06/2001	22/06/2001	1	Present
<i>Protapion filirostre</i>	A Beetle				Notable-B	25/07/2000	25/07/2000	1	Present
<b>Invertebrates - Butterflies</b>									
<i>Erynnis tages</i>	Dingy Skipper			NERC-S41	RL-GB-post2001-VU	22/06/1983	13/06/2011	30	2
<i>Pyrgus malvae</i>	Grizzled Skipper			NERC-S41	RL-GB-post2001-VU	1985	21/05/2014	56	12
<i>Lasiommata megera</i>	Wall			NERC-S41	RL-GB-post2001-NT	22/06/1983	06/03/2003	17	1
<i>Coenonympha pamphilus</i>	Small Heath			NERC-S41	RL-GB-post2001-NT	22/06/1983	30/06/2017	167	6
<i>Cupido minimus</i>	Small Blue		WACA-Sch5-s9.5a	NERC-S41	RL-GB-post2001-NT	22/06/1983	13/06/2003	33	25
<i>Polyommatus bellargus</i>	Adonis Blue		WACA-Sch5-s9.5a		RL-GB-post2001-NT	1990	1990	1	Present
<b>Invertebrates - Molluscs</b>									
<i>Arion (Arion) ater</i>	Large Black Slug				RL-GB-post2001-DD	03/12/1993	07/01/2000	2	Present
<b>Invertebrates - Moths</b>									
<i>Malacosoma neustria</i>	Lackey			NERC-S41		28/04/1985	05/01/1985	2	Present
<i>Timandra comae</i>	Blood-vein			NERC-S41		06/03/1985	06/03/1985	2	Present
<i>Scotopteryx bipunctaria cretata</i>	Chalk Carpet			NERC-S41		23/07/1985	23/07/1985	1	Present
<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar			NERC-S41		26/07/1984	16/07/2002- 17/07/2002	8	1
<i>Chiasmia clathrata</i>	Latticed Heath			NERC-S41		22/06/1983	07/12/1988	22	Present
<i>Tyria jacobaeae</i>	Cinnabar			NERC-S41		22/06/1983	29/07/2017	14	10
<i>Tyta luctuosa</i>	Four-spotted			NERC-S41	RL-GB-pre94-VU	22/06/1983	19/06/1985	10	Present
<i>Acronicta psi</i>	Grey Dagger			NERC-S41		06/03/1985	06/03/1985	1	Present
<i>Hydraecia micacea</i>	Rosy Rustic			NERC-S41		29/08/2002- 30/08/2002	29/08/2002- 30/08/2002	1	1
<i>Diarsia rubi</i>	Small Square-spot			NERC-S41		16/07/2002- 17/07/2002	16/07/2002- 17/07/2002	1	1
<b>Mammals - Terrestrial (bats)</b>									
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	HabDir-A4	HabReg-Sch2 WACA-Sch5- s9.4b/s9.4c/s9.5a/s9.5b			03/01/2013	03/01/2013	1	Present
<i>Plecotus auritus</i>	Brown Long-eared Bat	HabDir-A4	HabReg-Sch2 WACA-Sch5- s9.4b/s9.4c/s9.5a/s9.5b	NERC-S41		03/01/2013	03/01/2013	1	Present
<b>Mammals - Terrestrial (excl. bats)</b>									

Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
<i>Erinaceus europaeus</i>	West European Hedgehog			NERC-S41		11/12/2006	11/12/2006	1	1
<i>Meles meles</i>	Eurasian Badger		Badgers-1992			04/01/1985	01/05/2012-31/05/2012	8	2
<i>Mustela putorius</i>	Polecat	HabDir-A5	HabReg-Sch4	NERC-S41		14/04/2003	04/03/2009	2	1
<b>Reptiles</b>									
<i>Zootoca vivipara</i>	Common Lizard		WACA-Sch5-s9.1k/s9.5a	NERC-S41		06/08/2016	14/06/2016	3	2
<i>Natrix helvetica</i>	Grass Snake		WACA-Sch5-s9.1k/s9.5a	NERC-S41		26/05/2012	26/05/2012	1	1


## **Appendix 2: Phase 1 Plan**

Ref: 18-1651



**Legend:**

- Survey Boundary
- Scattered/Parkland Tree
- Semi-improved Grassland
- Improved Grassland
- Building
- Hardstanding
- Fence
- Species Poor Intact Hedgerow
- Other Habitat
- Target Notes:  
1 - Wood/Rubble Pile

REVISIONS:		
DATE:	VERSION:	INITIALS:
		
<b>CELEBRATING 20 YEARS</b> 1998 - 2018		
TITLE: Ecological Phase 1 Habitat Survey		
PROJECT/SITE: Fewcott Road, Fritwell		
CLIENT: Cala Homes Limited		
MAP REF: 3849/06/18-1651		
VERSION: v1		
DATE: 15/10/18	SCALE: 1:1,000@A3	
APPROVED BY: AC	PRODUCED BY: SM	
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7 - 8 Melbourne House Corbygate Business Park Weldon, Corby Northamptonshire NN17 5JG 01536 408840		Greystones House Burford Road Chipping Norton Oxfordshire OX7 5UY 01608 648657
<a href="http://www.lgluk.com">www.lgluk.com</a>		



### **Appendix 3: Photo Record**

Ref: 18-1894

Photo 1 – Ash tree with bat potential (T1)



Photo 2 – Ash tree with bat potential (T2)





Photo 3 – Typical building type



Photo 4 – Grassland



Photo 5 – Stored items and recolonising vegetation



#### **Appendix 4: Relevant Legislation**



## NATIONAL PLANNING POLICY

### National Planning Policy Framework (NPPF)

Nationally, the Government's commitment to sustainable development and conservation of biodiversity is set out in the National Planning Policy Framework. The current NPPF (2018) replaces the NPPF published in 2012. It also replace previous national planning policy, including 'Planning Policy Statement 9 (Biological and Geological Conservation)'.

At the heart of the NPPF is the presumption in favour of sustainable development (Paragraph 11). This presumption however does not apply when developments require appropriate assessment under the Habitats or Birds Directives (Paragraph 177).

Under Paragraph 170, the NPPF sets out that "the planning system should contribute to and enhance the natural and local environment by: minimising impacts and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures."

Chapter 15 provides key information with respect to conserving and enhancing the natural environment. If a proposed development would result in significant harm to the natural environmental which cannot be avoided (through the use of an alternative site with less harmful impacts), mitigated or compensated for (as a last resort) then planning permission should be refused (see below).

Paragraph 174 identifies key principles for all plans to work to protect and enhance biodiversity and geodiversity. Plans should:

- *identify and map components of local wildlife-rich habitats, including the hierarchy of designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by local partnerships for habitat restoration or creation; and*
- *promote the conservation, restoration and re-creation 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.*

Paragraph 175 comprises a number of principles which Local Authorities should apply:

"When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- *if significant harm 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;*

- *development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. The only exception is where the benefits of the development clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland) should be refused, unless there are wholly exceptional reasons and a suitable mitigation strategy exists. Where development would involve the loss of individual aged or veteran trees that lie outside ancient woodland, it should be refused unless the need for, and benefits of, development in that location would clearly outweigh the loss;*
- *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 the environment;*
- the following wildlife sites should be given the same protection as European sites:
  - *potential Special Protection Areas and possible Special Areas of Conservation;*
  - *listed or proposed Ramsar sites; and*
  - *sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.”*

National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and conservation of the natural heritage can co-exist and benefits, in some circumstances, can be achieved.

In March 2014 this Department for Communities and Local Government released guidance to support the 2012 NPPF, known as the National Planning Practice Guidance (NPPG). This has been produced to provide guidance for planners and communities which will help deliver high quality development and sustainable growth. The current Planning Practice Guidance produced by the Department for Communities and Local Government dated 2018 has been produced to support the 2018 NPPF.

## **Government Circular '06/2005: Biodiversity and Geological Conservation**

The Government Circular 06/05 - Statutory Obligations and Their Impact within the Planning System', which accompanied Planning Policy Statement 9, still remains valid. This guidance provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

Paragraph 98 advises that the *"presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult Natural England before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species' protection provisions affecting the site concerned ... "*

Paragraph 99 advises that *"it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under the planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted."*

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

The NERC Act came into force in 2006 and Section 40 places duties on public bodies to have regard to the conservation of biodiversity in the exercise of their normal functions.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list is used to guide decision-makers such as public bodies, including local authorities and utilities companies, in implementing their duty under Section 40, to have regard for the conservation of biodiversity.

The current lists of species and habitats is largely derived from those listed under the UK Bap, which continue to be regarded as a priority under country-level biodiversity strategies.

In England there are 53 habitats and 943 species of principal importance on the Section 41 list.



## UK Post-2010 Biodiversity Framework

In 2007, the UK Biodiversity Action Plan (BAP) Partnership published an updated list of priority UK species and habitats covering terrestrial, freshwater and marine biodiversity to focus conservation action for species and habitats in the UK. The UK Post-2010 Biodiversity Framework succeeds the UK BAP. The Framework continues the conservation work initiated by the UK BAP following the establishment of the Convention on Biological Diversity in 1992.

The purpose of the Framework is to set a broad structure for conservation across the UK until 2020. In summary:

- To set *out* a shared vision and priorities for UK-wide activities, in a framework jointly owned by the four countries, and to which their own strategies will contribute;
- To identify priorities at a UK scale which will help deliver biodiversity targets and the EU Biodiversity Strategy;
- To facilitate the aggregation and collation of information on activity and outcomes across all countries of the UK; and
- To streamline governance arrangements for UK-wide activities.

## GENERAL BIODIVERSITY LEGISLATION

### Conservation of Habitats and Species Regulations 2017 (as amended)

The Habitats Regulations 2017 consolidate and update the Conservation (Natural Habitats, &c.) Regulations 1994 and all its amendments. The Habitats Regulations 2017 are the principal means by which the EEC Council Directive 92/43 (The Habitats Directive) is transposed into domestic law.

The Habitats Regulations 2017 place a duty upon the relevant authority to identify sites which are of importance to the habitats and species listed in Annexes I and II of the Habitats Directive. Those sites which meet the criteria are, in conjunction with the European Commission, designated as Sites of Community Importance, which are subsequently identified as Special Areas of Conservation (SAC).

The Regulations also place a duty upon the government to maintain a register of European protected sites designated as a result of EC Directive 79/409/EEC on the Conservation of Wild Birds (The Birds Directive). These sites are termed Special Protection Areas (SPA). SPAs and SACs form a network of sites known as Natura 2000.

SPAs and SACs are defined within the Regulations as a 'European site'. The Regulations regulate the management of land within European sites, requiring land managers to have the consent of Natural England before carrying out management.

The Regulations define competent authorities as public bodies or statutory undertakers to make an appropriate assessment of any plan or project they intend to permit or carry out, if the plan or project is likely to have a significant effect upon a European site. The permission may only be given if the plan or project is ascertained to have no adverse effect upon the integrity of the European site. If the

competent authority wishes to permit a plan or project despite a negative assessment, no alternatives and imperative reasons of over-riding public interest must be demonstrated, and there is a process involving the Secretary of State and the option of consulting the European Commission.

In practice, there will be very few cases where a plan or project is permitted despite a negative assessment. This means that a planning application has to be assessed by the Local Planning Authority, based on information provided by the client, and the assessment must either decide that it is likely to have no significant effect on a European site or ascertain that there is no adverse effect upon the integrity of the European site.

The Regulations also are applicable to Land use plans, including Regional Spatial Strategies and Development Plan Documents. If the plan is likely to have a significant effect upon a European site, the permission may only be given if the plan is ascertained to have no adverse effect upon the integrity of the European site. This approach gives rise to a hierarchy of plans each with related appropriate assessments.

The Regulations provide protection for individual species of flora and fauna, listed on Schedules 2 and 4 respectively. The Regulations make it an offence, subject to exceptions, to deliberately capture, kill, disturb or trade in the animals listed within Schedule 2 or to pick, collect, cut, uproot, destroy or trade in the plants listed in Schedule 4. Natural England may issue a licence for actions that are otherwise illegal, subject to the satisfaction of the three tests: no alternative; over-riding public interest; and maintenance of the favourable conservation status of the species.

### **The Wildlife and Countryside Act (WCA) 1981 (as amended)**

The WCA consolidates and amends pre-existing national wildlife legislation in order to implement the Bern Conventions and the Birds Directive. It complements the Conservation (Natural Habitats. &c.) Regulations 1994 (as amended), offering protection to a wider range of species.

The Act also provides for the designation and protection of national conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSIs).

Schedules of the act provide lists of protected species, both flora and fauna, and detail the possible offences that apply to these species. All relevant species specific legislation is detailed later in this section.

### **The Countryside and Rights of Way (CRoW) Act 2000**

The CRoW Act amends and strengthens existing wildlife legislation detailed within the WCA. The Act places a duty upon government and the National Assembly for Wales to have regard for biodiversity and provides increased powers for the protection and maintenance of SSSIs.

The Act also contains a list of habitats and species under Section 74 for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

### **The Hedgerow Regulations 1997**

The Hedgerow Regulations make provision for the identification of 'important' hedgerows which may not be removed without consent from the Local Planning Authority. The Regulations specifically exclude any hedgerow which is within, or borders, a domestic garden.

A hedgerow is important under the regulations if it:

- Contains certain categories of protected or Red Data Book species of birds, animals or plants listed in the Wildlife and Countryside Act or Joint Nature Conservation Committee (JNCC) publications.
- Includes:
  - (a) at least 7 woody species, on average, in a 30 metre length;
  - (b) at least 6 woody species, on average, in a 30 metre length and has at least 3 associated features;
  - (c) at least 6 woody species, on average, in a 30 metre length, including a black-poplar tree, or large-leaved lime, or small-leaved lime, or wild service-tree; or
  - (d) at least 5 woody species, on average, in a 30 metre length and has at least 4 associated features.

The number of woody species is reduced by one in northern counties. The list of 56 woody species comprises mainly shrubs and trees. It generally excludes climbers (such as clematis, honeysuckle and bramble) but includes wild roses.

- Runs alongside a bridleway, footpath, road used as a public path, or a byway open to all traffic;
- And includes at least 4 woody species, on average, in a 30 metre length and has at least 2 of the associated features listed at (i) to (vii) below. The associated features are:
  - (i) a bank or wall supporting the hedgerow;
  - (ii) less than 10% gaps;
  - (iii) on average, at least one tree per 50 metres;
  - (iv) at least 3 species from a list of 57 woodland plants;
  - (v) a ditch;
  - (vi) a number of connections with other hedgerows, ponds or woodland; and
  - (vii) a parallel hedge within 15 metres

## SPECIES LEGISLATION

### Badger

Badger is protected under the Protection of Badgers Act 1992. It is based primarily on the need to protect badgers from baiting and deliberate harm or injury, rather than being a response to unfavourable conservation status. It is a duty of the planning authorities to consider the conservation and welfare impacts of development upon badger and issue planning permissions accordingly.

The Act makes it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger;
- To attempt to do so; or
- To intentionally or recklessly interfere with a sett.

A badger sett is defined in the legislation as a “structure or place, which displays signs indicating current use by a badger”. Current use is not synonymous with current occupation and a sett is defined as such as long as signs of current usage are present.

Sett interference includes damaging or destroying a sett, obstructing access to a sett and disturbing a badger whilst it is occupying a sett. Any intentional or reckless work that results in the interference of badger setts is illegal without a licence from Natural England.

Development should not be permitted unless it is possible to ensure the survival of badgers in their existing range and that the population status is unaffected. ODPM Circular 06/2005 provides further guidance on statutory obligations towards badger within the planning system. Paragraph 124 states that “The likelihood of disturbing a badger sett, or adversely affecting badgers’ foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions.”.

Natural England provides standing advice which is capable of being a material consideration in planning decisions. Mitigation is recommended to avoid impacts on badger setts, which includes maintaining or creating new foraging areas and maintaining or creating access (commuting routes) between setts and watering areas.

### Bats

All British bats are classed as European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended) and are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

Under Regulation 41 of the Habitats Regulations, it is an offence to:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb bats; or
- Damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

It is an offence under the Habitats Regulations for any person to have in their possession or to control or transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has unlawfully been taken from the wild.

Natural England is the appropriate authority for determining licence applications in England for works associated with developments affecting bats. Before a licence may be issued, the three tests must be satisfied.

In addition, bats are listed under Schedule 5 of the Wildlife and Countryside Act, making it an offence to intentionally or recklessly:

- Obstruct access to any structure or place which any bat uses for shelter or protection; or
- Disturb bats while occupying a structure or place that it uses for that purpose.

## **Birds**

All wild birds and their nests receive protection under Section 1 of the Wildlife and Countryside Act 1981 (as amended). With certain exceptions, all wild birds are protected such that it is an offence to intentionally:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird whilst in use\* or being built; or
- Take or destroy an egg of any wild bird.

\*The nests of birds that re-use their nests as listed under Schedule ZA1, e.g. golden eagle, are protected against taking, damage or destruction irrespective of whether they are in use or not".

Some species listed in Schedule 1 receive protection by special penalties. Subject to the provisions of the Act, if a person intentionally or recklessly:

- Disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- Disturbs dependent young of such a bird, he shall be guilty of an offence.

The RSPB categorise British bird species in terms of conservation importance based on a number of criteria including the level of threat to a species' population status. Species are listed as Green, Amber or Red. Red Listed species are considered to be of the highest conservation concern being either globally threatened and/or experiencing a high/rapid level of population decline (≥50% over the past 25 years).

## **Amphibians**

All British amphibian species receive a degree of protection under the Wildlife and Countryside Act 1981 (as amended). The level of protection afforded to amphibians varies from protection from trade or sale (smooth newt, palmate newt, common frog and common toad), to more rigorous protection afforded to great crested newt and natterjack toad.

Great crested newt (GCN) is protected under the Act and is also classed as a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended).

Although GCN are regularly encountered throughout lowland England, the UK holds a large percentage of the world population of the species. As such, the UK has an international obligation to conserve the species under domestic and European legislation.

Under the Habitats Regulations 2017 it is an offence to:

- Deliberately kill, injure or capture a GCN;

- Deliberately disturb GCN, including in particular any disturbance which is likely to impair their ability to survive, to reproduce or to hibernate, or to migrate, or which is likely to affect significantly their local distribution or abundance;
- Deliberately take or destroy eggs of a GCN; or
- Damage or destroy a breeding site or resting place of a GCN.

Under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), there are further provisions, making it an offence to:

- Obstruct access to any structure or place which any GCN uses for shelter or protection; or
- Disturb any GCN while occupying a structure or place which it uses for that purpose.

Should any proposed development work be likely to result in an offence, a licence will need to be obtained from Natural England, subject to appropriate measures to safeguard GCN.

### **Hazel Dormouse**

Hazel dormouse are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). Dormouse and their resting places are fully protected. Without a licence it is an offence to:

- Deliberately disturb, capture, injure or kill hazel dormouse;
- To damage or destroy their breeding or resting places; or
- To disturb or obstruct access to any place used by them for shelter.

It is also an offence to possess or sell a wild dormouse.

### **Reptiles**

All six species of British reptile are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), which protects individuals from killing or injury. The Countryside Rights of Way Act 2000 (CRoW) introduced the new offence of 'recklessness'.

Sand Lizard and Smooth Snake are afforded greater protection under the Conservation of Habitats and Species Regulations 2017 (as amended) but are unlikely to be found at the Site due to their geographical distribution.

With respect to planning policy, protected and notable species are afforded policy protection at a national level by the National Planning Policy Framework (NPPF) 2012, paragraph 117 which states planning policies should "promote the protection and recovery of priority species populations."

The Natural Environment and Rural Communities Act, Section 41 (S41) requires the Secretary of State to publish a list of habitats and species which are of principal importance for conservation biodiversity in England. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

## Hedgehog

Hedgehogs receive protection under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), which lists animals which may not be killed or taken by certain methods, namely traps and nets, poisons, automatic weapons, electrical devices, smokes/gasses and others.

Humane trapping of hedgehogs for research purposes requires a licence.

Hedgehogs are a Species of Principal Importance in England and are thus capable of being material considerations in the planning process.

## Invertebrates

Certain species of invertebrate and their habitat (aquatic and terrestrial) are afforded full protection under Section 9, Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

This part of the WACA (1981) makes it is an offence to:

- Intentionally kill, injure, take;
- Possess or control (live or dead, part or derivative);
- Damage, destroy or obstruct access to any structure or place used by a scheduled animal for shelter or protection;
- Disturb an animal occupying such a structure or place;
- Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative); and
- Advertise for buying or selling live or dead animal, part or derivative.

The Conservation of Habitats and Species Regulations 2017 (as amended) under Schedule 2, list three species, therefore classing them as European protected species (EPS). EPS Invertebrate species include:

- Large blue butterfly *Phengaria arion*;
- Fisher's estuarine moth *Gortyna borelii lunata*; and
- Little whirlpool ramshorn snail *Anisus vorticulus*.

More than 350 invertebrate species are listed under Section 41 of the Natural Environment and Rural Communities Act (2006), and form the Species of Principle Importance in England.



# Environmental Planning & Forestry Consultants

## Northamptonshire

7-8 Melbourne House  
Corbygate Business Park  
Weldon  
Corby  
Northamptonshire  
NN17 5JG  
Tel: 01536 408840  
Email: [info@lgluk.com](mailto:info@lgluk.com)  
Website: [www.lgluk.com](http://www.lgluk.com)

## Oxfordshire

Greystones House  
Burford Road  
Chipping Norton  
Oxfordshire  
OX7 5UY  
Tel: 01608 648657  
Email: [info@lgluk.com](mailto:info@lgluk.com)  
Website: [www.lgluk.com](http://www.lgluk.com)

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