PRELIMINARY ECOLOGICAL APPRAISAL

MAWLES FARM, SIBFORD GOWER, BANBURY, OXFORDSHIRE, OX15 5RW

Date: 14th September 2020

Client: Mr & Mrs Broom

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Control Sheet

General Report Information	
Report title	Preliminary Ecological Appraisal
Client	Mr & Mrs Broom
Location	Mawles Farm, Sibford Gower, Banbury, Oxfordshire, OX15 5RW
Lead ecologist	J Russ
Report author	J Russ

The information which we have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Every reasonable attempt has been made to comply with [BS42020 (Biodiversity: Code of practice for planning and development); the CIEEM Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) and the CIEEM Guidelines for Ecological Report Writing (CIEEM, 2015)]. If compliance has not been achieved, justification/explanation has been given.

Contents

SUMMARY

- A Preliminary Ecological Appraisal, including a Phase 1 Habitat Survey and protected species assessment was undertaken on 5th September 2019 and 1st July 2020 of an area of land at Mawles Farm, Sibford Gower, Banbury, Oxfordshire, OX15 5RW in relation to the proposal to develop the site and convert the barns to form a dwelling. Methodology for the survey followed CIEEM (2017).

- The purpose of this report is to identify and describe the potential ecological impacts of the proposed development of the site, make recommendations for further survey where appropriate and to identify potential mitigation/enhancement measures that may be required. The report also provides information on the legislative requirements relating to protected species.

- The 0.14 ha site proposed for development (GR: SP 3528 3788) comprises an area of land at Mawles Farm, Sibford Gower, Oxfordshire (Figure 1). The site is surrounded by dwellings in a clockwise arc from the east to the north and rough grassland, amenity grassland and open farmland to the north-east. Woodland within 2 km of the site is sparse.

- The site comprises four building (a large L-shaped barn, an outbuilding, a steel-framed barn and a shed), areas of tall ruderal vegetation, ephemeral/short perennial vegetation, poor semi-improved grassland and handstanding bordered by stone walls and timber fencing. Generally, the habitats on site are of site value only.

- There are no sites designated for their ecological value within 1 km of the site.

- There was evidence of protected species within the site: a barbastelle bat was identified roosting within the L-shaped barn (as well as a lesser horseshoe bat and a common pipistrelle roost during separate surveys) and swallows were identified nesting in the L-shaped barn. Reptiles, badgers and nesting birds other than swallows may be present within the site boundary.

- A European Protected Species licence will be required to destroy the identified bat roosts. Precautionary working measures are provided for nesting birds, badgers, reptiles and hedgehogs.

- Ecology enhancements to provide net gains for biodiversity are provided.

1 Introduction

1.1 Background to activity/development

Ridgeway Ecology Ltd were commissioned by Aaron Marriott of Ian O'Brien Studio, acting on behalf of Mr & Mrs Broom, to undertake a Preliminary Ecological Appraisal of an area of land at Mawles Farm, Sibford Gower, Banbury, Oxfordshire, OX15 5RW (hereafter referred to as 'the site'), centred at approximate OS grid reference SP 3528 3788. A Preliminary Ecological Appraisal report was produced to support an application to Cherwell District Council to convert the barns and develop the site to provide two dwellings (See *Preliminary Ecological Appraisal - Mawles Farm, Sibford Gower by Ridgeway Ecology Ltd dated 24th September 2019*).

The owners now wish to develop a smaller area of the site and convert the barns to form a single dwelling. The current report is based in on the findings of the 24th September 2019 report and a site visit on 1st July 2020.

This report has been produced by Dr Jon Russ CEnv CIEEM.

1.2 Report Structure

The report is structured as follows:

Section 2 – Methodology. This section summarises the methodology used for undertaking the desk study and field survey.

Section 3 – Legislation, Planning Policy and Biodiversity Action Plan Context. This section sets out the considerations made while undertaking the ecological appraisal and informs the recommendations set out in Section 5.

Section 4 – Ecological Baseline Conditions. This section describes the findings of the survey with respect to the desk study, the Phase 1 habitat survey and protected species assessment, the preliminary bat roost assessment and the pond Habitat Suitability Index assessment.

Section 5 – Assessment and Recommendations. This section discusses the results and assesses the likely impact of the proposed development on habitats and protected species. This section also sets out recommendations in order to mitigate any potential impacts of the proposed development on habitats and protected species. This section also outlines any additional survey work that is required.

Section 6 – Enhancements. This section outlines non-obligatory additional measures that could be taken to enhance the site's biodiversity value.

Section 7 - Conclusions.

Section 8 - References.

1.3 Ecological Context

The 0.14 ha site proposed for development (GR: SP 3528 3788) comprises an area of land at Mawles Farm, Sibford Gower, Oxfordshire (Figure 1). The site is surrounded by dwellings in a clockwise arc from the east to the north and rough grassland, amenity grassland and open farmland to the north-east. Woodland within 2 km of the site is sparse.

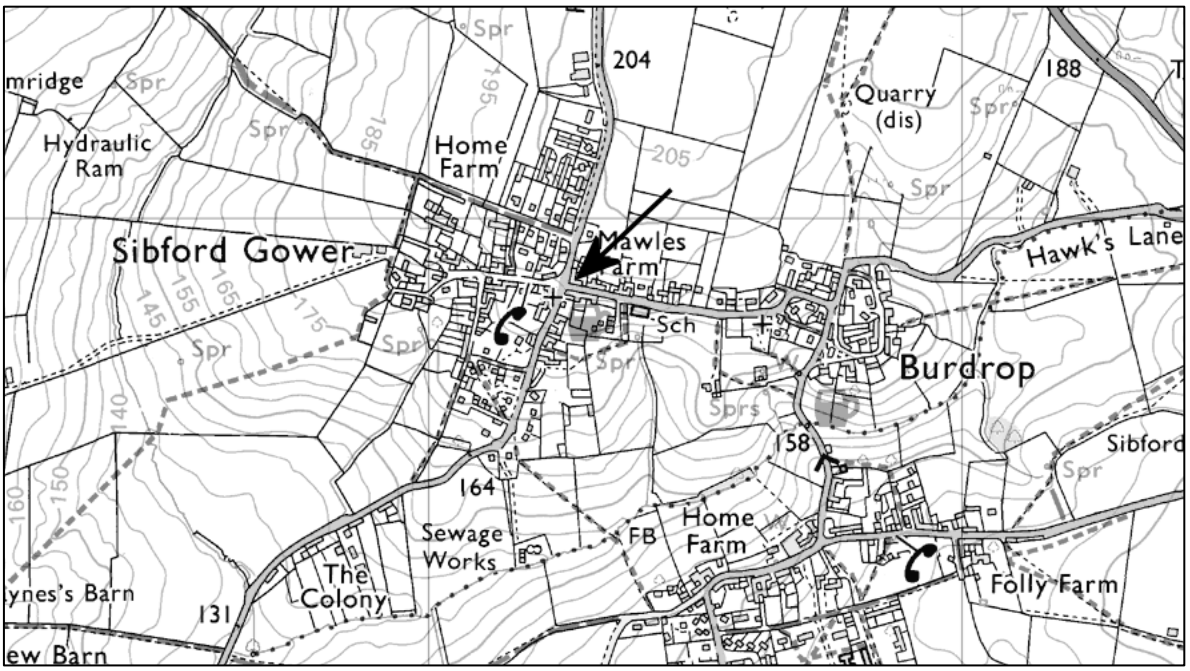


Figure 1 – Location of the site (Ordnance Survey 1 :25000)

1.4 Purpose of Report

The purpose of this report is to identify and describe all potentially significant ecological effects upon habitats and protected species that may be using the site, and to set out the mitigation, enhancement and compensation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects.

The report format follows the 2015 CIEEM guidance, modified to reflect the small size of the site and the limited impact of the development.

2 Methodology

2.1 Scope of Assessment

The scope of the assessment reflects the relatively small size and likely limited impact of the proposed development. The zone of influence is considered to be the habitats within the red line boundary within which the development will occur. The resources considered as part of this assessment are limited to designated sites and protected species of wildlife.

2.2 Desk Study

A background data search was undertaken in September 2019 by Thames Valley Environmental Records Centre (TVERC) of designated sites and protected/notable species records within a 1 km radius around a central Grid Reference SP 3528 3788.

2.3 Field Survey

2.3.1 General

A Preliminary Ecological Appraisal was undertaken of the site, comprising a Phase 1 Habitat Survey and protected species assessment, following standard methods as described in the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) and the Phase 1 Habitat Survey Methodology (JNCC, 2003, revised 2010).

The survey covered the entire area within the red line boundary (Figure 2).

Figure 2 – Site boundary (red line) © Google Maps

Table 1: Survey conditions

Date	Approximate start time	Weather conditions
05.09.2019	12:00	Dry, clear, sunny. Visibility was good and the air temperature was 18°C.
01.07.2020	18:30	Dry, warm. Visibility was good and the air temperature was 22°C.

2.3.2 Phase 1 habitat survey

A Phase 1 Habitat Survey was undertaken of the development area, following standard methods as described in the Phase 1 Habitat Survey Methodology (JNCC, 2003, revised 2010). A Phase 1 Habitat survey typically comprises the following elements depending on the nature of the site:

- Habitat descriptions for each separate habitat type;
- Target notes to identify particular areas of interest or concern; and
- Plant species lists, if appropriate.

All information was mapped and recorded as target notes where appropriate.

2.3.3 Protected species assessment

The suitability of habitats for any protected animal species was assessed at the same time as the Phase 1 Habitat Survey and any incidental evidence of such species was recorded if encountered. Species that might be expected to be present in the geographic location include bats, badger, nesting birds and reptiles.

Bats

The buildings were surveyed for potential roost sites and signs of bats. The survey utilised a ladder, a high-powered torch, binoculars and an endoscope (Ridgid CA-300 with 6mm and 9mm camera heads). The external inspection involved looking for bat droppings on the ground, stuck to walls or roof tiles and on windows and sills and recording suitable entry and exit points. The internal inspection focused on those areas which may be suitable for roosting bats, such as ridge tiles, gable walls, joints and crevices in wood, crevices in walls as well as searching for bat droppings and feeding signs on the floors and other surfaces.

Badger

Habitat was assessed for its suitability for badger foraging and sett digging. Any incidental signs of badgers, such as setts, latrines, foraging signs, or footprints, were recorded if they were encountered. A full badger survey was not undertaken.

Nesting birds

Habitats on site were assessed for their suitability for breeding birds and nests were recorded if they were encountered. Bird species observed or heard during the survey were recorded.

Great crested newt
Great crested newts *Triturus cristatus* use terrestrial habitat within 500 m of breeding ponds; if used by the species for resting, such habitat is protected. Terrestrial habitats on-site were therefore assessed for their potential to support the species, based on factors including vegetation structure and composition, the availability of shelter and foraging resources. The proximity of ponds and intervening habitats are also an important factor in determining the likelihood of this species being present on site.

On 5th September 2019 an abandoned swimming pool to the north-east of the current site was shown to contain hundreds of smooth newts. The Habitat Suitability Index for Great Crested Newts for the swimming pool was 0.44 (Poor). The pool was subsequently drained in accordance with the guidance in the 2019 report.

As there are no ponds located within 1km of the site, great crested newts are not considered further in this report.

Reptiles
The suitability of habitats on site for common reptiles (adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*) was assessed, based on factors such as the quality of the foraging resource, the presence of suitable sites for basking, and the presence of refugia for shelter and hibernation.

Other notable mammals
General habitat suitability and incidental sightings of other animal species, including UK and Local Biodiversity Action Plan species, were noted.

Plants
Incidental sightings of county rare and other notable plants and veteran trees were noted. A search was also made for invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

2.3.4 Constraints and limitations
July and September are within the optimal period for undertaking detailed botanical surveys, although a Phase 1 habitat survey can be undertaken at any time of the year. It should be noted that any survey based on a single site visit will miss a significant proportion of the species present on or using the site. As such this report includes an assessment of only the likely presence of notable species.

2.4 Criteria for Evaluation and Assessment
It is assumed the development will commence within two years of the date of survey and will take approximately one year to complete; given this timescale, the evaluation of ecological resources and assessment of impacts is made as if at the time of writing.

Evaluation of the site's ecological resources is determined in accordance to a geographical frame of reference (site, zone of influence, local, district, county, regional, national, UK, international) and is based on the approach outlined in the CIEEM Guidelines for Ecological Impact Assessment 2018. Only ecological resources with a local value or above are considered in the significance assessment.

Assessment of significance follows the respective approaches outlined in the CIEEM Guidelines for Ecological Impact Assessment (CIEEM 2018) and in the British Standard BS42020 and is based on the value or potential value of the ecological resource, and on the nature and extent of the impact(s) that would result from the proposed development. CIEEM guidance (2018) defines a significant impact as '*an impact on the integrity of a defined site or ecosystem(s) and/or the conservation status of habitats or species with a given geographical area, including cumulative impacts.*' Impacts on legally protected habitats and species are also assessed.

3 Legislative, Planning

3.1 Legislative Framework

Specific habitats and species receive legal protection in the UK under various pieces of legislation, including:

- The Wildlife and Countryside Act 1981 (as amended);
- The Badger Protection Act 1992;
- The Conservation of Habitats and Species Regulations 2010;
- The Countryside Rights of Way Act 2000;
- The Natural Environment and Rural Communities (NERC) Act 2006; and
- The Hedgerow Regulations 1997

Where relevant, the ecological assessment takes account of the legislative protection afforded to specific habitats and species where applicable.

3.2 Planning Policy

3.2.1 National Planning Policy Framework – Conserving and Enhancing the Natural Environment

The National Planning Policy Framework (NPPF), published by the government in March 2012 (and replaces Planning Policy Statement 9 (PPS9)) outlines the Government's commitment to the conservation of wildlife and natural features. Policies set out in NPPF are taken into account by regional planning bodies in the preparation of regional spatial strategies, and by local planning authorities in the preparation of local development documents. They may also be material to decisions on individual planning applications. The NPPF states that the planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks. To minimise impacts on biodiversity and geodiversity, planning policies should:

- plan for biodiversity at a landscape-scale across local authority boundaries;

- identify and map components of the local ecological networks, including the hierarchy of international, national and locally 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;
- promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan;
- aim to prevent harm to geological conservation interests; and where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas

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;
- proposed 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. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have 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 proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and
- 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

The Government will "now embark on a new exercise to consider what underpinning guidance continues to be needed" with the outcome of this process being "an appropriate and easy to use set of guidance, focussing on issues that require national expression, to support implementation of the National Planning Policy Framework." The Government has "not established the process or set a timetable" for this yet and "until such time as the guidance review is complete, the existing guidance where relevant can still be used." Regarding what guidance is still relevant, "Annex 3 of the NPPF indicates that ODPM Circular 06/2005: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System (Circular 06/05) is still relevant. This Circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

3.2.2 The Natural Environment and Rural Communities Act 2006

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on the Secretary of State to publish, review and revise lists of living organisms and types of habitat in England that are of principal importance for the purpose of conserving English biodiversity. It also requires the Secretary of State to take, and promote the taking of, steps to further the conservation of the listed organisms and habitats. The current list of species and habitats is largely the same as those listed with the UK Biodiversity Action Plan and includes all reptile species, the hedgehog and a number of bat and bird species.

3.2.3 Proposed new Cherwell Local Plan (2006-2031)

The proposed new Cherwell Local Plan (2006-2031) was submitted to the Secretary of State for Communities and Local Government for formal Examination on 31st January 2014.

The NPPF places an emphasis for planning decisions to be made at a local level, taking into account local factors and policies. With regard to the Cherwell District Proposed Submission Local Plan, the following policy is considered to be relevant in this instance.

Policy ESD 10: Protection and Enhancement of Biodiversity and the Natural Environment

- Protection and enhancement of biodiversity and the natural environment will be achieved by the following:
- In considering proposals for development, a net gain in biodiversity will be sought by protecting, managing, enhancing and extending existing resources, and by creating new resources
- The protection of trees will be encouraged, with an aim to increase the number of trees in the district
- The reuse of soils will be sought
- Development which would result in damage to or loss of a site of international value will be subject to the Habitats Regulations Assessment process and will not be permitted unless it can be demonstrated that there will be no likely significant effects on the international site or that effects can be mitigated
- Development which would result in damage to or loss of a site of biodiversity or geological value of national importance will not be permitted unless the benefits of the development clearly outweigh the harm it would cause to the site and the wider national network of SSSIs, and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity
- Development which would result in damage to or loss of a site of biodiversity or geological value of regional or local importance including habitats of species of principal importance for biodiversity will not be permitted unless the benefits of the development clearly outweigh the harm it would cause to the site, and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity
- Development proposals will be expected to incorporate features to encourage biodiversity, and retain and where possible enhance existing features of nature conservation value within the site. Existing ecological networks should be identified and maintained to avoid habitat fragmentation, and ecological corridors should form an essential component of green infrastructure provision in association with new development to ensure habitat connectivity
- Relevant habitat and species surveys and associated reports will be required to accompany planning applications which may affect a site of known or potential ecological value

- Air quality assessments will also be required for development proposals that would significantly adversely impact on biodiversity by generating and increase in air pollution
- Planning conditions/obligations will be used to secure net gains in biodiversity by helping to deliver Biodiversity Action Plan targets and/or meeting the aims of Conservation Target Areas. Developments for which these are the principal aims will be viewed favourably
- A monitoring and management plan will be required for biodiversity features on site to ensure their long-term suitable management.

3.2.4 Biodiversity Action Plans

Following The Convention on Biological Diversity (1992), the UK Biodiversity Action Plan was published in 1994 to guide national strategy for the conservation of biodiversity through Species Action Plans (SAPs) and Habitat Action Plans (HAPs), which set conservation targets and objectives. Most areas now possess a local Biodiversity Action Plan (BAP) to complement the national strategy where priority habitats and species are identified and targets set for their conservation. BAPs are the key nature conservation initiative in the UK, working at national, regional and local levels. The NERC Act 2006 places a statutory responsibility on all local authorities to conserve biodiversity.

The following publications have also been used to assist in valuing features and developing mitigation strategies for habitats and species relevant to the site:

- UK Biodiversity Action Plan (UKBAP) 1994; and
- The Cherwell Biodiversity Action Plan

The Cherwell Corporate Biodiversity Action Plan 2013 which is updated and reviewed annually, sets out how Cherwell District Council will fulfil their duty under the Natural Environment and Rural Communities (NERC) Act 2006 and meet other biodiversity legislation and policy requirements. The following species listed in Appendix 3 ("Important sites and species in the Cherwell District") may be relevant to the site:

- Song Thrush
- Hedgehog
- Slow worm

4 Baseline Ecological Conditions

4.1 Designated Sites

Records provided by Thames Valley Environmental Records Centre (TVERC) show that there are no designated sites within 1 km of the site.

4.2 Habitats

4.2.1 Buildings

The majority of the site comprises three brick, stone or steel-framed buildings (Figure 3).

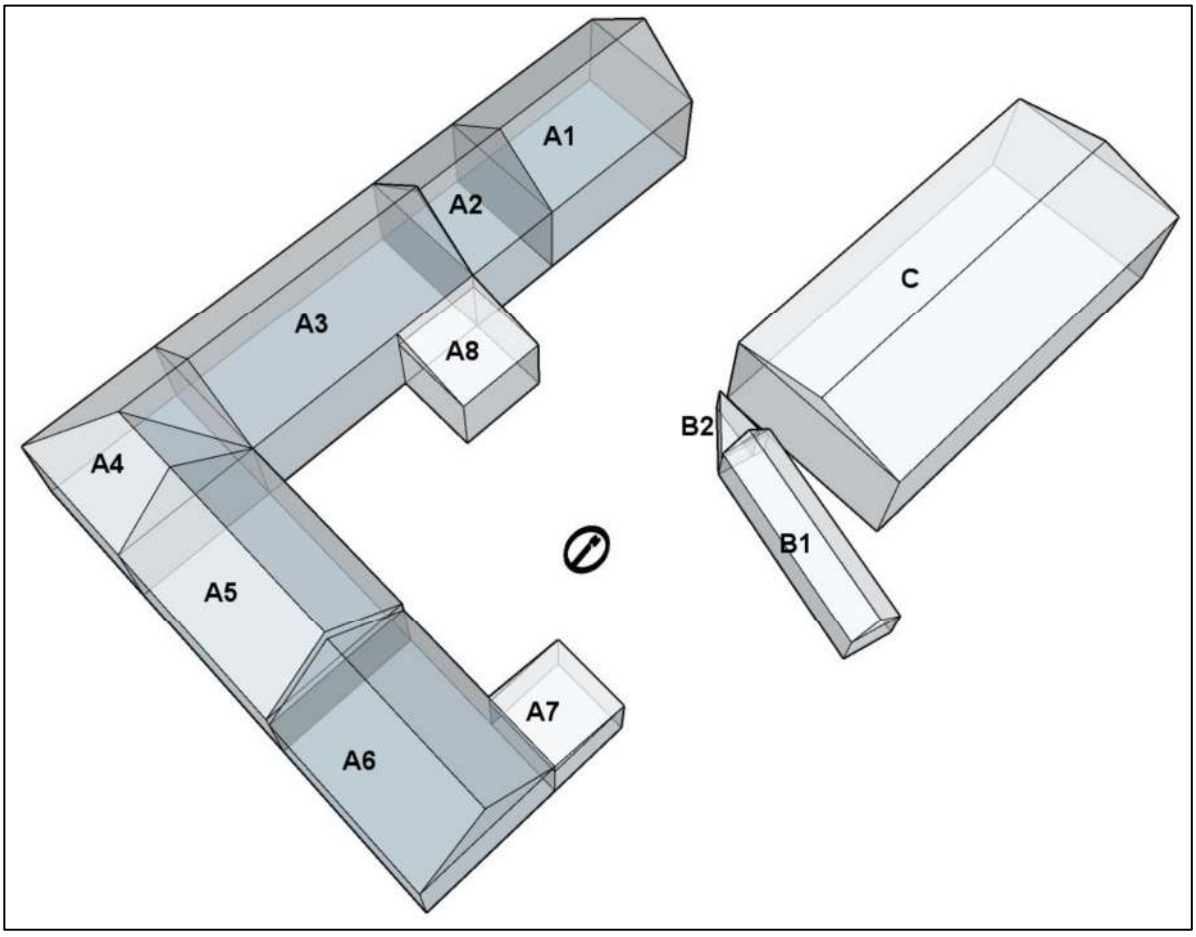


Figure 3. Plan of the brick, stone and steel-framed buildings

Dominating the centre of the site is a large L-shaped stone barn with a brick mono-pitch extension at the eastern end of the north elevation of the southern part and a mono-pitch lean-to structure along the east elevation of the western part (Figure 3: A1-A8; Figure 4; Photographs 1-12). The gable roofs are covered with slate over timber sarking except for the eastern end of the southern part, which is corrugated concrete fibre, and the lean-to and mono-pitch sections which are corrugated metal.

To the north-east of the L-shaped barn is a stone outbuilding, formerly a piggery, with a brick addition at the western end (Figure 3: B1 and 2; Figure 4; Photographs 13-16). The main roof is slate and the south-west corner is covered with corrugated iron.

Opposite the site entrance is a large open-sided steel-framed barn (Figure 3: C; Figure 4; Photographs 17 and 18).

Photograph 1. The east elevation of the southern part of the L-shaped barn

Photograph 2. The north elevation of the eastern end of the southern part of the L-shaped barn

Photograph 3. The north elevation of the western end of the southern part of the L-shaped barn and the east elevation of the southern end of the western part

Photograph 4. The north and east elevations of the northern end of the western part of the L-shaped barn

Photograph 5. The west elevation of the western part of the L-shaped barn

Photograph 6. The southern elevation of the southern part of the L-shaped barn

Photograph 7. The interior of the northern end of the western part of the L-shaped barn (Figure 3: A1)

Photograph 8. The interior of the central section of the western part of the L-shaped barn (Figure 3: A2)

Photograph 9. The interior of the southern end of the western part of the L-shaped barn (Figure 3: A3)

Photograph 10. The interior of the south-west corner of the L-shaped barn (Figure 3: A4)

Photograph 11. The interior of the western end of the southern part of the L-shaped barn (Figure 3: A5)

Photograph 12. The interior of the eastern end of the southern part of the L-shaped barn (Figure 3: A6)

Figure 13. The south and east elevations of the outbuilding (Figure 3: B1)

Figure 14. the south-west elevation of the outbuilding (Figure 3: B2)

Figure 15. Part of the interior of the main part of the outbuilding (Figure 3: B1)

Figure 16. The interior of the south-west corner of the outbuilding (Figure 3: B2)

Figure 17. The west elevation of the steel-framed barn (Figure 3: C)

Figure 18. The interior of the steel-framed barn

The L-shaped barn, outbuilding and steel-framed barn are assessed as having value at the site level and are considered further in this report in relation to protected species (see sections 4.3.2 and 4.3.4).

4.2.2 Tall ruderal vegetation

On either side of the site entrance, along the eastern part of the L-shaped barn and to the south and east of the outbuilding are areas of tall ruderal vegetation (Figure 4; Photographs 19-21). Common nettle *Urtica dioica* and broad-leaved dock *Rumex obtusifolius* are dominant with frequent or occasional dandelion *Taraxacum officinalis*, broad-leaved willowherb *Epilobium montanum*, Canadian fleabane *Erigeron canadensis*, spear thistle *Cirsium vulgare*, creeping thistle *Cirsium arvense*, white dead-nettle *Lamium album*, ribwort plantain *Plantago lanceolata*, greater plantain *Plantago major*, cow parsley *Anthriscus sylvestris*, white clover *Trifolium repens*, chamomile *Anthemis* sp., knotgrass *Polygonum aviculare* with small patches of ivy *Hedera helix*, bramble *Rubus fruticosus*, common poppy *Papaver rhoeas*, ash *Fraxinus excelsior* and blackcurrant *Ribes nigrum*.

Photograph 19. Tall ruderal vegetation at the northern end of the L-shaped barn

Photograph 20. Tall ruderal vegetation along the eastern side of the L-shaped barn

Photograph 21. Tall ruderal vegetation to the south of the swimming pool

The tall ruderal vegetation is a common and widespread habitat with a low level of structural and botanical diversity and is assessed as having a value at site level. As this habitat is easy to replicate and unlikely to provide good habitat for protected species, it is not considered further within this report except in relation to precautionary methods for protected species.

4.2.3 Ephemeral/short perennial vegetation

The original driveway is now covered with ephemeral/short perennial vegetation such as knotweed, smooth hawk's-beard, white clover, fat hen *Chenopodium album*, dandelion, broad-leaved plantain, Canadian fleabane, common groundsel *Senecio vulgaris*, broad-leaved dock with some waste ground grasses (Figure 4; Photographs 22 and 23).

Photograph 22. Ephemeral/short perennial vegetation to the south of the outbuilding

Photograph 23. Ephemeral/short perennial vegetation to the west of the steel-framed barn

4.2.4 Hardstanding

To the east and north of the southern part of the L-shaped barn are areas of concrete (Figure 4; Photograph 24). At the southern end of the concrete to the east of the L-shaped barn is a patch of wisteria *Wisteria* sp. as well as some holly *Ilex aquifolium*, ash and common nettle.

Photograph 24. Concrete area at the south-east corner of the site

The hardstanding is assessed as having negligible value at a site level due to the lack of any significant vegetation cover.

4.2.5 Poor semi-improved grassland

To the north of the steel-framed barn is an area of poor semi-improved grassland (Figure 4; Photograph 25). The sward is generally species-poor and is dominated by cock's foot *Dactylis glomerata*, false oat grass *Arrhenatherum elatius*, meadow foxtail *Alopecurus pratensis*, Yorkshire fog *Holcus lanatus* and perennial rye grass *Lolium perenne*. Also present are common nettle, spear thistle, creeping thistle, cow parsley, yarrow *Achillea millefolium*, smooth hawk's beard, blackthorn *Prunus spinosa* saplings and a small patch of bramble in the south-east corner.

Photograph 25. Poor semi-improved grassland to the north of the steel-framed barn

Species-poor semi-improved grassland is a common and widespread habitat with a relatively low level of structural and botanical diversity. However, this type of grassland can still provide important habitat for notable and protected species. Therefore, although the grassland is only considered to be of intrinsic site value, it is considered further in this report in relation to compliance with legislation for protected species.

4.2.6 Wall

Along the northern site boundary, parts of the west boundary and to the north and east of the outbuilding is stone wall (Figure 4; Photograph 26).

Photograph 26. Low stone wall to the north of the area of poor semi-improved grassland

Photograph 27. Low stone wall to the west of the area of poor semi-improved grassland

Photograph 28. Wall to the rear of the outbuilding

The wall is assessed as having moderate value at a site level as although there is a lack of any significant vegetation cover there are numerous cracks and crevices which could be used by protected species (and other species).

4.2.7 Fence

There are short sections of fence and timber gates providing access to various parts of the site (Figure 4).

The fence is assessed as having negligible value at a site level due to the lack of any significant vegetation cover.

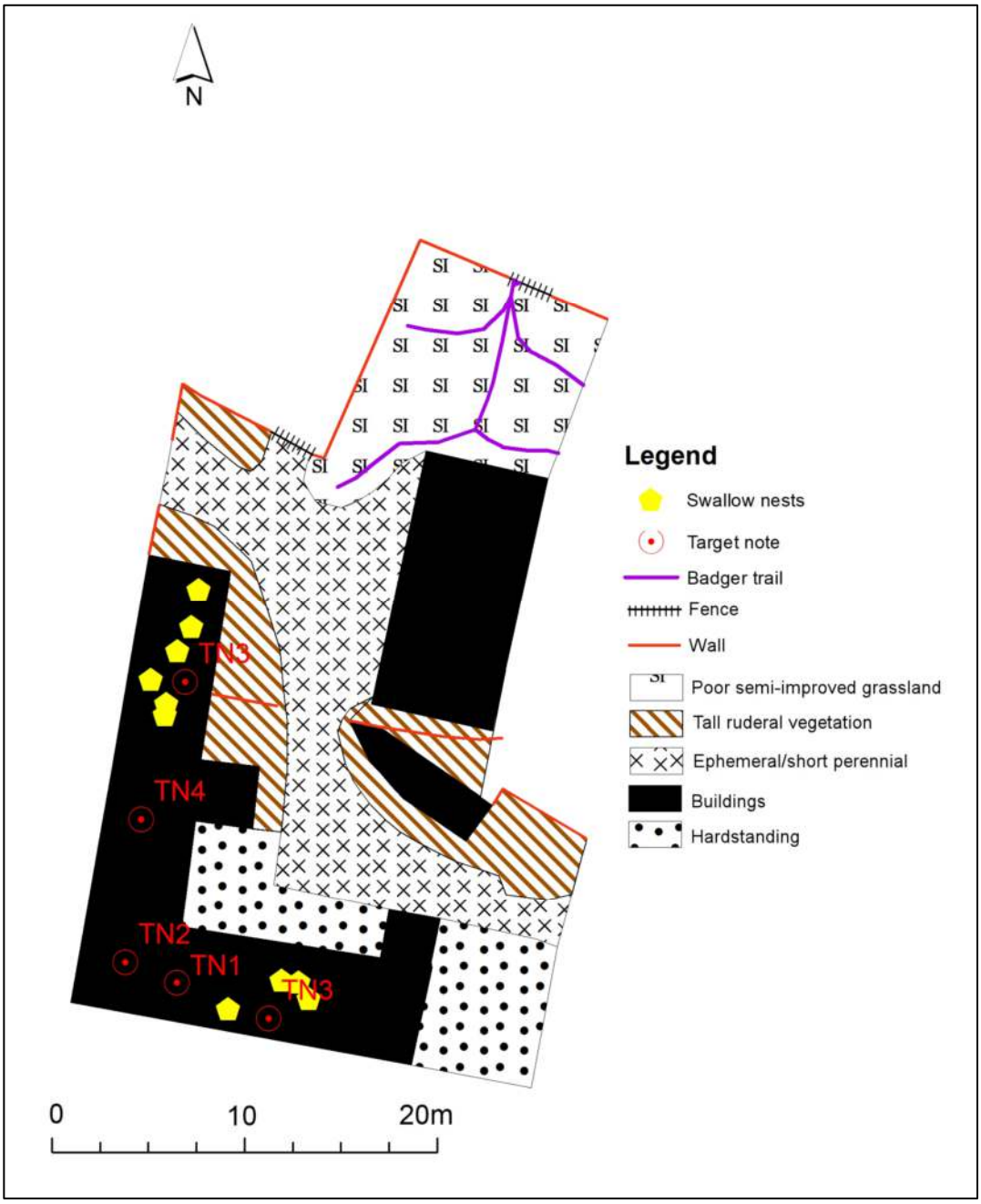


Figure 4. Phase 1 habitat map. Locations of habitats are approximate.

Table 2: Target notes

Target note	Description
TN1	Bat droppings and butterfly wings
TN2	Bat droppings and roosting barbastelle
TN3	Swallow's nests
TN4	Rats and rat holes

4.3 Species and Species Groups

4.3.1 Desk study

TVERC holds a number of records of protected or priority species within 1 km of the site; none of the records relate directly to the study site (see Appendix 1).

An absence of records does not mean that a particular species is not present; merely that it has not been recorded. Many species records are not obtainable from the sources utilised and therefore there may be further undetected records for such species on the study site or in the local area. Key records of protected species from TVERC are provided below under the relevant species or taxa.

4.3.2 Bats: assessment of habitats

This section must be read alongside the Phase 2 Bat Survey report detailing nocturnal activity surveys undertaken in 2020 (See *Phase 2 bat Survey, Mawles Farm, Sibford Gower by Ridgeway Ecology Ltd dated 6th July 2020*).

L-shaped barn

The L-shaped barn is considered to be of moderate bat roosting potential for bats as there are numerous access points under the slates and suitable potential roosting features for both crevice-dwelling bats (e.g. between slates and timber sarking, under ridge tiles, in crevices in the stone walls) and 'attic'-dwelling species (e.g. in the open roof voids, along exposed roof timbers), some of which are suitable for maternity roost and hibernation sites.

At the western end of the southern part of the barn there were approximately 25 medium-sized bat droppings and around 15 butterfly wings (Figure 3: A5; Figure 4, Target note 1; Photographs 28 and 29) and in the room at the south-west corner of the barn there were around 250 medium-sized bat droppings (Figure 3: A4; Photograph 30) under a singe barbastelle bat roosting against the roof timbers (Figure 4, Target note 2; Photograph 31).

Outbuilding

The outbuilding is considered to be of low bat roosting potential as although there are numerous openings, there are very few potential roosting sites. If the building is used at all it is likely to be used as a feeding perch only.

Steel-framed barn and timber shed

Due to the lack of potential roosting sites, these buildings are considered to be of negligible bat roosting potential.

The habitats within the site boundary offer some foraging opportunities for bats and it is well-connected to the surrounding habitats by the network of hedgerows and treelines. However, there is better foraging habitat nearby along the field boundaries and within the small patches of woodland.

TVERC holds six records of bats within 1 km of the site comprising three roost records of pipistrelle bats and brown long-eared bats within Sibford Gower and records of lesser-horseshoe bat, soprano pipistrelle, *Myotis* sp. and common pipistrelles in flight.

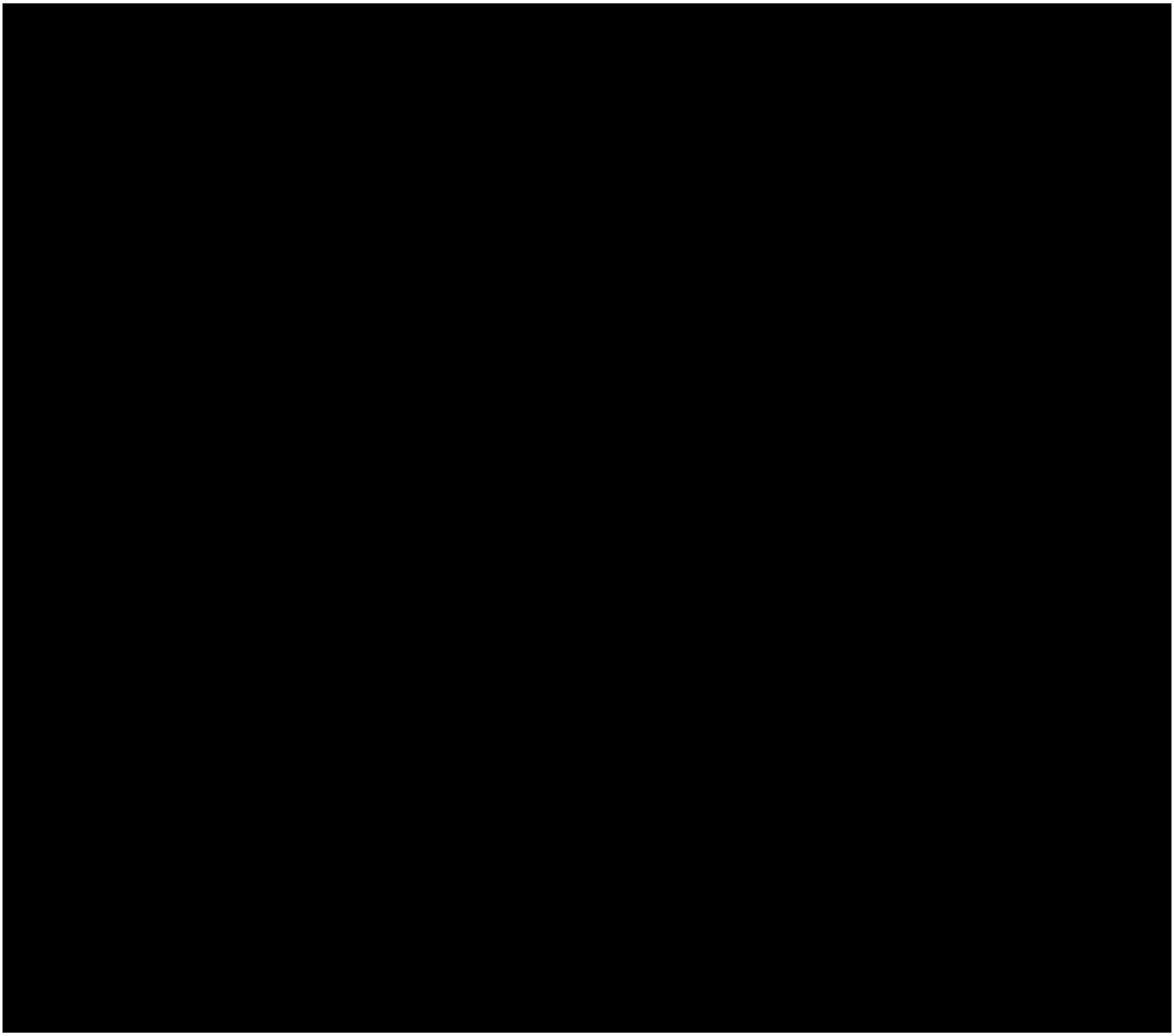
Photograph 28. Butterfly wings at the western end of the southern part of the L-shaped barn (Figure 3: A5)

Photograph 29. Bat droppings at the western end of the southern part of the L-shaped barn (Figure 3: A5)

Photograph 30. Bat droppings on the floor of the south-west corner of the L-shaped barn (Figure 3: A4)

Photograph 31. Barbastelle bat roosting on a roof timber within the room at the south-west corner of the L-shaped barn (Figure 3: A4)

The site is considered to be of county value for bats as barbastelles are considered to be rare, but widespread, in Oxfordshire. It will be necessary to obtain a European Protected Species Licence (EPSL) to permit the loss of the identified roost site. Recommendations are made for suitable mitigation and compensation measures (see sections 5 and 6).



4.3.4 Nesting birds

Approximately 10 swallow's nests were identified within the L-shaped barn (Figure 4, Target note 3; e.g. Photographs 33-35). Two of the nests were in use at the time of the survey in 2019 and 2020.

Other birds observed within the site boundary during the survey include great tit, blackbird, blue tit and crow.

TVERC holds 190 records of notable bird species within 1 km of the site. These include 39 records of swift which have been nesting nearby. It was not possible to determine whether swifts were nesting within the L-shaped barn at the time of the survey as their southern migration period had passed. However, as swifts need height to take off the potential for the building to be used by swift is somewhat reduced.

Photograph 33. Swallow's nest in the northern section of the western part of the L-shaped barn (Figure 3: A1)

Photograph 34. Swallow's nest in the central section of the western part of the L-shaped barn (Figure 3: A2)

Photograph 35. Swallow's nest in the western section of the southern part of the L-shaped barn (Figure 3: A5)

Breeding birds are assessed as having a value at the local level and are considered further in this report in relation to compliance with legislation.

4.3.5 Reptiles

The areas of tall ruderal vegetation, stone walls and long grass provide suitable areas for shelter, foraging and commuting with some of clearer areas and banks providing suitable basking areas. The dry-stone walls could provide suitable areas for shelter and brumation. However, most of these habitats are located primarily along the northern part of the site with suitable shelter being restricted in the rest of the site. Based on the site's habitats and the surrounding habitat it is considered that only slow worms may be present within the site boundary.

TVERC holds no records of reptiles within 1km of the site.

Although reptiles are nationally protected it is considered unlikely that the site will be used in any significant way by reptiles. In the context of this relatively small site they are assessed as having site value. Reptiles are considered further in this report in relation to compliance with legislation.

4.3.6 Other mammals

The site's suite of habitats are considered to be of moderate value for other mammal species, such as fox *Vulpes vulpes*, polecat *Mustela putorius*, rabbit *Oryctolagus cuniculus*, hedgehog *Erinaceus europaeus*, shrews, voles and mice with the surrounding habitat being taken in to account.

Within the L-shaped barn at the southern end and within the central section of the western part four brown rats were observed above the large metal cylinder as well as several rat holes (Figure 4, Target note 4). There were also rat droppings scattered throughout this part of the building.

TVERC holds no records of other mammals within 1 km of the site.

Given the small size of the development footprint most 'other' notable mammals will be able to relocate to surrounding areas. It considered that the proposals, will not have significant negative impacts on these species in the long-term, especially in the context of extensive areas of suitable habitat in the wider area. However, a precautionary note relating to the legislation for hedgehogs is included in this report.

4.3.7 Plants

The habitats on the site are common and widespread, and are unlikely to support protected, rare or notable plant species.

TVERC holds six records of notable plants within 1 km of the site but these are all located more than 500m away.

As no rare or notable plant and/or fungal species were noted within the site or considered likely to be present within the site, these species groups are not considered further in this report. Similarly, as no invasive species were recorded these are also not considered further.

5 Assessment and Recommendations

5.1 Designated Sites

5.1.1 Potential impacts

As there are no designated sites within 1 km of the site there will not be any impact upon such sites.

5.1.2 Mitigation measures

No mitigation is considered necessary.

5.1.3 Residual effects

There will be no residual effects.

5.2 Habitats

5.2.1 Potential impacts

The proposed work will involve the conversion of the buildings and clearing of the area of tall ruderal vegetation, the ephemeral/short perennial vegetation, the hardstanding and the poor semi-improved grassland.

5.2.2 Mitigation measures

Generally, the habitats on site are of site value only and their loss does not require mitigation. However, trees to be retained must be protected and

Impacts upon protected species that use the habitats listed above, and associated mitigation, are considered in Section 5.3 below.

5.2.3 Residual effects

n/a

5.3 Protected species

5.3.1 Potential impacts

The proposed development of the site will affect the bat roosts present in the stone barn and nesting swallows in the L-shaped barn. There is a possibility that hedgehogs and badgers may be present during works.

5.3.2 Mitigation measures

Bats

For full details of bats identified during the Phase 2 bat surveys and mitigation measures see *Phase 2 bat Survey, Mawles Farm, Sibford Gower by Ridgeway Ecology Ltd dated 6th July 2020*.

Nesting Birds
Several swallow's nests were identified in the L-shaped barn and there is a possibility that other bird species could nest in the buildings and hedgerow. Therefore, the following measures are needed to ensure compliance with legislation during the removal of any vegetation or work to any buildings that might support breeding birds:

- **All nesting birds are protected by law. To avoid committing an offence, any works to habitats that might be used by nesting birds, such as the buildings and trees, should be undertaken outside the bird breeding season (March to August inclusive). If this is not possible, the habitat must be checked immediately prior to works commencing by a suitably qualified ecologist. If there are breeding birds present, works cannot continue until the chicks have fledged and left the nest.**
- **Consideration must be given to providing replacement nest sites for swallows within the site boundary. Swallows prefer nesting inside buildings such as a barns, open-sided garages, outbuildings or stables and can be encouraged to nest by attaching nest cups to beams and rafters. Possible locations could be under the proposed south entrance and within part of the outbuilding.**

Reptiles

Parts of the site, particularly the northern part, contain suitable habitat for shelter, foraging and commuting for reptiles. The following precautions must be taken, to avoid harm to these species during site clearance:

- **The tall ruderal vegetation and grassland must be strimmed to ground level during the weeks prior to work commencing. Ideally this will occur on a hot day during the summer months when reptiles are very mobile and can easily escape. Subsequently, the vegetation must be kept close to ground level or cleared prior to development, and must be maintained in that condition until the development is complete.**
- **Prior to works commencing any log piles, brash piles and stone piles must be removed carefully. If any reptiles are discovered work must stop and an ecologist contacted to relocate the animal(s) to a suitable location identified off site.**
- **Work on the site may create rubble piles which, if left, may have the potential to be utilised as places of rest or shelter. Consequently, such debris must be removed from the site immediately or placed into skips prior to removal.**
- **Escape route for reptiles must be provided within any pits dug for the foundations. Such ramps must be no steeper than 45 degrees in angle and must be constructed using rough wooden planks.**
- **If at any point during these activities, or at any other stage during works, a reptile is discovered, all work must stop and a suitably licensed ecologist must be consulted.**

Other mammals

As it is possible that hedgehogs occasionally use the site the following precautionary measures relating to hedgehogs must be put in place:

- **Any wood or brash piles within the development area must be removed carefully by hand. If a hedgehog is found it must be removed carefully and placed in an undisturbed area outside the development zone.**
- **Ramps must be placed into any deep trenches or excavated holes, to allow hedgehogs an escape route should they fall in.**

5.3.3 Residual effects

Provided the appropriate mitigation measures outlined above are put in place, there should be no residual effects on protected species.

6 Enhancement

A variety of habitat creation options should be implemented within the site:

- Any new tree or shrub planting must be carried out using native species appropriate for the local area. Suitable species include:

Oak	*Quercus robur*
Ash	*Fraxinus excelsior*
Field maple	*Acer campestre*
Hazel	*Corylus avellana*
Hawthorn	*Crataegus monogyna*
Blackthorn	*Prunus spinosa*
Holly	*Ilex aquifolium*
Dogwood	*Cornus sanguinea*
Spindle	*Euonymus europaeus*
Guelder rose	*Viburnum opulus*
Wild cherry	*Prunus avium*
Wild privet	*Ligustrum vulgare*

- Any new planting scheme should include 'butterfly borders' of nectar rich plants to attract butterflies and moths; http://www.butterfly-conservation.org/text/4818/gardening.html.

- Wood or brash piles could be created for reptiles, amphibians and hedgehogs in the garden.

- The bird nesting potential of the site could be improved by additional tree planting and/or by attaching appropriate nesting boxes on the north or east sides of the trees/building (e.g. Vivara Pro WoodStone House Sparrow Nest Boxes, Vivara Pro WoodStone 32mm Nest Boxes and Vivara Pro WoodStone 28mm Nest Boxes).

7 References

ARG UK (2010). *ARG Advice Note 5: Great Crested Newt Habitat Suitability Index.*

Chartered Institute of Ecology and Environmental Management (2015). *Guidelines for Ecological Report Writing*. CIEEM, Winchester.

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

Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland.

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

Gent, A. H. & Gibson, S.D. (1998). *Herpetofauna Workers' Manual*. JNCC, Peterborough.

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

Langton, T., Beckett, C. and Foster, J. (2001). *Great Crested Newt Conservation Handbook*. Froglife, Suffolk.

Cresswell, W. and Whitworth, R., 2004. *An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt* Triturus cristatus. English Nature Research Report R576.

National Planning Policy Framework (2012). Department for Communities and Local Government.

Natural Environment White Paper (2011). *The Natural Choice: Securing the Value of Nature*.

Neal, E., & C. Cheeseman (1996). Badgers. T & AD Poyser Natural History Ltd, London

Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora

English Nature, (1994) Species Conservation Handbook. English Nature, Peterborough.

Froglife Advice Sheet 10 'Reptile Survey – An introduction to planning, conducting and interpreting surveys for snake and lizard conservation' Nov 1999.

Gent, T. and Gibson, S. (eds) (1998). Herpetofauna Workers' Manual. Joint Nature Conservation Committee, Peterborough

Joint Nature Conservation Committee (2006). UK Biodiversity Action Plan.

Natural England (2011). Standing Advice Species sheet: Badgers. Natural England, Peterborough.

Natural England (2011). Standing Advice Species sheet: Bats. Natural England, Peterborough.

Natural England (2011). Standing Advice Species sheet: Breeding Birds. Natural England, Peterborough.

Natural England (2011). Standing Advice Species sheet: Dormouse. Natural England, Peterborough.

Natural England (2011). Standing Advice Species sheet: Reptiles. Natural England, Peterborough.

Statutory Instrument 490 (2010). The Conservation of Habitats and Species Regulations 2010. The Stationary Office Limited.

Statutory Instrument 1151. The Wildlife and Countryside Act 1981 (Variation of Schedule 4) Order 1994. (1994). The Stationary Office Limited.

The Countryside and Rights of Way Act (2000). Her Majesty's Stationary Office.

8 Appendix 1

Thames Valley
Environmental Records Centre

TVERC

Enabling data-driven decisions to better enhance and protect our natural environment

BIODIVERSITY REPORT

Site: Mawles Farm, Sibford Gower, Banbury, Oxfordsh

TVERC Ref: TVERC/19/318

Prepared for: Ridgeway Ecology Ltd

On: 09/09/2019

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

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 1km search area
- ☑ Species status key
- ☑ Data origin key

DESIGNATED WILDLIFE SITE INFORMATION:

There are no designated wildlife sites within 1km search area

TERMS AND CONDITIONS

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

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.

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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: [redacted]

For road traffic accident records: [redacted]

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) You can use the following email contacts chairman@oos.org.uk (the chairman) and 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
Birds									
Branta leucopsis	Barnacle Goose	BirdsDir-A1			Bird-Amber	13/05/2000	13/05/2000	1	3
Cygnus olor	Mute Swan				Bird-Amber	15/12/1982	15/06/2002	12	5
Anser anser	Greylag Goose				Bird-Amber	03/11/2003	03/11/2003	1	1
Anas crecca	Teal				Bird-Amber	25/12/1982	25/12/1982	1	2
Anas platyrhynchos	Mallard				Bird-Amber	17/08/1982	11/10/2000	3	104
Aythya ferina	Pochard				Bird-Red	17/08/1982	28/08/1982	2	4
Perdix perdix	Grey Partridge			NERC-S41	Bird-Red	09/08/1988	11/06/1999	12	10
Coturnix coturnix	Quail		WACA-Sch1-p1		Bird-Amber	15/07/1983	07/11/1997	6	1
Milvus milvus	Red Kite	BirdsDir-A1	WACA-Sch1-p1		RL-Global-post2001-NT	03/08/2007	30/07/2010	2	1
Falco tinnunculus	Kestrel				Bird-Amber	09/05/1988	11/04/2011	8	3
Falco columbarius	Merlin	BirdsDir-A1	WACA-Sch1-p1		Bird-Red	03/06/1992	03/06/1992	1	1
Falco subbuteo	Hobby		WACA-Sch1-p1			22/08/1987	09/01/2000	4	1
Pluvialis apricaria	Golden Plover	BirdsDir-A1				01/05/1986	01/05/1986	1	9
Gallinago gallinago	Snipe				Bird-Amber	17/08/1990	01/11/2009	4	2
Larus canus	Common Gull				Bird-Amber	26/01/1982	23/02/1997	5	344
Chroicocephalus ridibundus	Black-headed Gull				Bird-Amber	23/05/1982	23/05/1982	1	62
Streptopelia turtur	Turtle Dove			NERC-S41	Bird-Red	14/05/1991	05/12/1996	2	1
Cuculus canorus	Cuckoo			NERC-S41	Bird-Red	05/05/1999	24/04/2002	2	2
Tyto alba	Barn Owl		WACA-Sch1-p1			11/10/1984	11/10/1984	1	1
Strix aluco	Tawny Owl				Bird-Amber	31/03/2004	23/11/2004	2	1
Apus apus	Swift				Bird-Amber	22/08/1990	2018	40	7
Alcedo atthis	Kingfisher	BirdsDir-A1	WACA-Sch1-p1		Bird-Amber	09/03/1998	20/11/1999	4	1
Dendrocopos minor	Lesser Spotted Woodpecker			NERC-S41	Bird-Red	13/04/1985	01/12/1993	3	1
Locustella naevia	Grasshopper Warbler			NERC-S41	Bird-Red	15/06/1995	15/06/1995	1	1
Alauda arvensis	Skylark			NERC-S41	Bird-Red	28/02/2000	28/02/2000	1	2
Delichon urbicum	House Martin				Bird-Amber	25/09/2000	07/10/2016	2	20
Anthus pratensis	Meadow Pipit				Bird-Amber	25/09/1998	27/09/2000	3	4
Motacilla flava	Yellow Wagtail			NERC-S41	Bird-Red	08/02/1990	08/02/1990	1	1
Motacilla cinerea	Grey Wagtail				Bird-Red	14/11/1988	28/10/2007	11	6
Turdus pilaris	Fieldfare		WACA-Sch1-p1		Bird-Red	03/08/1992	15/12/2002	7	500
Turdus iliacus	Redwing		WACA-Sch1-p1		Bird-Red	21/09/2000	25/02/2007	2	125
Muscicapa striata	Spotted Flycatcher			NERC-S41	Bird-Red	07/03/1998	07/10/2016	5	3
Poecile montana	Willow Tit			NERC-S41	Bird-Red	21/01/1988	22/10/1995	3	1
Poecile palustris	Marsh Tit			NERC-S41	Bird-Red	22/01/1989	13/03/2011	5	2

Taxon Name	Common Name	European Directives	UK Legislation	NERC s41	Other Designations	Earliest Record	Latest Record	No. of Records	Max. Abundance
Passer domesticus	House Sparrow			NERC-S41	Bird-Red	07/06/1999	02/01/2000	4	32
Passer montanus	Tree Sparrow			NERC-S41	Bird-Red	24/01/1988	29/03/2006	8	10
Emberiza citrinella	Yellowhammer			NERC-S41	Bird-Red	01/07/1996	15/03/2008	3	50
Emberiza schoeniclus	Reed Bunting			NERC-S41	Bird-Amber	05/05/1999	05/07/2006	9	4
Emberiza calandra	Corn Bunting			NERC-S41	Bird-Red	23/03/1996	15/03/2008	7	70
Higher Plants - Flowering Plants									
Hyacinthoides non-scripta	Bluebell		WACA-Sch8			06/02/2016	06/02/2016	1	Present
Ranunculus flammula	Lesser Spearwort				RL-Eng-post2001-VU	06/02/2016	06/02/2016	2	Present
Plantago media	Hoary Plantain				RL-Eng-post2001-NT	20/07/1990	20/07/1990	1	Present
Salvia verbenaca	Wild Clary				RL-Eng-post2001-NT	20/07/1990	20/07/1990	1	Present
Tilia platyphyllos	Large-leaved Lime				Status-NS	27/05/1991-15/09/1991	27/05/1991-15/09/1991	1	Present
Invertebrates - Butterflies									
Thecla betulae	Brown Hairstreak		WACA-Sch5-s9.5a	NERC-S41	RL-GB-post2001-VU	13/09/2002	13/09/2002	1	2
Mammals - Terrestrial (bats)									
Rhinolophus hipposideros	Lesser Horseshoe Bat	HabDir-A2np HabDir-A4	HabReg-Sch2 WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b	NERC-S41		22/05/2017	22/05/2017	1	Present
Myotis	Unidentified Bat	HabDir-A2np HabDir-A4	HabReg-Sch2 WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b	NERC-S41	RL-Global-post2001-NT	01/05/2017-30/06/2017	01/05/2017-30/06/2017	1	Present
Pipistrellus	Pipistrelle Bat species	HabDir-A4	HabReg-Sch2 WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b	NERC-S41		30/07/2014	30/07/2014	1	Present
Pipistrellus pipistrellus	Common Pipistrelle	HabDir-A4	HabReg-Sch2 WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b			01/05/2017-30/06/2017	01/05/2017-30/06/2017	1	4
Pipistrellus pygmaeus	Soprano Pipistrelle	HabDir-A4	HabReg-Sch2 WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b	NERC-S41		01/05/2017-30/06/2017	01/05/2017-30/06/2017	1	Present
Plecotus auritus	Brown Long-eared Bat	HabDir-A4	HabReg-Sch2 WACA-Sch5-s9.4b/s9.4c/s9.5a/s9.5b	NERC-S41		01/05/2017-30/06/2017	01/05/2017-30/06/2017	1	1
Mammals - Terrestrial (excl. bats)									
Meles meles	Eurasian Badger		Badgers-1992			17/06/1994	12/03/2014	3	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:

HabDir-A2	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.
HabDir-A2np	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.
HabDir-A4	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.
HabDir-A5	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)

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Thames Valley
Environmental Records Centre

TVERC is hosted by Oxfordshire County Council

Schedule 5 Wild Animals

WACA-Sch5-s9.1	Covers intentionally killing, injuring or taking any wild animal included in Schedule 5
WACA-Sch5-s9.1k	Covers animals which are protected from intentional killing or injuring.
WACA-Sch5-s9.1t	Covers animals which are protected from taking.
WACA-Sch5-s9.2	Covers animals which are protected from being possessed or controlled (live or dead).
WACA-Sch5-s9.4a	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.
WACA-Sch5-s9.4b	Covers animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.
WACA-Sch5-s9.4c	Covers animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.
WACA-Sch5-s9.5a	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.
WACA-Sch5-s9.5b	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 (MARCH 2019)

Data Origin Abbreviation	Origin Details
ABFG	Association of British Fungus Groups
AC	Academic Researcher
AN	Abingdon Natural History Society
ANHSO	Ashmolean Natural History Society (& Rare Plant Group)
ARC	Amphibian & Reptile Conservation
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)
BCYS	Berkshire Churchyards Surveys
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
CalRS	National Calliphoridae Recording Scheme
CBT	Childe Beale Trust
CDC	Cherwell District Council
COS	County Ornithological Services (also known as BCS)
CPRE	Campaign to Protect Rural England
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
FoLV	Friends of Lye Valley
FOTTG	Friends of the Trap Grounds

DATA ORIGIN KEY (MARCH 2019)

Data Origin Abbreviation	Origin Details
FROG	Froglife
FSO	Fungus Survey of Oxfordshire
FWAG	Farmland Wildlife Advisory Group
GCER	Gloucestershire Centre for Environmental Records
GCN	GCN Licence Return Records
HA	Highways Agency
HWMT	Hurst Water Meadows Trust
ICL	Imperial College London
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
NPMS	National Plant Monitoring Scheme
NRG	Newbury Ringing Group
NSP	NatureSpace Partnership
NT	National Trust
OBadG	Oxfordshire Badger Group
OBG	Oxfordshire Bat Group
OBRC	Oxfordshire Biological Record Centre
OBU	Oxford Brookes University
OCC	Oxfordshire County Council
OCYS	Oxfordshire Churchyard Survey
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.)

DATA ORIGIN KEY (MARCH 2019)

Data Origin Abbreviation	Origin Details
PTES	People's Trust for Endangered Species
RBC	Reading Borough Council
RBWM	Royal Borough of Windsor & Maidenhead
RDNHS	Reading and District natural History Society
RF	Richard Frankum
RM	Reading Museum
RRS	Riverfly Recording Scheme
RSPB	Royal Society for the Protection of Birds
RTCT	River Thame Conservation Trust
RUWG	Reading Urban Wildlife Group
RWP	Reading Woodlands Plan
SARS	Soldierflies and Allies Recording Scheme
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