



Ecological Impact Assessment

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Sayers Common

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Report	Ecological Impact Assessment (EclA)
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Executive Summary

Ecosupport Ltd was instructed by Riverdale Developments Limited to conduct ecological surveys in support of an EclA of a parcel of land at Westhouse Farm, Sayers Common, Hassocks. This was required in order to identify any potentially important ecological features that may be affected by the proposed development. As part of this assessment, the following surveys were undertaken:

- 2km desktop search submitted to Thames Valley Environmental Records Centre (TVERC) (December 2024)
- Walkover survey assigning UK Habs habitat types and assessing for protected / notable species suitability (November 2024)
 - Updated Walkover Survey (May 2025)
- Bat emergence survey of the building present on site (May - June 2025)
- Habitat Suitability Index (HSI) Assessment (February 2025)

The following ecological constraints have been identified within the site:

- Low potential for foraging and commuting bats
- Potential for foraging and commuting Badgers
- Low potential for reptiles in retained habitat
- Low potential for Great Crested Newts in retained habitat
- Moderate potential for breeding and nesting birds in retained habitat
- Low potential for Hedgehog

Measures for mitigation, compensation and ecological enhancements are proposed in **Section 6.0** to ensure there will be no residual adverse impacts and to ensure the proposed development will result in a net gain for biodiversity.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was commissioned by Riverdale Developments Limited to conduct an Ecological Impact Assessment (EclA) of a residential parcel of land at Westhouse Farm, Sayers Common, Hassocks (here after referred to as 'the site'). The purpose of this survey was to assess any ecological impacts that may arise as a result of a proposed residential development. The objectives of the survey were as follows:

- Identify and classify any priority habitats;
- Assess the ecological value of the site;
- Identify any signs of protected species and potential features that may support them
- Make recommendations for further survey work as necessary;
- Make recommendations for any necessary ecological avoidance and mitigation where possible.

NB. If the works do not take place within 18 months of this report¹ then the findings of this survey will no longer be considered valid and certain aspects may require updating.

1.2 Site Description & Location

The site comprises the residential dwelling, garden, access track and a small parcel of woodland at Westhouse Farm, Sayers Common, BN6 9DE (centred on OS grid reference TQ 25798 16903) (**Fig 1**). The site is bound by large fields of modified grassland, some of which are used for grazing horses, with hedgerows present. Along the eastern boundary, the site is bound by Henfield Road (B2116). The surrounding environment consists of agricultural fields and occasional areas of developed land, with the village Albourne situated southeast and Sayers Common situated northeast.

¹ <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>

2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

2.1.1 *The Environment Act (2021)*

The Environment Act 2021 is the UK's new legislation for environmental protection in the UK, which includes protection of water quality, clean air, and biodiversity among other key protections. This Act provides the government power to set targets to reach long-term aims relating to the environment, which will be periodically reviewed and updated. This legislation also establishes a new environmental watchdog organisation, the Office for Environmental Protection (OEP), which will hold the government accountable on environmental issues.

Part 6 of The Environment Act relates to nature and biodiversity. This section makes provision for biodiversity net gain to be a condition of planning permission in England and a requirement for nationally significant infrastructure projects. Biodiversity net gain will require maintenance for a period of at least 30 years after the completion of enhancement works to be achieved.

The legislation also includes updates to existing environmental legislation, such as the NERC Act 2006, to strengthen biodiversity enhancement rather than just conservation and includes a requirement for local, or relevant, authorities to publish biodiversity reports. Further, The Environment Act places a requirement on responsible authorities to prepare local nature recovery strategies, which will outline nature conservation sites and priorities and opportunities for recovering or enhancing biodiversity within the local area. Within England, the legislation also provides Natural England with the power to publish 'species conservation strategies' and 'protected site strategies' to identify activities that may affect a species or site's status and outline their opinions on measures that would be appropriate to avoid, mitigate or compensate any adverse impacts.

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

The Conservation of Habitats and Species Regulations 2017 transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way that is likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

The Conservation of Habitats and Species Regulations 2019 (EU Exit) makes changes to the three existing instruments which transpose the Habitats and Wild Birds Directives so that they continue to work (are operable) upon the UK's exit from the European Union (EU). These include The Conservation of Habitats and Species Regulations 2017 and The Conservation of Offshore Marine Habitats and Species Regulations 2017. This instrument also amends section 27 of the Wildlife and Countryside Act 1981 to ensure existing protections continue. The intention is to ensure habitat and species protection and standards as set out under the Nature Directives are implemented in the same way or an equivalent way when the UK exits the EU.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from Natural England.

2.1.3 The Wildlife and Countryside Act (1981) (as amended)

This is the primary piece of legislation by which biodiversity is protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost. Similarly, this Act makes it an offence to kill or injure any species of British reptiles and also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built).

The Wildlife & Countryside Act (1981) states that it is an offence to ‘plant or otherwise cause to grow in the wild’ any plant listed in Schedule 9 part II of the Act. This list over 30 plants including Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Parrot's Feather (*Myriophyllum aquaticum*).

2.1.4 The Countryside and Rights of Way Act (2000)

This Act strengthens the Wildlife & Countryside Act by the addition of “reckless” offences in certain circumstances, such as where there is the likelihood of protected species being present. The Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.5 Natural Environment and Rural Communities Act (2006)

The Natural Environment and Rural Communities (NERC) Act 2006 requires that public bodies have due regard to the conservation of biodiversity. This means that Planning authorities must consider biodiversity when planning or undertaking activities. Section 41 of the Act lists species found in England which were identified as requiring action under the UK Biodiversity Action Plan and which continue to be regarded as conservation priorities under the *UK Post – 2010 Biodiversity Framework*.

2.1.6 Protection of Badgers Act

The Protection of Badgers Act (1992) relates to the welfare of Badgers (*Meles meles*) as opposed to nature conservation considerations. The Act prevents:

- The wilful killing, injury, ill treatment or taking of Badgers and / or
- Interference with a Badger sett
- Damaging or destroying all or part of a sett
- Causing a dog to enter a set and
- Disturbing a Badger while it is occupying a sett

Provisions are included within the Act to allow for the lawful licensing of certain activities that would otherwise constitute an offence under the Act.

2.2 Policy

2.2.1 National Planning Policy Framework (NPPF) 2024

The National Planning Policy Framework (NPPF) (2024) sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

Chapter 15 'Conserving and enhancing the natural environment' states that planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing sites of biodiversity, the wider benefits from natural capital and ecosystem services, minimising impacts on and minimising impacts on and providing net gains for biodiversity including by incorporating features which support priority or threatened species such as swifts, bats and hedgehogs.

The NPPF states that plans should distinguish between the hierarchy of international, national and locally designated sites and land should be allocated with the least environmental or amenity value and take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure for the enhancement of natural capital at a catchment or landscape scale.

To protect and enhance biodiversity, plans should 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 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.

The NPPF states 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) development on land within or outside a SSSI, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSIs;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists;

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Potential SPAs and possible SACs listed or proposed Ramsar sites and sites required as compensatory measures for the previous should be given the same protection as habitats sites.

2.2.2 Local – Mid Sussex District Council (2018)

Adopted in March 2018 the District Plan states nearly 50% of the District is within the High Weald Area of Outstanding Natural Beauty, and over 10% is within the South Downs National Park. Mid Sussex is the tenth most wooded District in the South East and two-thirds of this woodland is classified as 'ancient'. It also has many sites valued for their biodiversity including Sites of Special Scientific Interest, Sites of Nature Conservation Importance, Local Nature Reserves and Biodiversity Opportunity Areas.

Strategic Objectives to protect and enhance the environment include:

1. To promote development that makes the best use of resources and increases the sustainability of communities within Mid Sussex, and its ability to adapt to climate change
2. To promote well located and designed development that reflects the District's distinctive towns and villages, retains their separate identity and character and prevents coalescence
3. To protect valued landscapes for their visual, historical and biodiversity qualities
4. To protect valued characteristics of the built environment for their historical and visual qualities
5. To create and maintain easily accessible green infrastructure, green corridors and spaces around and within the towns and villages to act as wildlife corridors, sustainable transport links and leisure and recreational routes
6. To ensure that development is accompanied by the necessary infrastructure in the right place at the right time that supports development and sustainable communities. This includes the provision of efficient and sustainable transport networks

DP37: Trees, Woodland and Hedgerows

The District Council will support the protection and enhancement of trees, woodland and hedgerows, and encourage new planting. In particular, ancient woodland and aged or veteran trees will be protected.

Development that will damage or lead to the loss of trees, woodland or hedgerows that contribute, either individually or as part of a group, to the visual amenity value or character of an area, and/ or that have landscape, historic or wildlife importance, will not normally be permitted.

Proposals for new trees, woodland and hedgerows should be of suitable species, usually native, and where required for visual, noise or light screening purposes, trees, woodland and hedgerows should be of a size and species that will achieve this purpose.

Trees, woodland and hedgerows will be protected and enhanced by ensuring development:

- incorporates existing important trees, woodland and hedgerows into the design of new development and its landscape scheme; and
- prevents damage to root systems and takes account of expected future growth; and
- where possible, incorporates retained trees, woodland and hedgerows within public open space rather than private space to safeguard their long-term management; and
- has appropriate protection measures throughout the development process; and
- takes opportunities to plant new trees, woodland and hedgerows within the new development to enhance on-site green infrastructure and increase resilience to the effects of climate change; and
- does not sever ecological corridors created by these assets.

Trees, woodland and hedgerows form part of the District's green infrastructure, and in particular, are important for health and well-being, biodiversity, and increasing resilience to the effects of climate change. Ancient woods are irreplaceable wildlife habitats with complex ecological conditions that have developed over centuries. They contain a wide range of wildlife including rare species, however, because the resource is limited and highly fragmented, ancient woodland and their associated wildlife are particularly vulnerable and must be protected from damaging effects of adjacent and nearby land uses that could threaten the integrity of the habitat and survival of its special characteristics.

The District Plan recognises this contribution and will support the protection of trees, woodland and hedgerows, as well as encouraging new planting. Development will be required to incorporate trees, woodland and hedgerows into the design and landscaping scheme.

All hedgerows on farmland and open land are protected and consent is required from the District Council to remove them. The Hedgerow Regulations 1997 also define 'important' hedgerows as being of particular archaeological, historical, wildlife or landscape value.

DP38: Biodiversity

Biodiversity will be protected and enhanced by ensuring development:

- Contributes and takes opportunities to improve, enhance, manage and restore biodiversity and green infrastructure, so that there is a net gain in biodiversity, including through creating new designated sites and locally relevant habitats, and incorporating biodiversity features within developments; and
- Protects existing biodiversity, so that there is no net loss of biodiversity. Appropriate measures should be taken to avoid and reduce disturbance to sensitive habitats and species. Unavoidable damage to biodiversity must be offset through ecological

enhancements and mitigation measures (or compensation measures in exceptional circumstances); and

- Minimises habitat and species fragmentation and maximises opportunities to enhance and restore ecological corridors to connect natural habitats and increase coherence and resilience; and
- Promotes the restoration, management and expansion of priority habitats in the District; and
- Avoids damage to, protects and enhances the special characteristics of internationally designated Special Protection Areas, Special Areas of Conservation; nationally designated Sites of Special Scientific Interest, Areas of Outstanding Natural Beauty; and locally designated Sites of Nature Conservation Importance, Local Nature Reserves and Ancient Woodland or to other areas identified as being of nature conservation or geological interest, including wildlife corridors, aged or veteran trees, Biodiversity Opportunity Areas, and Nature Improvement Areas. Designated sites will be given protection and appropriate weight according to their importance and the contribution they make to wider ecological networks.

Policy DP38 'Biodiversity' reflects the requirements of the National Planning Policy Framework (section 11) where it relates to biodiversity and the natural environment. It takes into account the duty on the District Council to have regard to the purpose of conserving biodiversity. Development proposals should be informed by local ecological and geological evidence and national guidance. Local ecological evidence should include protected and notable species as well as considering the potential effects of the development on the habitats and species on the Natural Environment and Rural Communities Act 2006 section 41 list.

DP17: Ashdown Forest Special Protection Area (SPA) and Special Area of Conservation (SAC)
In order to prevent adverse effects on the Ashdown Forest SPA and SAC, new development likely to have a significant effect, either alone or in combination with other development, will be required to demonstrate that adequate measures are put in place to avoid or mitigate any potential adverse effects. Within a 400 metres buffer zone around Ashdown Forest, mitigation measures are unlikely to be capable of protecting the integrity of the SPA and, therefore, residential development will not be permitted.

Within a 7km zone of influence around the Ashdown Forest SPA, residential development leading to a net increase in dwellings will be required to contribute to mitigation through:

- 1) The provision of Suitable Alternative Natural Greenspace (SANG) to the minimum level of 8Ha per 1,000 net increase in population; or a financial contribution to SANGs elsewhere; or the provision of bespoke mitigation; and
- 2) A financial contribution to the Ashdown Forest Strategic Access Management and Monitoring (SAMM) Strategy.

Large schemes proposed adjacent or close to the boundary of the 7km zone of influence may require mitigation for the SPA. Such proposals for development will be dealt with on a case-by-case basis.

Where bespoke mitigation is provided, these measures will need to be in place before occupation of development and must be managed and maintained in perpetuity. The effectiveness of such mitigation will need to be demonstrated prior to approval of the development. Bespoke mitigation will need to be discussed and agreed by the District Council as the competent authority following advice from Natural England.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Data Request

A data request was submitted to the Sussex Biodiversity Record Centre (SxBRC) to ascertain any records held of nature conservation designations and protected species within 2km of the boundary of the site.

The data search covered:

- Statutory designated sites.
- Non-statutory designations such as Local Wildlife Sites.
- Records of protected and notable species.

NB the data request was submitted as part of the larger wider development that will be part of a separate application. Therefore, the boundary on the data maps is shown larger. As this application site lies approximately in the centre of the wider site it is still considered accurate and the data only encompasses a larger search area.

3.1.2 Waterbodies

Any ponds located within 250m of the proposed development were searched for using Ordnance Survey maps and available aerial images.

3.2 Field Survey

3.2.1 Habitats

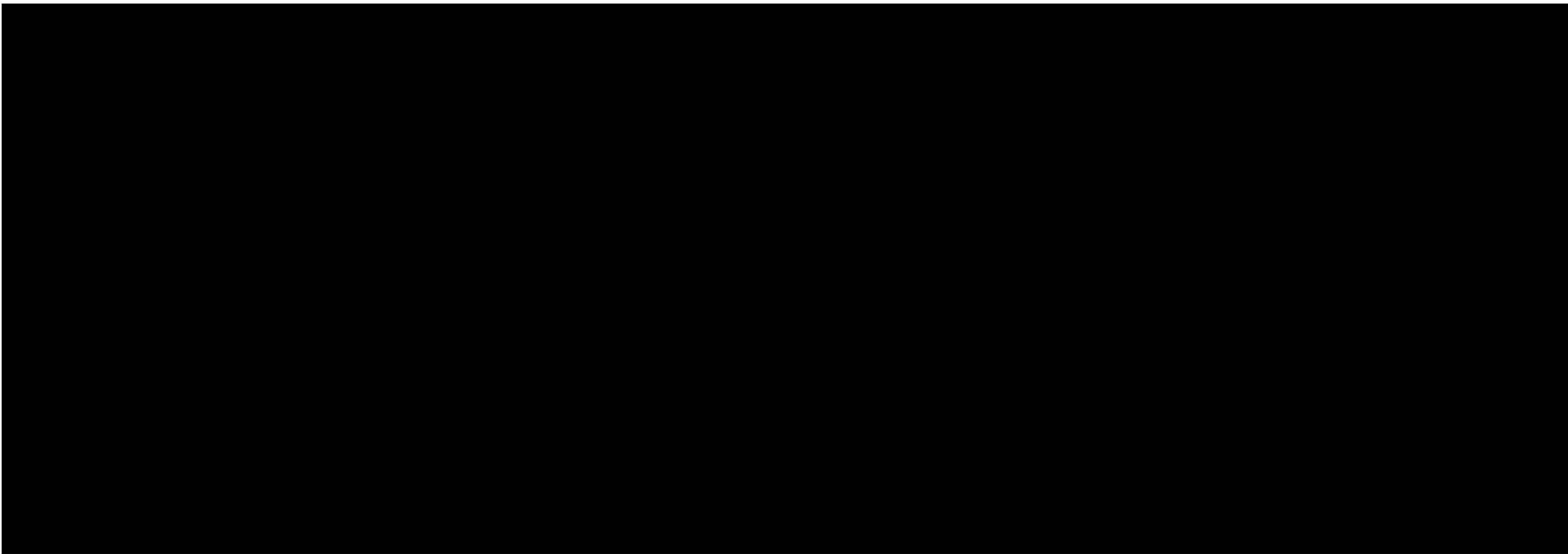
The field survey work which forms the basis of the findings of this report was carried out by Adam Jessop MSc MCIEEM (Principal Ecologist with Ecosupport Ltd) and Louise Davies BSc (Hons) (Project Ecologist with Ecosupport Ltd) on the 20th November 2024, with an Updated Walkover Survey later conducted on the 29th May 2025. Habitats on site pre-development were identified in accordance with the categories specified for a UK Habitats survey, using Habitat Definitions Version 2.0 (UKHab Ltd., 2023). This was chosen as an appropriate habitat categorisation system as it fits within the Statutory Biodiversity Metric calculation.

UKHab represents a method for classifying habitats which has been produced to provide an up-to-date replacement for the current industry standard phase 1 survey method. One of the main benefits of UKHab is that it supports the evaluation of habitats for EclA and no net loss/ net gain analysis, providing a more detailed interpretation of habitat types, which is important for assessing the distinctiveness and condition of habitats against which biodiversity net gain is measured.

The standard survey methodology has been ‘extended’ in this report to include the following:

- Floral species lists for each identified habitat;
- Descriptions of habitat structure, the evidence of management and a broad assessment of habitat condition;

- Mapping of additional habitat types (e.g. hardstanding);
- Identification of Priority Habitats under Section 41 of the NERC Act;
- Evidence of, or potential for, the presence of certain species/groups



3.2.3 Bats

3.2.3.1 PRA (Buildings)

An assessment of all buildings on site was undertaken by Adam Jessop during the initial walkover survey under class level 2 survey licence number (2015-13366-CLS-CLS). This followed BCT (Collins, J. (ed), 2023) best practice survey guidelines searching for any PRFs / evidence of bat occupation and assigning a roost potential assessment as outlined in **Table 1** below.

Table 1. Guidelines for assessing the potential suitability of a built structure for roosting bats (reproduced from BCT (Collins, J. (ed) 2023)).

Suitability	Description of Roosting Habitats
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ² and/or suitable surrounding habitat to be used on a regular basis or by a large number of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure 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

2

	habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.
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3.2.3.4 Emergence Surveys

Three dusk emergence surveys were undertaken on the extension of the main dwelling, which will be impacted.

The full dwelling was not assessed as it is understood the remainder of the building’s roof (which has a separate loft space from the extension) will be unimpacted by the proposals.

An Elekon Batlogger and Batscanner were utilised for identifying species calls / analysis of calls via sonogram (where required), with 2 Nightfox Whisker Night Vision Binoculars used to record each surveyor’s field of view for the duration of the survey and to assist in identifying bat activity. The dusk emergence surveys began approximately 15 minutes prior to sunset and continued until approximately 1.5 hours after.

Survey sheets were used to record the following information:

- Time of call registration
- Species (if possible to identify using heterodyne detector)
- Location / activity
- Direction of flight (if seen)

The surveyor locations are shown below in **Fig 3**, with the accompanying surveyor fields of view appended to this report in **Appendix A**.

Figure 3. Location of the bat surveyors positioned around the building



3.2.4 Great Crested Newts

3.2.4.1. Habitat Suitability Index

Five ponds were identified within 250m of the site and three of these were subject to a HSI assessment. These assessments were conducted on the 21st February, 2025 by Thomas Lane BSc (Hons) MRes, following the guidance provided with ARG (2010). This considers the following factors when calculating the ponds suitability to support GCN:

- Location of Pond,
- Surface Area,
- Permanence,
- Water Quality,
- Shade,
- Presence of Waterfowl and Fish,
- Number of Ponds within 1km,
- Quality of Terrestrial Habitat,
- Macrophyte Cover.

These criteria are used to calculate a score according to ARC Guidelines (ARC 2010) using the Oldham (2000) calculation formulae. This gives a score between 0 and 1 of the suitability of the pond for GCN with:

0.40 – 0.50: Poor suitability for GCN

0.51 – 0.59: Below average suitability for GCN

0.60 – 0.69: Average suitability for GCN

0.70 – 0.79: Good suitability for GCN

0.80 – 1.00: Excellent suitability for GCN

3.2.4.2 eDNA Survey

Following the HSI assessment, only one pond (P4) could be successfully sampled for eDNA survey.

An eDNA assessment was undertaken on Pond 4 in April 2025 by Adam Jessop BSc (Hons) MSc MCIEEM (GCN licence number 2016-21153-CLS-CLS) and Louise Davies BSc (Hons). The survey was undertaken in full compliance with best practice guidance published by Defra (Biggs et al., 2014). A total of 20 water samples were taken from the pond, spaced as evenly as possible around the pond margin and targeting in particular areas where suitable egg-laying vegetation was present, as well as areas of open water which could facilitate displaying male GCN. 30ml samples were taken at each survey point and mixed together in a sterile bag. Six individual 15ml samples of this water were then mixed thoroughly with ethanol to preserve the eDNA sample. These samples were then refrigerated at 2-4° C prior to being sent for analysis. Analysis of the eDNA samples was undertaken by Surescreen Scientifics, a recognised 'quality supplier' by Natural England.

3.3 Assessment Methodology

3.3.1 Introduction

The methodology for the assessment of the likely ecological effects of the proposed development is based on CIEEM's *Guidelines for Ecological Assessment in the UK* (CIEEM 2018). This includes establishing the likely Zone of Influence (Zol) for the project.

3.3.2 Valuation

Features of ecological interest are valued on a geographic scale. Value is assigned on the basis of legal protection, national and local biodiversity policy and cultural and/or social significance.

3.4 Limitations

It is not considered there are any limitations to the survey. While the initial survey was carried out outside the optimal season, an updated survey was carried out in May 2025 in the optimal season botanical season for identifying species. All further survey work was carried out as per best practice guidance.

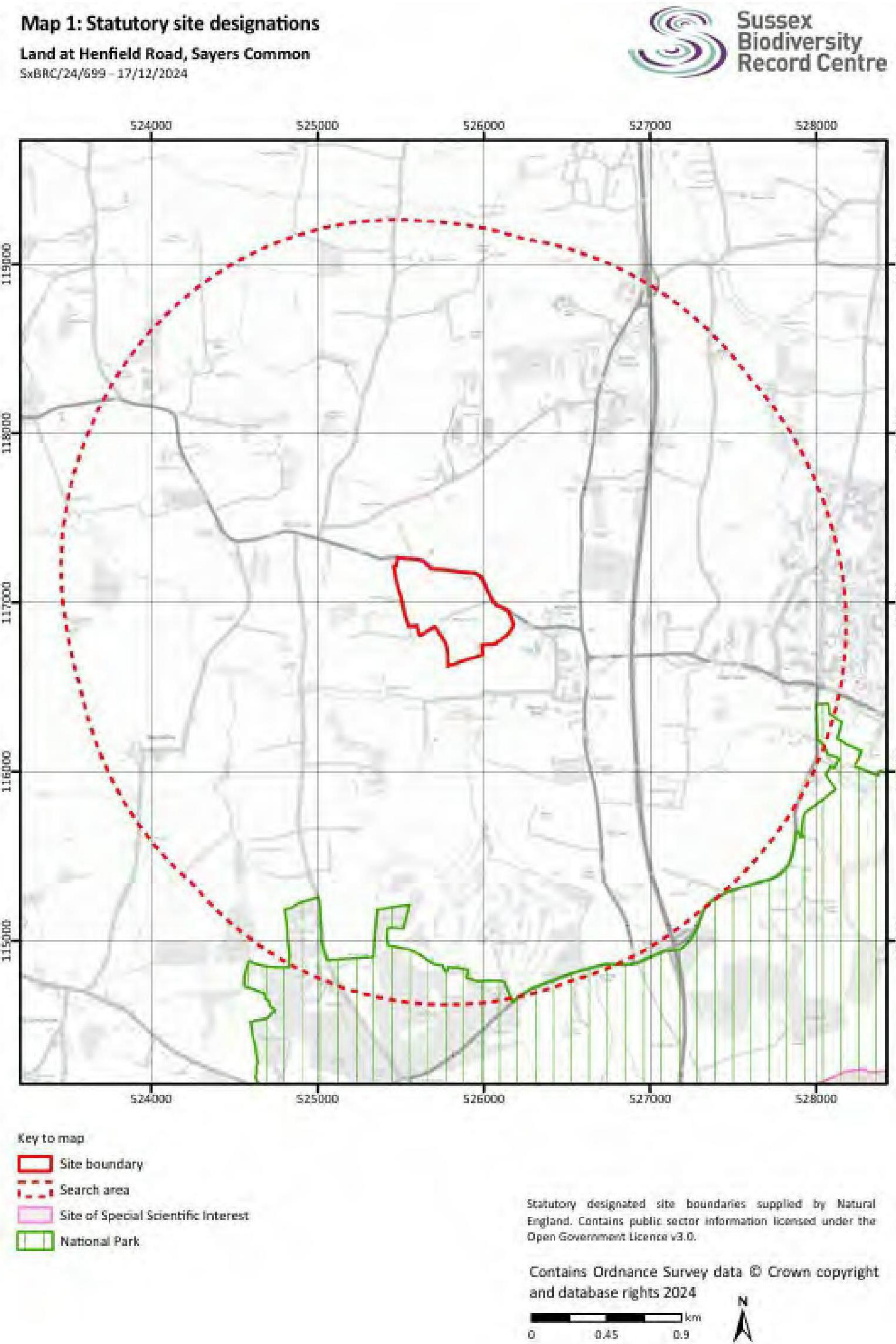
4.0 ECOLOGICAL BASELINE

4.1 Designated Sites

4.1.1 Statutory Designated

SxBRC identified that the site lies approximately 1.63 km to the North of the South Downs National Park (Fig 4).

Figure 4. Statutory Designated Sites situated within a 2km radius of the site as provided by SxBRC



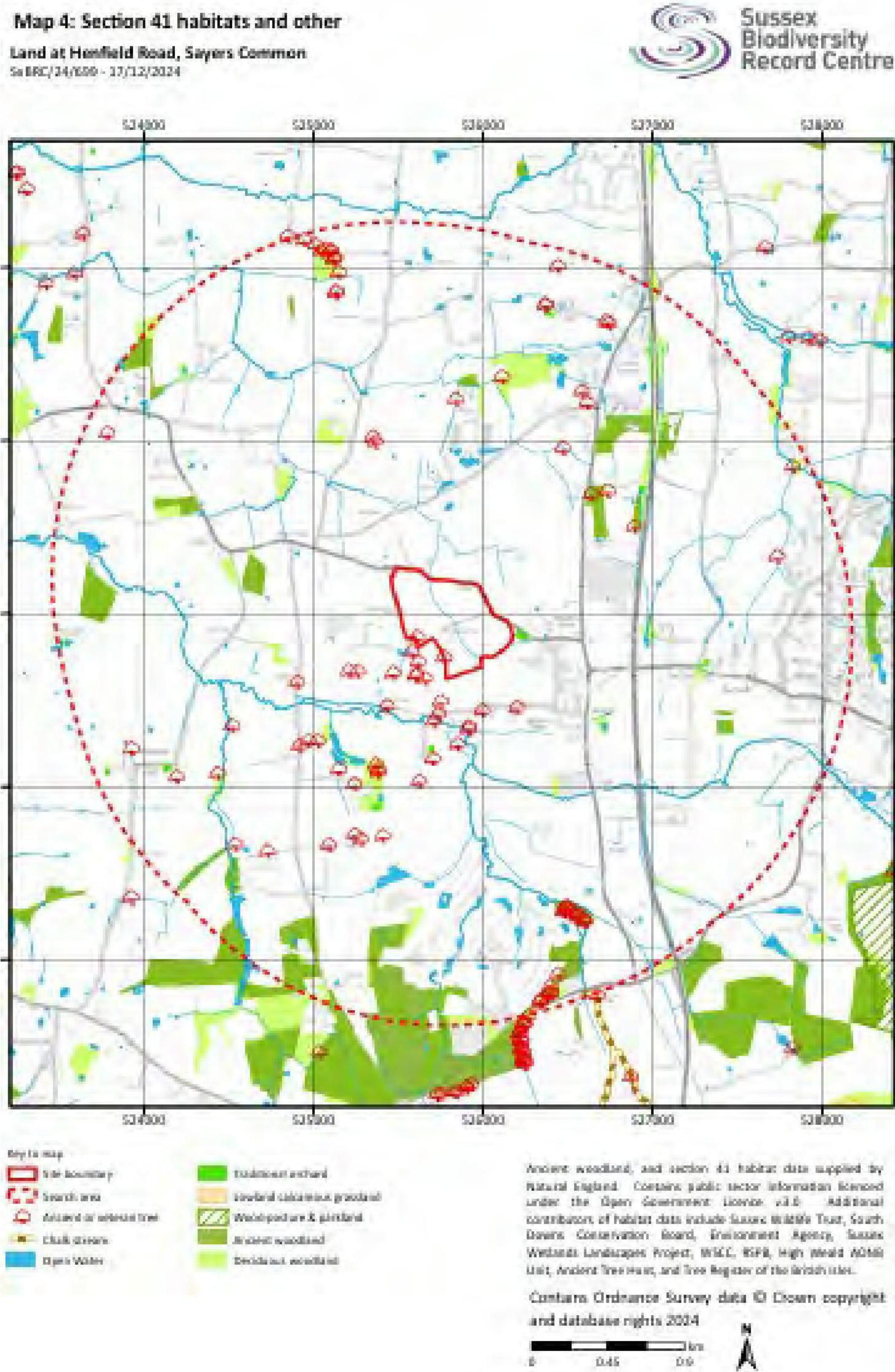
4.1.2 Non-Statutory Designated

SxBRC did not identify any Non-Statutory Designated sites within a 2km radius of the site.

4.1.3 Section 41 Habitats

SxBRC also identified a number of Section 41 habitats within a 2km radius of the site as per **Fig 5** below. These habitats include Traditional Orchards, Chalk Streams, Deciduous Woodland and Ancient Woodland. Numerous Ancient or Veteran Trees are noted to be within a close proximity to the site, situated to the southwest.

Figure 5. Section 41 habitats located within 2 km of the site as provided by SxBRC.



4.2 Vegetation Survey Results

The vegetation within the site has been described below using the UK Habs Habitat Definitions Version 2.0 (UKHab Ltd., 2023). The below species noted should not be considered an exhaustive list and instead refer to dominant, characteristic and other noteworthy species associated with each community within the survey area. The habitat types on site comprise (approximate spatial extent shown in the **habitat map appended**):

- Modified grassland (g4) – secondary codes: (32) scattered trees, (108) frequently mown, (828) vegetated garden
- Mixed scrub (h3h)
- Lowland mixed deciduous woodland (w1f)
- Broadleaved and mixed woodland (w1) – secondary code: (33) Line of Trees
- Native hedgerow (h2a) - secondary code: (11) hedgerow with trees
- Artificial unvegetated; unsealed surface (u1c)
- Buildings (u1b5)

4.2.1 Modified Grassland (g4) – secondary codes: (32) scattered trees, (108) frequently mown, (828) vegetated garden

Modified grassland is present surrounding most of the existing buildings on site, most of which forms part of the private garden (828) associated with the residential portion of the property. It is frequently mown (108) kept to a short sward length (**Fig 6**). Species present within these parcels are dominated by grasses including Perennial Rye Grass (*Lolium perenne*) and Yorkshire Fog (*Holcus lanatus*), with limited forb diversity including Creeping Buttercup (*Ranunculus repens*), with additional species including Ground Ivy (*Glechoma hederacea*), Dock (*Rumex obtusifolius*) and Nettles (*Urtica dioica*).

There are a number of scattered trees (32) around the vegetated garden, seen in the background of **Fig 6**.

Fig 6. View of the modified grassland present surrounding the dwelling and the existing unvegetated access track (taken November 2024).



4.2.2 Mixed Scrub (h3h)

Situated to the southwest of the main residential building lies a parcel of mixed scrub comprising primarily of Bramble (*Rubus fruticosus*) with some Blackthorn (*Prunus spinosa*) and Hawthorn (*Crataegus monogyna*) as well as some non-native species (**Fig 7**).

Fig 7. View of the mixed scrub present on site (taken November 2024).



4.2.3 Lowland Mixed Deciduous Woodland (w1f)

There is a parcel of Lowland Mixed Deciduous Woodland to the east of the main residential property (**Fig 8**). Species present within this parcel include Ash (*Fraxinus excelsior*), Oak (*Quercus robur*), Bramble, Nettles, Elder (*Sambucus nigra*) and Hawthorn. It features collections of small fallen deadwood within the understory.

Fig 8. View of the boundary woodland parcel present on site (taken November 2024).



4.2.4 Broadleaved and mixed woodland (w1) – secondary code: (33) Line of Trees

There is a line of trees extending from the woodland parcel into the residential garden, present along the edge of the access track.

4.2.5 Native Hedgerow (h2a) – secondary codes: (11) native hedgerow with trees

There is a hedgerow with trees along the south of the site (**Fig 9**), separating the vegetated garden from the grassland fields. Species present include Blackthorn, Oak, Field Maple (*Acer campestre*), Bramble and Hawthorn.

Fig 9. View of the native hedgerow with trees on site (taken November 2024).



4.2.6 Artificial Unvegetated; Unsealed Surface (u1c)

A dirt track access road runs from the easternmost point of the site through to the existing buildings on site. This can be seen in **Figs 6 & 8** above.

It should be noted that a minor unnamed stream flows under the access track and is present to the east of the woodland on site. However as there are no proposed impacts to this habitat it has not been described in further detail.

4.2.7 Buildings (u1b5)

Two buildings were identified on site, consisting of the residential dwelling and a shed. These buildings are all described in more detail in **Section 4.3** below.

4.3 Bat Survey Results

4.3.1 Pre-Existing Data

The data request from SxBRC returned the following bat records within 2 km of the site (**Table 2**).

Table 2. List of bat records within 2 km of the site provided by SxBRC.

Taxon Name	Species Name	Number of Records
<i>Barbastella</i>	Barbastelle Bat Species	1
<i>Barbastella barbastellus</i>	Barbastelle	2
<i>Chiroptera</i>	Bats	12
<i>Eptesicus serotinus</i>	Serotine bat	54
<i>Myotis bechsteinii</i>	Bechstein’s Bat	2
<i>Myotis daubentonii</i>	Daubenton's Bat	2
<i>Myotis mystacinus</i>	Whiskered Bat	4
<i>Myotis mystacinus/brandtii</i>	Whiskered/Brandt’s	3
<i>Myotis nattereri</i>	Natterer’s Bat	1
<i>Nyctalus noctula</i>	Noctule Bat	4
<i>Pipistrellus</i>	Pipistrelle bat species	12
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	25
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	9
<i>Plecotus</i>	Long-eared bat species	4
<i>Plecotus auritus</i>	Brown Long-eared Bat	5

Additionally, further ecology surveys are currently being undertaken throughout the surrounding land parcels of the site – as part of a separate planning application. Bat activity noted within the surrounding environment has consisted of species such as Common Pipistrelle, Soprano Pipistrelle, *Myotis* species, Noctule, Leisler’s Bat, Barbastelle and small numbers of Greater Horseshoe bat. Particularly of note from this list are light sensitive Barbastelle, which have been recorded in relatively close proximity to this Application.

4.3.2 Roosting Bats (Buildings)

4.3.2.1 Preliminary Roost Assessment

Two buildings were subject to a Preliminary Roost Assessment (PRA), the extension on the main dwelling (B8) and the shed (B9) (**Fig 10**). These buildings were subject to Preliminary Roost Assessment, with the results summarised below.

NB other buildings labelled B1-B7 have been included as a separate application within the property. The buildings on this site have been kept as B8 and B9 so as not to become confused with the other application

Fig 10. A map of the buildings present on site



B8 (**Fig 11**) is the extension to the main residential property on site, with a separate loft space which is due to be impacted by proposed development (whilst the main loft space of the property will remain untouched). The extension features the previously mentioned established void space in the loft, along with gaps beneath clay roofing tiles, and gaps within the brick and mortar of the walls. Therefore, the building is considered to be of **high potential** for roosting bats.

B9 is a small timber shed with a corrugated metal roof. No potential roosting features were noted and the building was deemed to be of **Negligible potential** for roosting bats.

Figure 11. Preliminary Roost Assessment of B8 on site (taken April 2025, facing southeast)



4.3.2.2 Emergence Survey

Three emergence surveys were undertaken on the extension of the main dwelling situated on site. The results of this are provided in **Tables 3 & 4** below. No bats were recorded to emerge from the extension and therefore no further survey work / mitigation will be required.

Table 3. Relevant information on survey conditions recorded.

Date	Temp (°C)	Cloud (%)	Cover (%)	Wind (Beaufort scale)	Sunset / Sunrise Time	Start Time	Finish Time
01/05/25	23	45		0	20:23	20:08	21:53
22/05/25	14	98		1	20:53	20:38	22:23
12/06/25	19	25		1	21:15	21:00	22:45

Table 4. Results from the emergence surveys (HNS = Heard Not Seen).

Survey Date	Recorded Bat Roost(s)	Bat Activity on Site		
01/05/25	No emergences	Species	First Pass	Last Pass
		Common Pipistrelle	20:22	21:53 (HNS)
		Soprano Pipistrelle	20:52	21:55 (HNS)
		<u>Summary:</u> Activity during this survey was considered to be moderate with individual bats noted frequently foraging and commuting. Species diversity was considered to be low with a total of 2 species recorded throughout the survey. The first registration was from a Common Pipistrelle (<i>Pipistrellus pipistrellus</i>), which was recorded at 20:22 commuting around the site. Individual Common Pipistrelles were then recorded frequently foraging and commuting over the site, with the final recording of this species at 21:53 as HNS The second and final species recorded was a Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>), which was recorded commuting northeast at 20:52. Individual Soprano Pipistrelles were then recorded occasionally commuting and foraging around the site, with the last recording of this species at 21:55 as HNS. The NVAs were reviewed on the 2nd May 2025 and no emergences or additional bats were identified.		

		Species	First Pass	Last Pass
		Noctule	21:05 (HNS)	21:05 (HNS)
		Common Pipistrelle	21:06 (HNS)	21:56 (HNS)
		Soprano Pipistrelle	21:08 (HNS)	21:53 (HNS)
		<u>Summary:</u> Activity during this survey was considered to be low with individual bats noted occasionally foraging and commuting. Species diversity was considered to be low with a total of 3 species recorded throughout the survey. The first species recorded was a Noctule (<i>Nyctalus noctula</i>) which was recorded as HNS at 21:05. This was the only time a Noctule was heard during the survey. The second recorded species was a Common Pipistrelle (<i>Pipistrellus pipistrellus</i>) which was recorded at 21:06 as HNS. Individual Common Pipistrelles were then noted occasionally commuting and foraging around the site, with the final recording of the species at 21:56 as HNS. The third and final species recorded was a Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>) which was recorded as commuting around the site at 21:08. Individual Soprano Pipisistrelles were recorded occasionally commuting and foraging around the site, with the final recording of the species at 21:53 as HNS. The NVAs were reviewed on the 13th April 2025 and no emergences or additional bats were identified.		
22/05/25	No emergences			
		Species	First Pass	Last Pass
		Noctule	21:23	22:19 (HNS)
		Soprano Pipistrelle	21:52	22:26 (HNS)
		<i>Plecotus spp.</i>	21:52 (HNS)	21:57 (HNS)
		Common Pipistrelle	21:56	22:21 (HNS)
		Serotine	22:08 (HNS)	22:08 (HNS)
		<u>Summary</u> Activity during this survey was considered to be high with individual bats noted consistently foraging and commuting. Species diversity was considered to be moderate with a total of 5 species recorded throughout the survey. The first species recorded was a Noctule (<i>Nyctalus noctula</i>) which was recorded at 21:23 foraging around the site. Individual Noctules were often recorded foraging and commuting around the site during the early stages of the survey, with the last recording at 22:19, as HNS. The second species which was recorded was a Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>) which was recorded at 21:52 as HNS.		
12/06/25	No emergences			

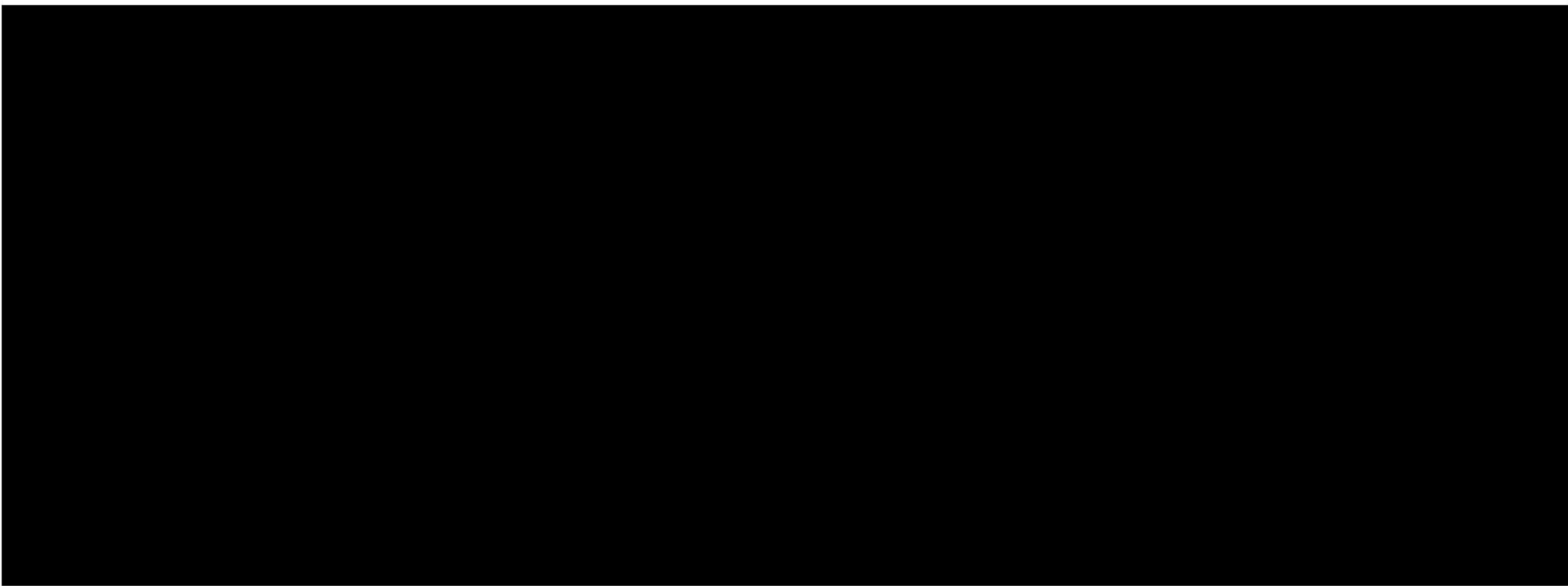
		Individual Soprano Pipistrelles were occasionally seen foraging around site over the rest of the survey, with the final Soprano Pipistrelle recorded at 22:26 as HNS. The third species recorded was a <i>Plecotus</i> bat (<i>Plecotus spp.</i>), recorded at 21:52 as HNS. One additional <i>Plecotus</i> bat was recorded again that survey at 21:57, also as HNS. The fourth species recorded was a Common Pipsitrelle (<i>Pipistrellus pipistrellus</i>) which was recorded foraging on site at 21:56. Individual Common Pipistrelles were then infrequently recorded foraging and commuting around the site, with the final recording of the species at 22:21 as HNS. The fifth and final species recorded was a Serotine (<i>Eptesicus serotinus</i>) which was recorded just once during the survey at 22:08 as HNS. The NVAs were reviewed on the 13th June 2025 and no emergences or additional bats were identified.
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4.3.3 Roosting Bats (Trees)

Currently, it is understood no trees will be removed as a result of the proposed development and therefore a detailed assessment has not been carried out on all trees to assess potential for roosting bats. No PRFs were noted during the initial survey.

4.3.4 Foraging and Commuting Bats

The vegetation present on site has the potential to support small populations of invertebrates, with mixed scrub, individual trees, woodland and hedgerows all offering potential niches for invertebrate species – this directly increases the opportunities for foraging bats on site. Additionally, the habitats on site are relatively well connected, which would provide ample commuting pathways. Despite this, however, the suitable habitat on site is limited, with managed grassland and hardstanding being the dominant habitats. Based on this, the site is considered to be of **low potential** for foraging and commuting bats.



4.5 Reptiles

4.5.1 Pre-Existing Data

SxBRC returned records for Slow Worm (*Anguis fragilis*, 44 records), Common Lizard (*Zootoca vivipara*, 12 records), Adder (*Vipera berus*, 4 records) and Grass Snake (*Natrix Helvetica*, 27 records) from within the 2 km search radius.

Additionally, further ecological surveys have been undertaken throughout the surrounding land parcels of the site – as part of a separate planning application. A maximum count of 2 grass snakes and 6 slow worms were found within the surrounding environment.

4.5.2 Site Assessment

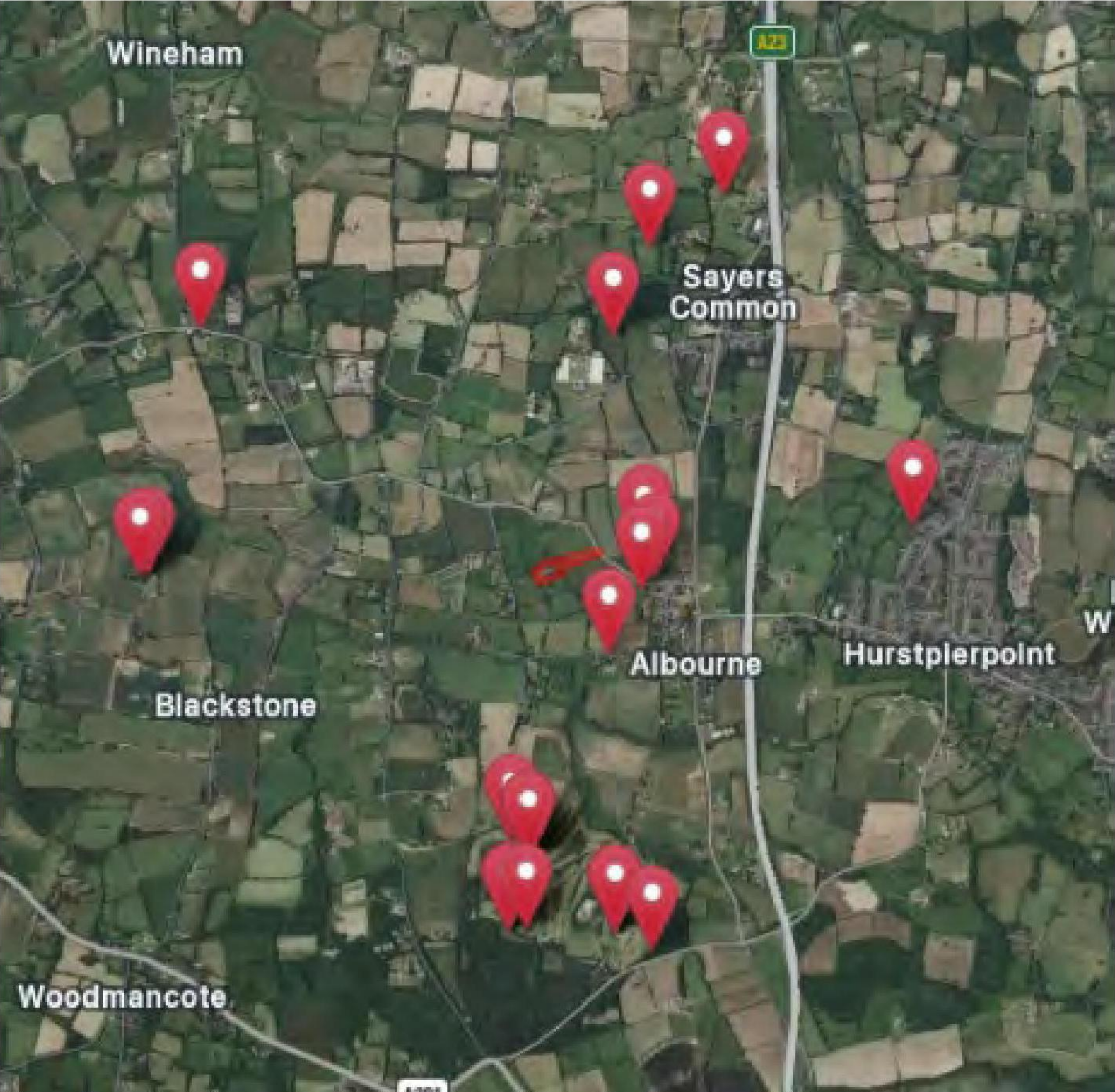
Whilst there are a number of reptile records in the local area, the habitats on site are dominated by a short sward length modified grassland and hardstanding – both inappropriate for reptiles. However, the mixed scrub, woodland, hedgerows and tall forbs on site do offer some potential, with the edges of habitats providing opportunities for basking, and remaining habitats offering sheltering/hibernating potential. Although it is understood all habitats with potential will be retained in the proposed development, the site is considered to be of **low potential** for reptiles (***NB. This assessment only be valid if the management practices of the grassland remain the same***).

4.6 Great Crested Newt

4.6.1 Pre-Existing Data

SxBRC returned 37 records of GCN presence within 2 km of the site, with the nearest record, taken in 2019, situated approximately 0.25km east of the site (**Fig 12**).

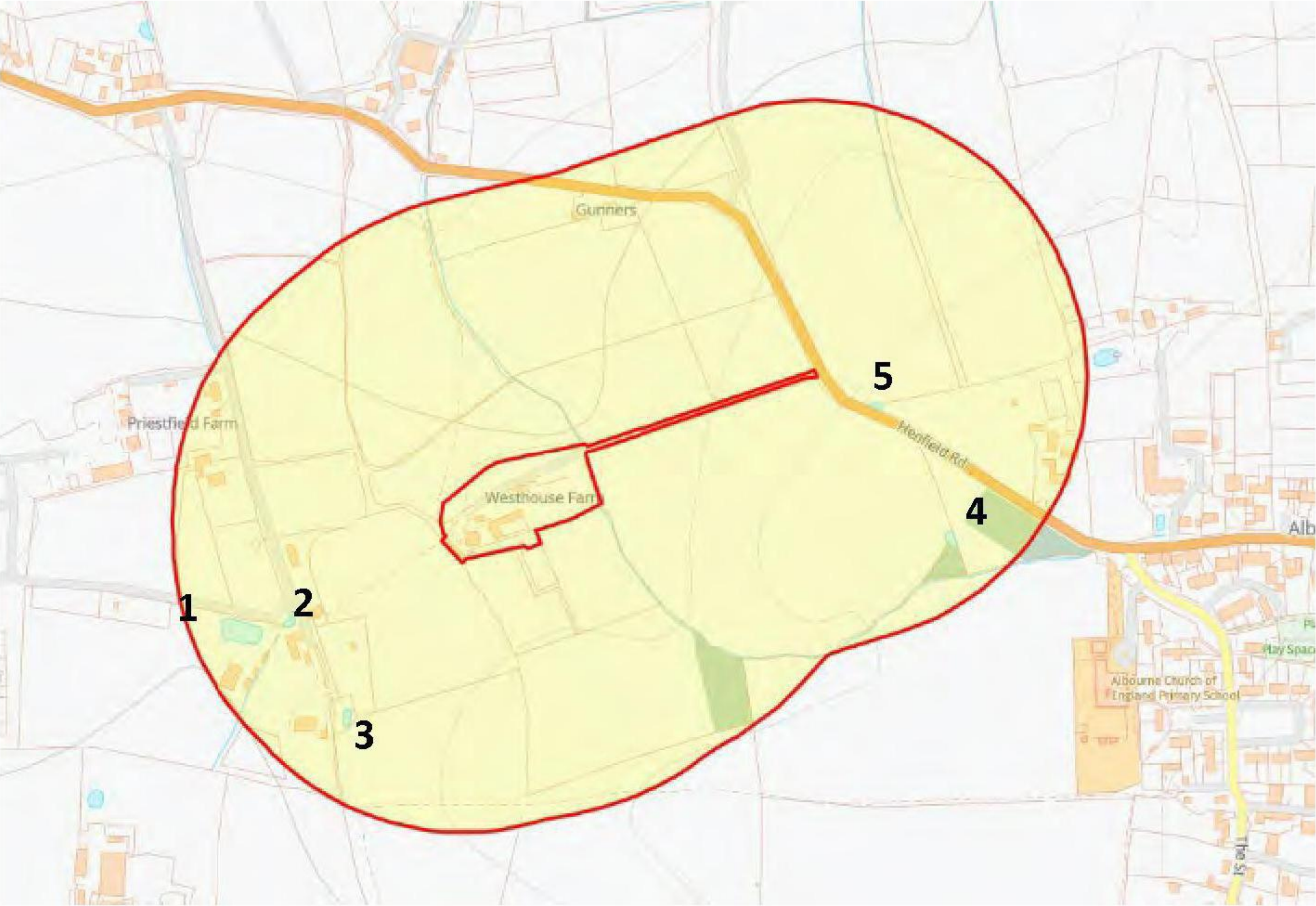
Figure 12. Location of the GCN records within 2 km of the site (SxBRC, 2024)



4.6.2 Waterbodies within 250 m

Five waterbodies were identified within 250m of the site boundary as shown in **Fig 13**.

Figure 13. Approximate locations of the ponds located within 250m of the site (OS Maps, 2024).



4.6.3 HSI Assessment

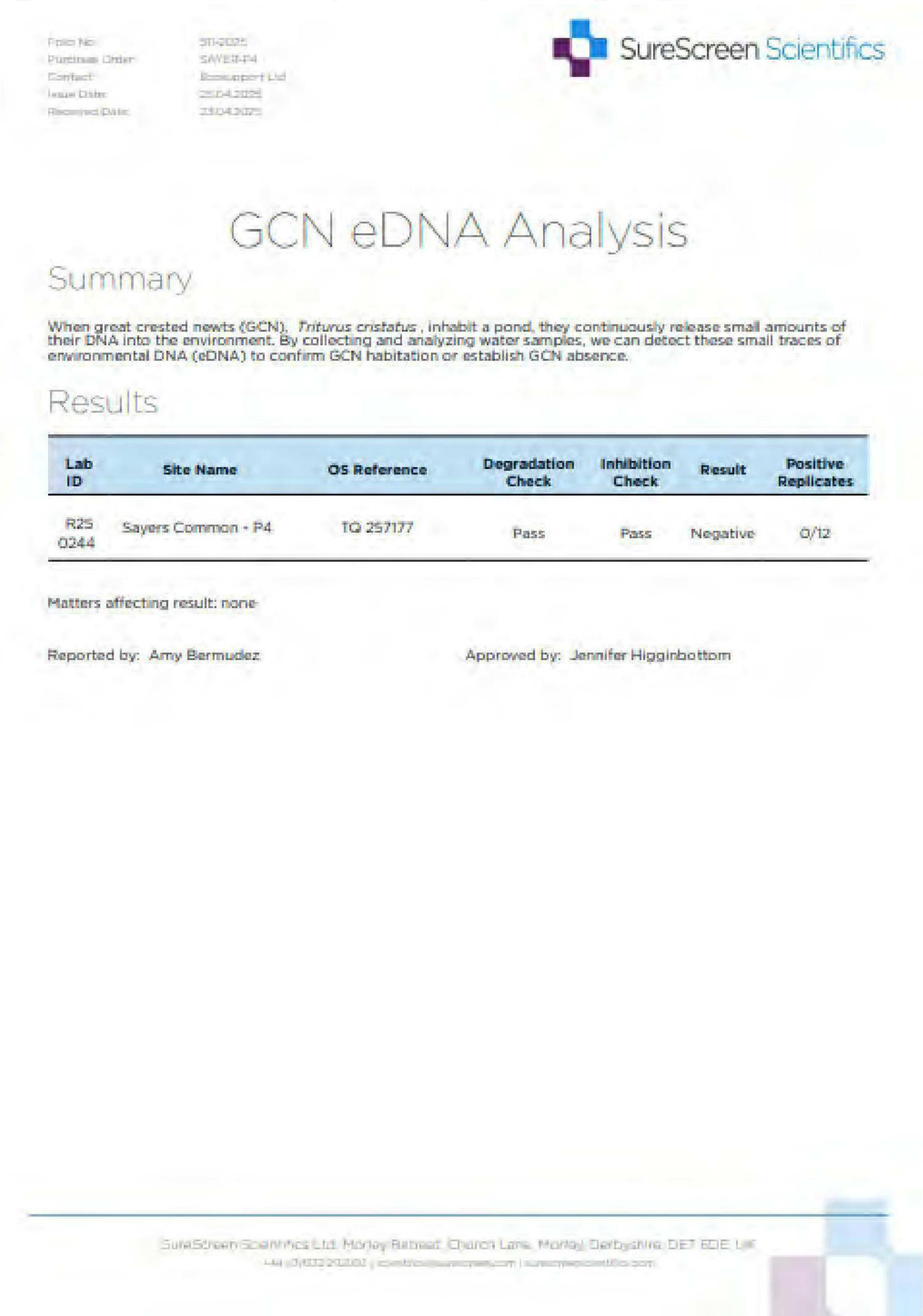
A HSI assessment was conducted on Ponds 1, 3 and 4, with the results of these assessments demonstrated in **Table 5**. When attempting to conduct these assessments of the ponds, Pond 2 could not be found, and access to Pond 5 was denied by the landowner, so no assessment was conducted on these ponds.

Table 5. HSI Assessments of Ponds 1, 3 and 4.

Pond	Pond 1	Pond 3	Pond 4
Geographic Location	Zone A	Zone A	Zone A
Pond Area	200m ²	50-100m ²	1200m ²
Permanence	Rarely Dries	Rarely Dries	Never Dries
Water Quality	Moderate	Moderate	Moderate
Shade	86-90%	86-90%	66-70%
Water Fowl	Absent	Absent	Absent
Fish	Absent	Absent	Minor
Pond Count	10	10	10
Terrestrial Habitat	Poor	Poor	Moderate
Macrophytes	1-5%	1-5%	21-25%
HSI Score	0.6413	0.5583	0.7434
Suitability	<i>Average</i>	<i>Below Average</i>	<i>Good</i>

Following the HSI assessment of the above ponds, eDNA sampling was planned for all 3 ponds. However, only Pond 4 was successfully sampled, as access to Ponds 1 and 3 could not be arranged for the following eDNA testing. **Figure 14** shows the results of the eDNA analysis of Pond 4, confirming a **Negative result** for Great Crested Newts.

Figure 14. Results of eDNA analysis for Pond 4, confirming a negative result for GCN.



4.6.4 Site Assessment

Similar to reptiles, the grassland on site has been managed to a short sward length which would be inappropriate terrestrial habitat for GCN, however the area of mixed scrub and hedgerows to the south would provide potential habitat for the species, although these areas are expected to be retained. The site does not feature any waterbodies within the site boundaries, with the nearest ponds to the site all disconnected by country roads. The site is connected to other potentially suitable terrestrial habitat for GCN.

4.6.5 Evaluation

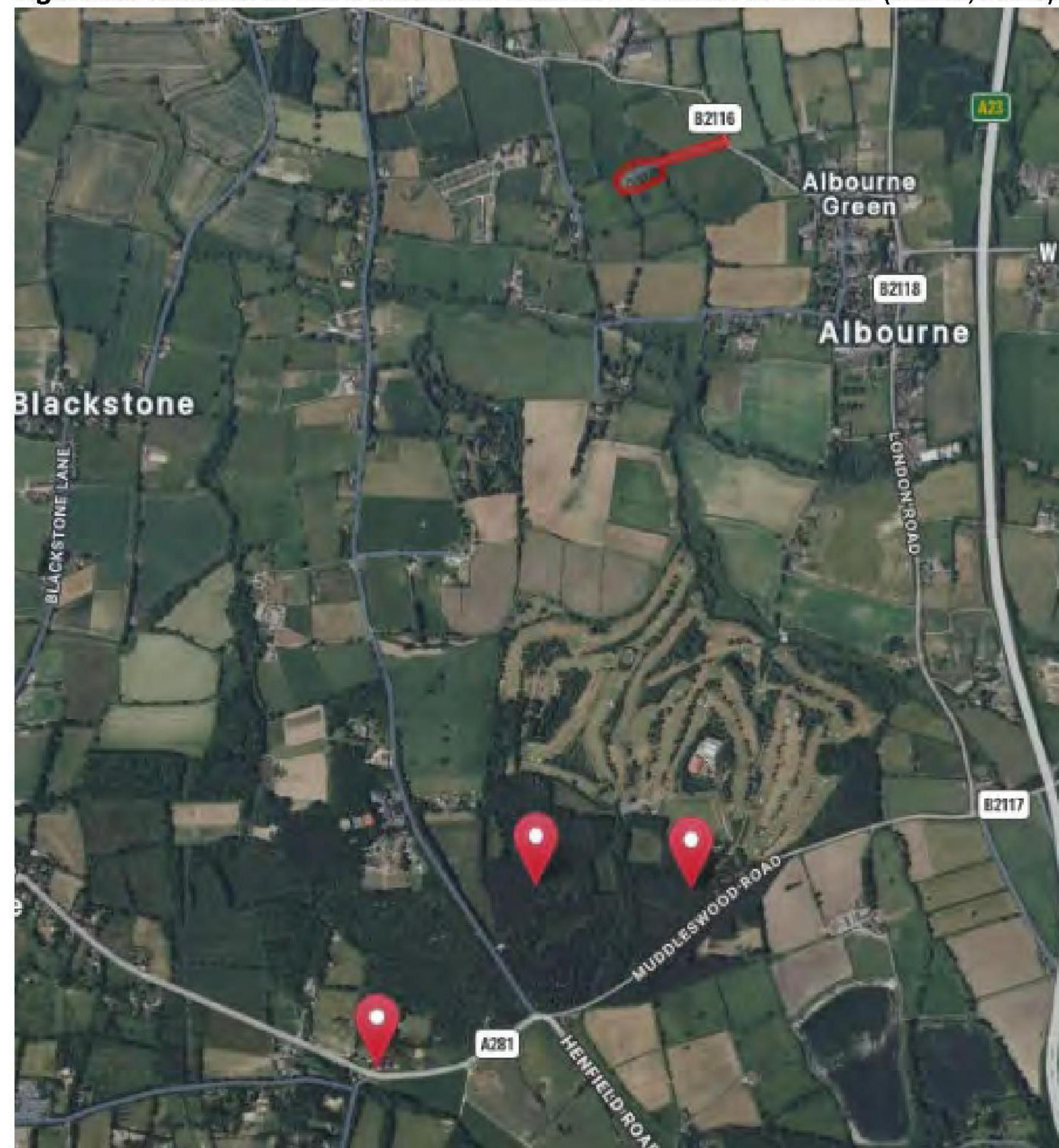
The site supports very little suitable habitat for GCN, with the dominant habitats to be impacted on site being short sward modified grassland and hardstanding/unvegetated. Furthermore, the most suitable habitat on site for GCN - the woodland and the hedgerows - will not be impacted by the development. However, using the NatureSpace Partnership (2022) 'Horsham District Council - Impact Risk Zones' map, the site is shown to lie between amber and green zones for GCN. Additionally, the high number of GCN records within 2km of the site, including a number of records in close proximity east of the site, further increases the potential for GCN to be found in the limited suitable terrestrial habitat on site. Therefore, considering this, the site is considered to be of **moderate potential** for GCN, although no suitable habitat is expected to be impacted.

4.7 Hazel Dormouse

4.7.1 Pre-existing Information

SxBRC returned 3 records of Hazel Dormouse (*Muscardinus avellanarius*) presence within 2 km of the site, with the most recent records in 2011 situated approximately 2km south of the site, in more established woodland (Fig 15).

Figure 15. Location of the 3 dormouse records in relation to the site (SxBRC, 2024)



Additionally, further ecological surveys were undertaken throughout the surrounding land parcels of the site, as part of a separate planning application, between April and September 2025. However, no evidence of Hazel Dormice was found in the surrounding habitats during any of the survey months and surveys have now concluded.

4.7.2 Site Assessment

The hedgerow habitats present in the south of the site offer potential habitat for dormice, with hedgerows on site well connected, offering a network of habitat for the species. The site, however, is a distance away from the woodland in the south where the records were found, with a number of small roads which could also limit dispersal of the species. Further, However, a complete suite of dormouse surveys was completed on all surrounding habitat as part of a separate application and dormice were considered absent after no evidence of dormouse was found. Therefore, given the negative results combined with no close records identified, it is similarly considered that dormice are **likely absent** on site.

4.8 Birds of Conservation Concern (BoCC) / Notable Birds

4.8.1 Pre-Existing Data

SxBRC returned a high number of notable bird records (51 different species) from within 2 km of the site including: Barn Owl (*Tyto alba*), Bittern (*Botaurus stellaris*), Bullfinch (*Pyrrhula pyrrhula*), Cetti's Warbler (*Cettia cetti*), Corn Bunting (*Emberiza calandra*), Crossbill (*Loxia curvirostra*), Cuckoo (*Cuculus canorus*), Dunnock (*Prunella modularis*), Firecrest (*Regulus ignicapilla*), Green Woodpecker (*Picus viridis*), Hawfinch (*Coccothraustes coccothraustes*), Herring Gull (*Larus argentatus*), Hobby (*Falco subbuteo*), House Martin (*Delichon urbicum*), House Sparrow (*Passer domesticus*), Kestrel (*Falco tinnunculus*), Kingfisher (*Alcedo atthis*), Lapwing (*Vanellus vanellus*), Lesser Spotted Woodpecker (*Dryobates minor*), Linnet (*Linaria cannabina*), Little Bittern (*Ixobrychus minutus*), Little Grebe (*Tachybaptus ruficollis*), Mallard (*Anas platyrhynchos*), Marsh Tit (*Poecile palustris*), Meadow Pipit (*Anthus pratensis*), Mistle Thrush (*Turdus viscivorus*), Mutee Swan (*Cygnus olor*), Nightingale (*Luscinia megarhynchos*), Red Kite (*Milvus milvus*), Reed Bunting (*Emberiza schoeniclus*), Ring Ouzel (*Turdus torquatus*), Short-Eared Owl (*Asio flammeus*), Skylark (*Alauda arvensis*), Song Thrush (*Turdus philomelos*), Spotted Flycatcher (*Muscicapa striata*), Starling (*Sturnus vulgaris*), Stock Dove (*Columba oenas*), Swift (*Apus apus*), Tawny Owl (*Strix aluco*), Tree Sparrow (*Passer montanus*), Tundra Swan (*Cygnus columbianus*), Turtle Dove (*Streptopelia turtur*), Wheatear (*Oenanthe oenanthe*), Whinchat (*Saxicola rubetra*), White-fronted Goose (*Anser albifrons*), Whitethroat (*Curruca communis*), Whooper Swan (*Cygnus cygnus*), Willow Warbler (*Phylloscopus trochilus*), Woodcock (*Scolopax rusticola*), and Yellowhammer (*Emberiza citrinella*).

4.8.2 Site Assessment

The area of woodland on site and hedgerows are very well connected to additional hedgerows in the wider environment. Areas of scrub and scattered trees present on site and in the local environment – as well as large areas of grassland – provide good quality foraging habitat for birds. Considering this, the site is considered to be of **moderate potential** for breeding and nesting birds.

4.9 Hedgehogs

4.9.1 Pre-existing Data

SxBRC returned 51 records of Hedgehog (*Erinaceus europaeus*) within a 2km radius of the site.

4.9.2 Site Assessment

The site is a part of a well-connected network of hedgerows and grassland parcels, providing Hedgehogs with opportunity to create nests and forage. However, the site itself does not offer optimal foraging conditions, with frequently mown grass. Accounting for the connectivity of the site, the site is considered to be of ***low potential*** for foraging and commuting hedgehogs.

5.0 LIKELY ECOLOGICAL IMPACTS IN ABSENCE OF MITIGATION

5.1 Introduction

The CIEEM guidelines (CIEEM 2018) require that the potential impacts of the proposals should be considered in absence of mitigation. In order for a significant adverse effect to occur, the feature being affected must be at least of local value. However, in some cases, features of less than local value may be protected by legislation and/or policy and these are also considered within the assessment. Although significant effects may be identified at this stage of the assessment, it is often possible to provide appropriate mitigation.

5.2 Site Preparation and Construction

5.2.1 Impacts to Habitats

The proposals for the site entail the demolition of a shed and main impacts will be to the vegetated garden and mown grassland. Whilst plans do not show any planned loss to hedgerows or mixed scrub, due to the close proximity of these habitats to the existing buildings, there is the potential that these habitats could be impacted. Furthermore, if unmitigated against, construction on site has the potential to impact retained trees through damage by machinery. Therefore, it is considered that the loss of habitat and potential indirect impacts on site would have a **certain impact** to habitats of **site level**.

5.2.2 Impacts to Wildlife

5.2.2.1 Bats

The wider environment of the site has been recorded to support nationally rare Barbastelle bats foraging and commuting - which would be highly likely to frequent the vegetated areas on this site for further foraging and commuting. The works, however, should not impact any commuting routes on site, and have a minor impact on the foraging habitat offered on site. Therefore, a **minor impact** is **possible** at the **Local level**.

5.2.2.3 Reptiles and GCN

The proposed site layout indicates that the woodland, mixed scrub and hedgerows on site will be retained, with habitat loss on site restricted to short sward length grassland. These habitats are considered sub-optimal for reptiles and GCN. Therefore, while there is potential for these species to be present on site, it is considered there will be **negligibly impacted** as a result of the works on site. **NB this is dependent on continued management of the short sward grassland.**

5.2.2.4 Breeding and Nesting Birds

The woodland, mixed scrub, trees and hedgerow on site offer potential for nesting birds, however the proposed site layout indicates that these habitats should be retained. However,

there is vegetation in close proximity to the area of impact at the shed and in the absence of mitigation, an ***adverse impact*** is ***likely*** at the ***site level***.

5.3 Site Operation

5.3.1 Impacts to Nocturnal Wildlife

The works may result in a minor increase in lighting within the general area from external lighting extension / carport, although unlikely would comprise a significant increase above the light present on the existing dwelling. This can affect the behaviour, particularly foraging, of nocturnal wildlife (i.e. bats, Badgers, Hazel Dormice). Therefore, a ***minor adverse impact is possible*** on nocturnal species.

6.0 MITIGATION, COMPENSATION AND ENHANCEMENTS

6.1 Introduction

The below sections outline the recommended measures to mitigate against any identified impact and where required provide proportionate compensation. In addition to this, measures to provide species specific ecological enhancements are provided with recommendations for habitat enhancements outlined in the BNG report that will accompany this application.

6.2 Protection of Woodland, Mixed Scrub and Hedgerows

The areas of retained woodland, mixed scrub and hedgerows will be protected using Heras fencing or similar to prevent access by machinery. Where large mature trees are present, they will be protected using standard arboricultural tree protection measures which include protection of the canopy and prevents root compaction. Access will not be permitted behind this fencing by construction personnel.

This will also provide protection for wildlife species that may be using the margins of the site including bats, reptiles, amphibians, Hazel Dormice and other mammals. No vehicles will enter the protective ring fencing and no materials will be stored within their circumference. All protective fencing must be in place prior to any construction machinery arriving on site, before any works on site get underway, and will remain in place until all work is completed. This will minimise the level of disturbance within the boundary habitats during the works and ensure the habitats and any wildlife species that may be using them are protected.

6.3 Bats

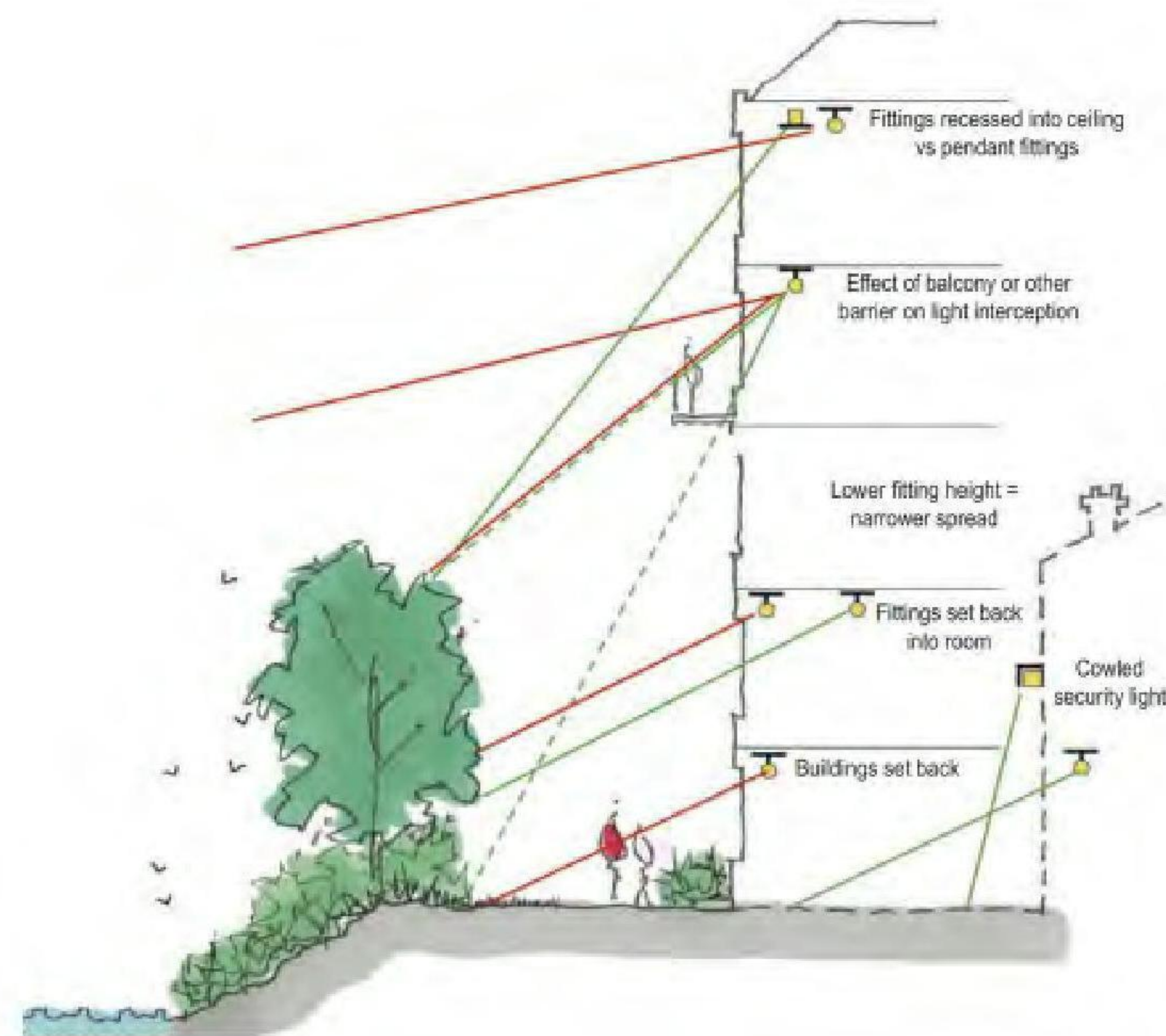
6.3.1 Lighting Strategy

Should any lighting be implemented on site, it will need to comply with the *Guidance Note 08/23 Bats and Artificial Lighting at night* (ILP / BCT, 2023) produced via a collaboration between the Institute of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT), which outlines the latest recommendations to minimise the impacts of increased artificial lighting on bats. The key recommendations within this document have been outlined below and will be implemented as far as is practicable:

‘Light sources, lamps, LEDs and their fittings come in a myriad of different specifications which a lighting professional can help to select. However, the following should be considered when choosing luminaires and their potential impact on Key Habitats and features:

- *All luminaires will lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used*
- *LED luminaires will be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability*
- *A warm white light source (2700Kelvin or lower) will be adopted to reduce blue light component*
- *Light sources will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012)*

- *Internal luminaires can be recessed (as opposed to using a pendant fitting - See **Fig 16**) where installed in proximity to windows to reduce glare and light spill*
- *Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges (see Case Study 1)*
- *Column heights will be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards*
- *Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01*
- *Luminaires will always be mounted horizontally, with no light output above 90° and/or no upward tilt*
- *Where appropriate, external security lighting will be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate*
- *Use of a Central Management System (CMS) with additional web-enabled devices to light on demand Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS*
- *The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues.*
- *Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely'*

Figure 16. Internal lighting mitigation options (ILP 2023)

6.5 Reptiles & Amphibians

It is not expected that any reptile / amphibian habitat will be impacted and retained habitat will be protected as per **Section 6.2**. It is recommended that all current maintained grassland on site continues to be regularly mown to prevent it from becoming suitable for reptiles. A log pile will be installed as an enhancement as detailed below.

6.6 Breeding & Nesting Birds

While it is understood that there will be minimal impacts to vegetation on site, due to the proximity of works to retained trees and scrub, it may be necessary to cut vegetation back. As such, avoidance measures will be used. To avoid disturbance of nesting birds or damage to their nests, clearance / cutting back of any trees and shrubs on site should be undertaken outside of the bird-nesting season (typically March – September, dependent on weather). If this is not possible, the area to be cleared should be thoroughly checked by an ecologist immediately prior to clearance. If any active nests are found they should be left undisturbed with a suitable buffer of undisturbed vegetation (ca. 5m) until nestlings have fledged.

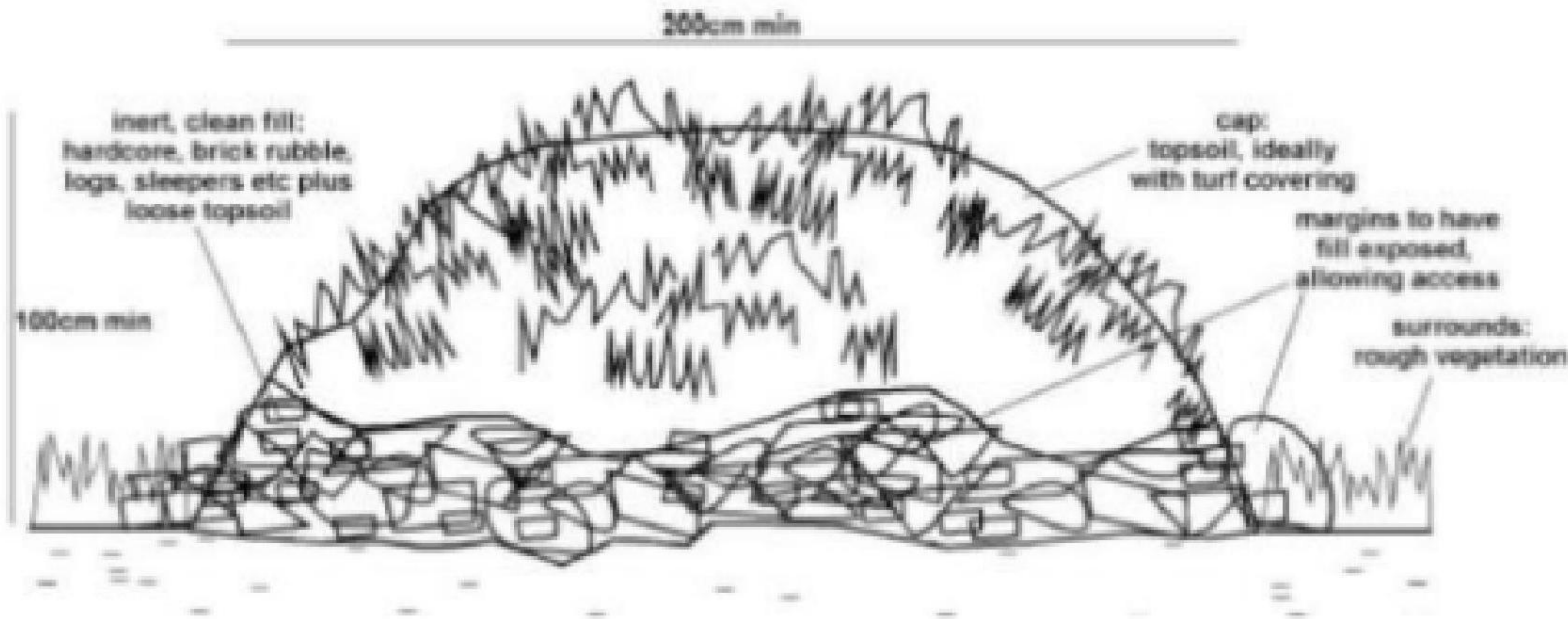
6.7 Ecological Enhancements

6.7.1 Log Pile

A single log pile will be created within the retained woodland on site (see **appended Enhancement Plan** for indicative location) to provide shelter for any reptiles or amphibians, should they be present in the area. Log piles can also increase invertebrate biomass and have further positive impacts on site biodiversity. This log pile may use a combination of logs,

branches, brash and grass cuttings from the sensitive clearance above and any tree surgery (Fig 17).

Figure 17. Reptile hibernaculum design as provided in HART (2009).



6.7.2 Bird Box

Additionally, to provide new nesting habitat for birds on site, a general bird box will be installed on a retained tree on site. The Vivara Pro Seville WoodStone Nest Box (Fig 18) is considered to be suitable. It will be installed at approximately 3m off of the ground in a sheltered location away from branches that could allow access by predators.

Figure 18. Vivara Pro Seville nest box to be erected on site (NHBS, 2023).



8.0 CONCLUSION

An Ecological Impact Assessment was undertaken on the residential property at Westhouse Farm, Sayers Common, Hassocks in relation to the proposed extension and new carport on site. There is potential for foraging and commuting bats, nesting birds, foraging and commuting Badgers, reptiles, Great Crested Newts and hedgehogs to be present, although all habitat considered suitable for reptiles, GCN and birds are expected to be retained. Mitigation, compensation and enhancement measures have been set out within this report including: protection of retained habitats and avoidance measures for Badgers and birds and enhancements have been specified to provide new opportunities within the site. Therefore, it is considered that the measures within this report suitably mitigate against any potential impacts to the above noted species as a result of the development.

9.0 REFERENCES

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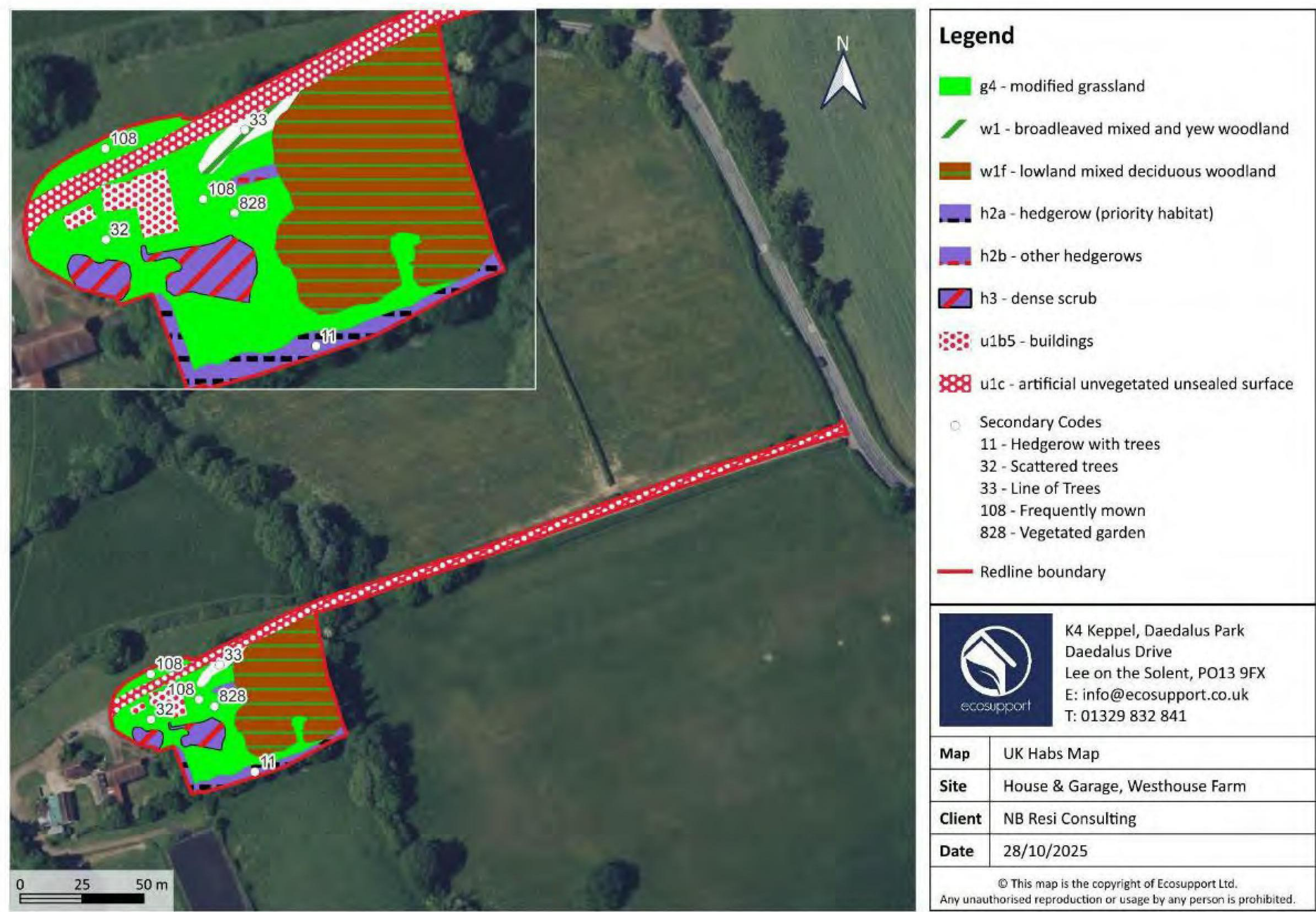
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APPENDICES

Appendix A. Field of View – Bat Survey

NVA / Survey or Location	Field of View (Start)	Field of View (End)
18		
19		

Appendix B. Baseline Habitats Plan



Appendix C. Enhancements Plan

