

26 SEP 2023

Received



Herdwick Ecology

Preliminary Ecological Appraisal

**Land At And North Of 61 Siston Common Siston South Gloucestershire BS15
4PA**

For and on behalf Mr Chris Green

January 2023

Report Reference: 313/R1/2023/V1

Rev No.	Status	Author	Date
1	Draft for Review	CG	30/01/2023
1	Final	CG	11/02/2023

1.0 Introduction

1.1 Herdwick Ecology Ltd has been commissioned by Mr Chris Green to undertake a Preliminary Ecological Appraisal (PEA) at 61, Siston Common (Central Reference ST70569156) to inform proposals for a new two storey rear extension. The extension will extend into adjacent agricultural land and, therefore, the application also includes a change of use from agricultural land to 'Class 3 C3 private amenity space'.

1.2 A Biodiversity Report was requested by the South Gloucestershire Council planning registration team. This report has been prepared to support a full planning application and aims to:

- Describe and evaluate the habitats present within the study area;
- Collate relevant biological records and assess their significance;
- Identify any protected species issues or potential issues that may exist; and
- Assess possible ecological constraints to development and make recommendations to avoid, minimise and mitigate for any potential impacts; and
- Set out opportunities for net gain and ecological enhancements in line with relevant planning policy, legislation and other published guidance.

1.3 This report has been prepared by Ceri Griffiths, Director at Herdwick Ecology, who is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Reference is made to CIEEM Guidelines for Preliminary Ecological Appraisal¹ and BS 4202:2013 Biodiversity - Code of practice for planning and development².

2.0 Legislation and Planning Policies

2.1 In carrying out this assessment relevant legislation, planning policies, and best practice guidelines were consulted and include:

- Conservation of Habitats and Species Regulations 2017 (as amended);
- Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way (CROW) Act 2000;
- Natural Environment and Rural Communities (NERC) Act 2006;
- National Planning Policy Framework 2021 (NPPF);
- South Gloucestershire Local Planning Policies – Core Strategy and PSP Plan

National Planning Policy Framework (NPPF) 2021

2.2 National planning policy on biodiversity and conservation is set out in the National Planning Policy Framework (NPPF). This emphasises that the planning system should seek to minimise impacts on

¹ CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal* (2nd. Ed.) CIEEM

² BSI (British Standards Institute) BS4202:2013 *Biodiversity – A code of practice for planning and development*. BSI, London.

biodiversity and provide net gains in biodiversity wherever possible as part of the Government's commitment to halting declines in biodiversity and establishing coherent and resilient ecological networks. Chapter 15: Conserving and Enhancing the Natural Environment, is of particular relevance to this report as it relates to ecology and biodiversity. Relevant policies are set out below:

- 2.3 Paragraph 179: *"To protect and enhance biodiversity and geodiversity, plans should: a) Identify, map and safeguard components of local wildlife-rich habitats and wider 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 national and local partnerships for habitat management, enhancement, restoration or creation; and b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity..."*
- 2.4 Paragraph 180 states: "When determining planning applications, local planning authorities should apply the following principles:
- a) *'if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts) adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused'*
 - b) Relates to developments affecting SSSI
 - c) Relates to developments affecting irreplaceable habitats, such as ancient woodland
 - d) *'Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity'.*
- 2.5 The Government Circular 06/2005, which is referred to by the NPPF, provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.
- 2.6 The above approach encapsulates the 'mitigation hierarchy' described in British Standard BS 42020:2013, which involves the following step-wise process:
- Avoidance – avoiding adverse effects through good design;
 - Mitigation – where it is unavoidable, mitigation measures should be employed to minimise adverse effects;
 - Compensation – where residual effects remain after mitigation it may be necessary to provide compensation to offset any harm; and
 - Enhancement – planning decisions often present the opportunity to deliver benefits for biodiversity, which can also be explored alongside the above measures to resolve potential adverse effects.

- 2.7 The measures for avoidance, mitigation, compensation, and enhancement should be *'proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development'*

Environment Bill

- 2.8 The Environment Bill received Royal Assent on 9th November 2021, becoming the Environment Act; this includes the provision of biodiversity gain for developments in England, which will be mandated through an amendment to the Town and Country Planning Act 1990. The two-year transition period that follows Royal Assent means that mandatory biodiversity gain will become law in autumn 2023. Whilst there is a transition period, the BNG principles are set out in the NPPF and the use of the DEFRA metric can be the most effective way of demonstrating a net gain.

Local Plan

Local Planning Policies

- 2.9 The South Gloucestershire Council Core Strategy document (2006 -2027) sets out a vision for future development in South Gloucestershire to 2027. Of relevance to this application are:

- Policy C2 Green Infrastructure – point 4 of which states an objective for *'..protecting and enhancing species and habitats, and creating new habitats and wildlife linkages between them*
- Policy CS9 Managing the Environment and Heritage of which point 3 sets out the require to conserve and enhance the natural environment to minimise impacts to biodiversity
- PSP19 Wider Biodiversity - South Gloucestershire Local Plan, which sets out the requirement to protect habitats and species of note.

- 2.10 In addition, SGC have recently published a draft SPD that sets out further guidance for development. This SPD *'provides information to support existing Local Plan policies to ensure that biodiversity is adequately conserved, enhanced and achieves a measurable Biodiversity Net Gain (BNG) throughout the development process, taking account of the emerging legislative framework set by the Environment Act (2021). In particular, it sets out how the council is seeking to encourage a 10% Biodiversity Net Gain from appropriate developments following the introduction of the Environment Act in November 2021, which will eventually become mandatory in November 2023'*.

Species Protection

- 2.11 All species of bat found in the UK are listed under Schedule 5 of The Wildlife and Countryside Act 1981 (as amended) and are afforded protection under Section 9(4) (b&c) and Section 9(5) of Part 1 of the Act.
- 2.12 Under this legislation, a person is guilty of an offence if a person intentionally or recklessly:
- disturbs any bat while it is occupying a structure or place which it uses for shelter or protection;

- obstructs access to any structure or place which any bat uses for shelter or protection.
- In addition the protection afforded through UK legislation, further protection is provided to a small group of species, commonly referred to as 'European Protected Species' under the Conservation of Habitats and Species 2017 (as amended) (also known as the Habitats Regulations).

2.13 With regards to European Protected Species listed under Schedule 2 of the Act, it is an offence to:

- Intentionally or deliberately capture or kill, or intentionally injure the animal;
- Deliberately disturb the animal or intentionally or recklessly disturb them in a place used for shelter or protection;
- Damage or destroy a breeding site or resting place;
- Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection.

2.14 The NERC Act also listed species of principle importance under Section 41 of the Act. This places further duties on the LPA to have due regard for the conservation of these species, such as hedgehog or certain bird species, which may be present on-site.

3.0 Methodology

Data Search

3.1 A data search was undertaken to look for designated sites and records of protected and notable species. This can provide important contextual information to gain an understanding of the site and surrounds. Online sources were reviewed, such as MAGIC³ and NBN Gateway⁴. In addition, the South Gloucestershire Council planning portal was reviewed for nearby applications that may have been supported by detailed ecological surveys.

3.2 A data search from the local records centre has not be undertaken to inform this appraisal.

Preliminary Ecological Appraisal

3.3 The site was surveyed on 9th January 2023 by Ceri Griffiths, Director of Herdwick Ecology, with full membership of Chartered Institute of Ecology and Environmental Management (CIEEM) and a Natural England bat and great crested newt licence holder. Weather conditions were dry, overcast with a temperature of 7°C. Habitats and obvious features within the site were assessed following the Joint Nature Conservation Committee's Phase 1 Habitat Survey Method⁵ (JNCC, 2010) as amended in 1995

³ <https://magic.defra.gov.uk/>

⁴ <https://nbnatlas.org/>

⁵ JNCC 2010. *Handbook for Phase 1 Habitat Survey*. Joint Nature Conservation Committee, Peterborough

by the Institute of Environmental Assessment⁶ (IEA, 1995) and also classified under the UKHab criteria to inform the Biodiversity Net Gain calculations. The potential for the site to support protected or notable species was also assessed.

- 3.4 Where access allowed, adjacent habitats were also considered in order to assess the site within the wider landscape, and to provide information with which to assess possible impacts of the proposed development.

Preliminary Roost Assessment

- 3.5 The perimeter of the building was systematically inspected, and the exterior assessed, with the aid of binoculars (Pentax 10 X 36), endoscope and high powered torch, where necessary. A description of the building was made, and the location of any potential access points or roost locations were noted. These included:

- Suitable cracks and crevices within stone or brick work;
- Suitable access points via head of gable end and within lintels and gaps around windows

- 3.6 The surrounding habitat was also assessed for its suitability for foraging and commuting quality.
- 3.7 Following the inspection, an assessment was made of the building's suitability to support a bat roost, following the criteria set out in Table 1 below.

Table 1 Suitability Assessment⁷

Suitability	Roosting Habitat
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats
Moderate	A building with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status
High	A building with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

- 3.8 In many situations it is not possible to inspect all locations where bats may be present, or any bats that may be present, may not be visible at the time of the survey. Hence, an absence of bats does not

⁶ IEA 2015 *Guidelines for Baseline Ecological Assessment* Institute of Environmental Assessment

⁷ Collins, J (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd. Ed.) The Bat Conservation Trust, London (p.35)

necessary mean that a roost is not present and further activity surveys may be required to confirm presence or absence.

4.0 Baseline Conditions

Site Location



Plate 1: Site location with red arrow illustrating 61, Siston Common (Google, January 2023)

- 4.1 The site is located on the eastern edge of Bristol within Siston Common. The A4174 ring road lies 70m to the east with the Bristol & Bath Railway Path siting in between. Despite the proximity to Bristol and the ring road, the site is partially rural being separated from the suburbs of the city. It is immediately surrounded by the Common that comprises grassland, scrub and small parcels of woodland. The highways shelter belt planting is also well established. The A4174 dual carriageway is likely to provide a significant barrier to movement of certain species.

Data Search

Designated Sites

- 4.2 There are no statutory designated site within 2km of the site boundary. The closest Site of Special Scientific Interest (SSSI) is the Cleeve Hill SSSI that lies 4.2km to the south. This site is designated for its woodland habitat and large population of Bath asparagus *Ornithogalum pyrenaicum*. There are no Internationally designated sites (Special Areas of Conservation (SAC), Special Protection Area (SPA)/Ramsar) within 10km of the site.

Non Statutory Sites

- 4.3 The Siston Common South Site of Nature Conservation Interest (SNCI) borders the rear of the property and extends south and east, now fragmented by the A4174. This large local wildlife site is designated for its botanical, invertebrate and animal interest including slow-worm. Habitats within the SNCI include lowland heathland, unimproved grassland, unimproved and semi-improved neutral grassland.

Habitats

- 4.4 There are large parcels of Priority Habitat, identified via MAGIC, to the south and east of the site that are associated within Siston Common. These have been highlighted as lowland dry acid grassland. The grassland that borders the property to the north has not be identified as Priority Habitat, although may not have been included within the Common Land survey that was undertaken in 1991.
- 4.5 There are further parcel of deciduous woodland to the south and east, with small areas of lowland heath.
- 4.6 The site sits within the Network Enhancement Zone 1, which identifies land connecting existing patches of primary and associated habitats, and may be suitable for the creation of primary habitat. Targets for this zone include actions that expand and join up existing habitat patches and improve the connections between them.

Species

- 4.7 A waterbody is present to the east of the A4174 that lies 308m southeast of the site. The dual carriageway will likely prevent movement of species. A further waterbody is shown on OS maps that lies 160m to the southwest but this appears to be link to the Warmley Brook and may not be support great crest newts.
- 4.8 There is a single European Protected Species licences for great crested newt 3.3km north. In addition, there are two eDNA survey results from 2018 (3.8km north, 3.9km south) both of which returned a negative result for great crested newts.
- 4.9 There are no European Protected Species licences within 2km of the site. There are three licences from within the last 10 years:
- Common pipistrelle resting place (dated 2016-2016) 3.5km west
 - Serotine bat resting place (dated 2016-2022) 3.7km west
 - Brown long-eared bat, serotine and common pipistrelle resting place (dated 2012-2013) 4km south

Planning Applications within locality

- 4.10 Two planning applications that lie within close proximity to the site, were reviewed, with one immediately adjacent for two new residential units (PK16/2625/F). The Phase I and protected species survey (Chalkhill Environmental Consultants, 2014) assessed the grassland as improved with low potential for common species of reptiles. A subsequent application was submitted (P20/12945/F) for an additional dwelling to form an end terrace. It was noted within this application that the grassland to the rear had already been cleared.

Preliminary Ecological Appraisal and Roost Assessment

- 4.11 The site comprises an end terrace property with a garden and driveway to the front (southern) elevation. The grassland to the rear, considered to be agricultural, comprises a rough grassland with species including creeping bent *Agrostis stolonifera* Yorkshire fog *Holcus lanatus*, tussocks of cock's foot *Dactylis glomerata*, smooth meadow-grass *Poa pratensis*, perennial rye-grass *Lolium perenne*, areas of false oat grass *Arrhenatherum elatius* around periphery, common sorrel *Rumex acetosa*, ribwort plantain *Plantago lanceolata*, cleavers *Galium aparine*, dove's-foot crane's-bill *Geranium molle*, creeping buttercup *Ranunculus repens*, bramble *Rubus fruticosus* agg, nettle *Urtica dioica*, great willowherb *Epilobium hirsutum*, teasel *Dipsacus fullonum* and dandelion *Taraxacum officinale*.
- 4.12 Following a review of historical imagery, there had been some disturbance to the field during the construction of the A4174 and adjacent cycleway. The northern area appeared to have been used for storage of spoil, with the wider area used for access. As such, it may have been reseeded. Later imagery appears to show that the field was regularly mown, possibly for hay.
- 4.13 The grassland is considered to be semi-improved grassland (UkHab: 'other neutral grassland' with some scattered scrub with limited recent management g3c, 10, 80).
- 4.14 There are small patches scrub within the wider field that comprises hawthorn *Crataegus monogyna*, with young oak trees *Quercus robur* and dense bramble.

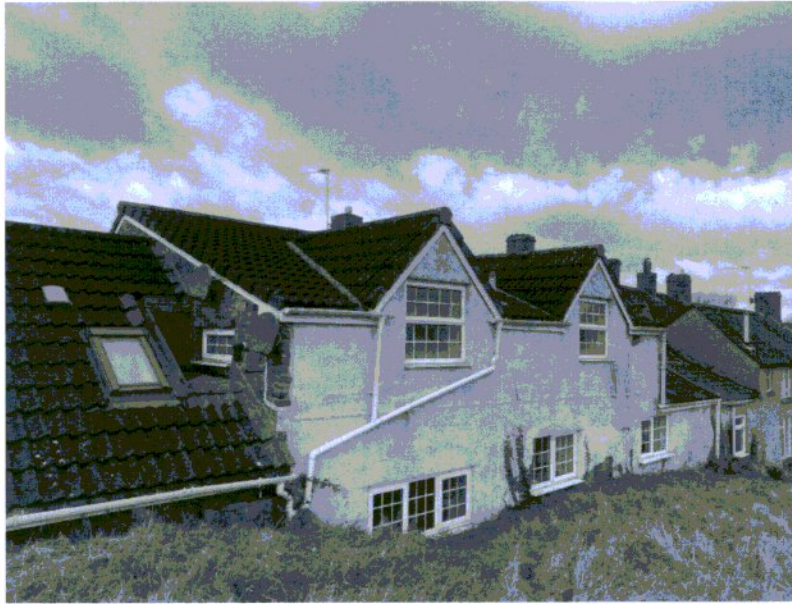


Plate 1: Rear of property showing area of proposed extension



Plate 2: Adjacent application showing clearance of grassland that extends some distance past the proposed extension.

Preliminary Roost Assessment

- 4.15 The building is a two storey stone and brick built building with render to the rear. It has a pitched double Roman clay tile roof with two dormer windows to both elevations.. There is a single storey extension to the eastern elevation with two skylights to the rear. A uPVC conservatory with a render block rear wall adjoins the eastern gable. A single chimney is present on the central southern elevation. Lead flashing is present within the valley of the dormer windows, at the base of the chimney and the join between the extension.

- 4.16 There are uPVC barge boards present around the building that are not flush with the wall, allowing access into the open eaves. The stonework and rendered is considered to be good condition with no 'Potential Roosting Features (PRF) noted. The tiles are also predominately well sealed but with occasional gaps noted along the gable ends.
- 4.17 Whilst an interior inspection was not undertaken – it is understood that there are two small roof voids – the exterior features, namely the lead flashing, gaps along the barge boards and occasional raised tile, the building is considered to offer high potential for bats.



Plate 3: Front (southern) elevation



Plate 4: Illustrating location of PRF

- 4.18 As such, further bat surveys will be required to ascertain whether a roost is present and, if so, the status of any such roost. Further information is provided below.

Other Species

- 4.19 The proposals will only result in the loss of a small strip of grassland and whilst the wider field and adjacent habitat may offer potential for a number of species, no further surveys – other than the aforementioned bat surveys – are required. Avoidance, mitigation and enhancement measures to be implemented are provided in Section 5 below.

5.0 Further Surveys

Bat Surveys – Presence/absence

- 5.1 Bat presence/absence surveys are required to determine whether a roost is present. The surveys should be undertaken during the active season, which is considered to be May to August for maternity roosts. Up to three surveys will be required as the external features are considered to have high potential, and will be spaced at least two weeks apart. The surveys will be undertaken by suitably experienced ecologists, with the use of thermal or infra-red cameras, who will position themselves around the property to look for bats emerging at dusk or returning at dawn. These surveys will ascertain whether a roost is present and if so the type and status of the roost, together with the location of the access points.
- 5.2 Should a bat roost be identified, then mitigation will need to be incorporated into the proposals. Whilst the mitigation will be dependent on the roost type and status, this could include the re-creation of bat access tiles and/or built-in bat tubes that can be installed into the gable ends. If a roost is present, the Type 1F bitumen flet should be used, or a BRM approved by Natural England, such as TLX batsafe.

6.0 Avoidance, Mitigation and Enhancement Measures

- 6.1 In line with National and Local planning policies, developments should seek to ensure the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species populations. Therefore the following section sets out avoidance and mitigation measures that should be implemented, together with enhancement opportunities, with the aim of delivering a net gain in biodiversity. The proposed are illustrated in the accompanying planning drawings (Cox Architectural Consultancy Ltd Drawing Ref: CC/03 & 07 dated Sept 22 & Nov 22)

Avoidance and Protection of Features

Siston Common SNCI

- 6.2 The boundary of the Siston Common SNCI runs close to the edge of the rear of the property, although is slightly offset. The survey did not identify any species indicative of a more diverse grassland or those meeting the criteria for the SNCI or priority habitat. It is of note that the adjacent application has already

removed a proportion of the grassland to allow for the development and creation of gardens. The Proposed Development will extend to a similar distance into the existing field but will not be as wide. The field is now within the applicant's ownership and they are keen to enhance the boundaries of the field through the planting of a species rich native hedgerow and additional seeding of a section of the field to improve species diversity in keeping with the nearby priority habitats and SNCI citation.

- 6.3 As such, it is considered that there will be no net loss of biodiversity or habitats within the SNCI and there are opportunities for wider ecological enhancement, as set out below.

Mitigation Measures

- 6.4 The requirement for specific mitigation for bats will be dependent on the outcome of the surveys.
- 6.5 Given the small scale of the proposed development, there are minimal mitigation requirements but following measures should be implemented, if applicable:
- The lighting design will need to be sensitively designed and should adhere to the principles set out in the ILP Guidance Note 08/18 Bats and artificial lighting in the UK to minimise light spill across the field, boundary features and neighbouring properties.
 - The site clearance should not impact on any habitats that support nesting birds but as an informative, any vegetation removal suitable for nesting birds must avoid the breeding bird season, which generally runs from March to August. If works are to be undertaken during this time then a check for breeding birds should be undertaken by an experienced ecologist prior to works starting. If an active nest is found then works will need to wait until the chicks have fledged.
 - Foundation trenches and all excavations must either be covered overnight or must have scaffolding boards, or similar, placed within them to ensure that any animals that fall in are able to escape.
 - Raise stored materials (that might act as temporary resting places for species such as amphibians and reptiles) off the ground, e.g. on pallets.
 - Should any fencing be installed, occasional gaps must be left at the base (130 x 130mm) to allow movement of hedgehogs.

Enhancement Opportunities

- 5.4 The proposed development should seek to achieve a net gain in biodiversity in line with National and Local planning policies. The following could be incorporated into the design:
- Bat and bird boxes could be installed on the rear of the building. They should be positioned as high as possible on the building, overlooking the adjacent vegetation.

- Habitat boxes or log piles for invertebrates, hedgehogs and reptiles could be placed within the blue line ownership boundary to provide further opportunities for species

5.5 Whilst bat presence/absence surveys are required, appropriate mitigation can be incorporated into the design. Therefore, taking the above into account, no ecological constraints have been identified and hence it is considered the proposed development will not contravene the local planning policies and will seek to deliver a net gain in biodiversity in line NPPF.