

Rose Hill Farm, Whalley Old Road, Billington BB7 9JF

ECOLOGICAL SURVEY AND ASSESSMENT **(Including a Licensed Bat Survey)**

March 2026

ERAP (Consultant Ecologists) Ltd Reference: 2025-214

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Document Control

Survey Type:	Surveyors ¹	Survey Date(s)
Ecological appraisal	Brian Robinson	26 th August 2025 and 23 rd September 2025
Daytime Bat Walkover Survey	Brian Robison and Oscar Caunce	10 th July 2025
Dusk Emergence Bat Survey Repetition 1	Lynne Rigby, Julia Rigby, Natalie Coffey, Leah Hart, Sue Lonsdale and Amy Sharples	5 th August 2025
Dusk Emergence Bat Survey Repetition 2	Keiran Bolton, Brian Robinson and Stephen Bolton	26 th August 2025
Dusk Emergence Bat Survey Repetition 3	John Harrison-Bryant, Natalie Coffey, Oscar Caunce, Sue Lonsdale, Leah Hart and Brian Robinson	23 rd September 2025
Reporting	Personnel	Date
Author	Brian Robinson B.Sc. (Hons) MCIEEM Senior Ecologist	8 th December 2025
Signature(s)		
Checked	Rebecca Bayley B.Sc. (Hons)	11 th December
Revised and issued	Brian Robinson	12 th December
Updated	Victoria Burrows: Updated bat mitigation strategy following review and discussion with ZMA. Name of site updated.	16 th February 2026
Report issued to	Zara Moon Architects	
Version Number	2	
¹ Licence reference numbers Bats John Harrison-Bryant Natural England Class Survey Licence (bats, Level 2) Registration Number 2015-10251-CLS-CLS Brian Robinson Natural England Class Survey Licence (bats, Level 2) Registration Number 2015-13161-CLS-CLS		

SUMMARY

Introduction and Scope

- i. This ecological survey and assessment presents the ecological, biodiversity and nature conservation status of Rose Hill Farm. The assessment was requested to inform a planning application proposing the demolition of the existing dwelling and redevelopment of the site to a new residential dwelling with associated access and gardens.
- ii. This report presents the results of a desktop study, data search, extended Phase 1 Habitat Survey, licensed bat survey and dusk emergence bat surveys carried out between July and September 2025. The scope of survey undertaken is appropriate to identify potential ecological constraints, the remit of mitigation required and opportunities for biodiversity associated with the development proposals.
- iii. The site comprises a detached residential dwelling with a disused stable, hardstanding, gardens (comprising amenity grassland and ornamental shrubs), a field of grassland at its southern end (and across which the access is proposed) and boundary hedgerows at its northern and southern ends. Woodland is located adjacent to the western and eastern site boundaries.

Results of Survey and Assessment

- iv. The proposed development should seek to avoid impacting Smalley's Farm BHS, which is located offsite and to the east, either directly or indirectly, during the proposed development. It is recommended that a suitable buffer is used to avoid direct impacts to the BHS during any proposed construction works. Works should be regulated by the enforcement of a Construction Environmental Management Plan (CEMP) or similar, and appropriate fencing should be used to ensure works do not impact upon the BHS.
- v. Guidance to be implemented for the protection of the BHS during the proposed works is presented at **Section 5.4**. It is otherwise considered that the proposals are unlikely to impact any statutory or non-statutory designated sites for nature conservation.
- vi. Only common and widespread plant species were found. None of the habitats present are representative of semi-natural habitat. The National Vegetation Classification (NVC) communities present are typical of the geographical area and conditions present. Both Hedgerows 1 and 2 are Priority Habitat; no other Priority Habitats are present within the site however. No irreplaceable habitats were detected within the site.
- vii. In terms of each habitat's importance in a geographical context, the areas of woodland, Hedgerows 1 and 2, and the southern grassland field are considered to be of 'local' importance. The garden habitats are of 'site' value only, and hardstanding and buildings are not considered to hold any importance on a geographical scale. Recommendations relating to the site layout, the retention and protection of the woodland and grassland habitats and for any compensatory planting required as a consequence of the proposed development are presented at **Section 5.3**. Measures for the protection of habitats during the proposed works are presented at **Section 5.4**.
- viii. Indian Balsam, Wall Cotoneaster and Hollyberry Cotoneaster, Virginia Creeper and Montbretia, all of which are invasive plant species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), have been detected within or within close proximity to the site. It is considered that the

proposals present an opportunity for the eradication of these species as part of the proposed development. Further guidance is presented at **Section 5.4**.

- ix. Building 1 supports a brown long-eared bat day roost with evidence of use over a long-period and is a day roost of common pipistrelle bats (with six emergence points identified). The proposals have the potential to harm individual bats and impact roosting bats and bat roosts. Works may only be completed following the receipt of an appropriate Natural England European Protected Species Mitigation (EPSM) Licence. A draft Method Statement for the protection of bats during the proposed works, and for appropriate mitigation and compensation for the roosts, is appended at **Section 9.0**. An initial assessment of the proposals under the 'Three Tests' used by Natural England to assess licence applications is presented at **Section 4.4**.
- x. The site provides suitable habitat for nesting birds, and for foraging and sheltering hedgehog and brown hare. No badger have been detected within the site, but the site is located within an area of suitable habitat for badger. Recommendations for the protection of wildlife during the proposed works are presented at **Section 5.4**.
- xi. No other protected species have been detected.

Recommendations

- xii. The recommendations in **Section 5.0** outline all the mandatory measures and additional actions to be applied to ensure compliance with wildlife legislation, the National Planning Policy Framework (NPPF) and best practice.
- xiii. The proposals will secure an opportunity to implement beneficial measures such as habitat management and habitat creation that will safeguard habitats for wildlife such as birds and bats, with the aim of providing a net gain in biodiversity in accordance with the principles of the NPPF.

Conclusion

- xiv. It is concluded that the proposals are feasible and acceptable in accordance with ecological considerations and relevant planning policy. Redevelopment at the site will provide an opportunity to secure ecological enhancement for wildlife associated with rural areas.

1.0 INTRODUCTION

1.1 Background and Rationale

- 1.1.1 ERAP (Consultant Ecologists) Ltd was commissioned by Zara Moon Architects to carry out an ecological assessment of Rose Hill Farm (also known as Smalley's Farm and hereafter referred to as the 'site'). The Ordnance Survey (OS) grid reference at the centre of the site is SD 71673 34528. An aerial image of the site and its surrounding habitats is appended at **Figure 1** (source image: ESRI World Imagery).
- 1.1.2 The assessment was requested to inform a planning application proposing the demolition of the existing dwelling and redevelopment of the site to a new residential dwelling with associated access and gardens.

1.2 Scope of Works

- 1.2.1 The scope of ecological works undertaken between July and September 2025 comprised:
- A desktop study and data search for known ecological information at the site and the local area;
 - An Extended Phase 1 Habitat Survey and assessment, and assessment of the habitats present at the site using the UK Habitats Classification;
 - Assessment of the ecological value of the habitats within the site with the use of the National Vegetation Classification (NVC) and the Ratcliffe criteria, as presented in *A Nature Conservation Review* (Ratcliffe, 1977);
 - Survey and assessment of all habitats for relevant statutorily protected species¹ and other wildlife including badger (*Meles meles*), barn owl (*Tyto alba*), great crested newt (*Triturus cristatus*), bird species and reptiles;
 - A daytime bat walkover survey for bats, which has comprised a licensed preliminary roost assessment of the buildings, a ground level tree assessment and an assessment of the suitability of the habitats within the site and the surrounding area for foraging and commuting bats;
 - Three dusk emergence surveys to determine the presence or absence of roosting bats, and to characterise any roosts detected;
 - The identification of any potential ecological constraints on the proposals and the specification of the scope of mitigation and ecological enhancement required in accordance with wildlife legislation, planning policy guidance and other relevant guidance; and
 - The identification of any further surveys or precautionary actions that may be required to inform the progression of the site through the planning process or prior to the commencement of any construction activities.

¹ In accordance with *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact on the Planning System* (Office of the Deputy Prime Minister, 2005) developers should not be required to undertake surveys for protected species unless there is reasonable likelihood of the species being present and affected by the development. In this instance (for example) there are no water bodies or water courses within or adjacent to the site; there has been no requirement to consider water vole (*Arvicola amphibius*) or otter (*Lutra lutra*) as part of this assessment.

2.0 METHOD OF SURVEY

2.1 Desktop Study and Data Search

2.1.1 The following sources of information and ecological records were consulted:

- a. MAGiC Maps: A web-based interactive map which brings together geographic information on key environmental schemes and designations, including details of statutory nature conservation sites;
- b. Ancient Tree Inventory (Woodland Trust, 2025): An online database of ancient and veteran trees;
- c. Lancashire's Local Nature Recovery Strategy (LNRS);
- d. Lancashire Environment Record Network (LERN); and
- e. Lancashire Biodiversity Action Plan (BAP).

2.2 Vegetation and Habitats

2.2.1 An Extended Phase 1 Habitat Survey of the site was carried out by Brian Robinson on 26th August and 23rd September 2025. The weather on 26th August was dry and sunny with a light air (Beaufort scale 1) and an air temperature of 21°C. The weather on 23rd September was dry and sunny with a light air (Beaufort scale 1) and an air temperature of 17°C.

2.2.2 A habitat and vegetation map was produced for the site and the immediate surrounding area and is appended at **Figure 2**. The mapping is based on the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC, 2010) with minor adjustments to illustrate and examine the habitats with greater precision.

2.2.3 On site habitat mapping was assisted via use of GPS technology and QField on-site mapping software, using *ESRI World Imagery* as a base plan. Mapping collected on site was subsequently assisted by the use of a DJI Mini 3 drone; aerial imagery was collected using WebODM software, which was additionally used to ensure accuracy in the mapping of the site.

2.2.4 The plant species within the site boundary were determined with estimates of the distribution, ground cover, abundance and constancy of individual species. The estimation of abundance was based on the DAFOR system, where D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare, this being a widely used and accepted system employed by ecological surveyors. The terms L = Locally and V = Very were additionally used to describe the plant species distributions with greater precision.

2.2.5 Stands of vegetation and habitats were described and evaluated using the National Vegetation Classification (NVC). The NVC provides a systematic and comprehensive analysis of British vegetation and is a reliable framework for nature conservation and land-use planning.

2.2.6 Habitats within the site were assessed in accordance with *The UK Habitat Classification Version 2.0* (UKHab Ltd, 2023). The UK Habitat Classification, or 'UKHab' has been designed to function at two scales of minimum mappable unit (MMU): fine scale (25m² or 5 metres length) and large scale (400m² or 20 metres length). It has been considered for the purposes of this survey that the fine scale of 25m² or 5 metres length MMU is appropriate.

2.2.7 Hedgerows were assessed in accordance with *The Hedgerows Regulations 1997* wildlife and landscape criteria (H.M.S.O., 1997).

- 2.2.8 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and species which are indicators of important and uncommon plant communities. Plant nomenclature follows *New Flora of the British Isles 3rd Edition* (Stace, 2010).
- 2.2.9 Searches were carried out for the presence of invasive species, including those listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), including Japanese Knotweed (*Fallopia japonica*), Indian Balsam (*Impatiens glandulifera*) and Giant Hogweed (*Heracleum mantegazzianum*).

2.3 Animal Life

Badger

- 2.3.1 The survey area for badger covered the site (as annotated on **Figure 2**) and extended to accessible land within a radius of 50 metres from the site boundary. Private gardens / land beyond the site boundary were excluded from the survey. The survey was conducted in accordance with guidance presented within *Badgers and Development* (Natural England, 2007) and *Badgers: advice for making planning decisions* (Natural England, 2022).
- 2.3.2 The following signs of badger activity were searched for:
- Sett entrances, e.g. entrances that are normally 25 to 35cm in diameter and shaped like a 'D' on its side;
 - Large spoil heaps outside sett entrances;
 - Bedding outside sett entrances;
 - Badger footprints;
 - Badger paths;
 - Latrines;
 - Badger hairs on fences or bushes;
 - Scratching posts; and
 - Signs of digging for food.
- 2.3.3 Habitats within and surrounding the site were assessed in terms of their suitability for use by foraging and sheltering badger in accordance with their known habitat preferences as detailed in current guidance and *Badger* (Roper, 2010).

Bat Species

Daytime Bat Walkover Survey

Survey Personnel

- 2.3.4 The site was assessed for its suitability to support roosting bats by Brian Robinson, Natural England Class Survey Licence WML CL18 (Bat Survey Level 2), Registration Number 2015-13161-CLS-CLS, assisted by Oscar Caunce. The surveyor's qualifications and experience meet the criteria as defined in the *Technical Guidance Series Competencies for Species Survey: Bats* (CIEEM, 2013). The survey was completed on 10th

July 2025; the weather was dry and sunny, with a light air (Beaufort scale 1) and an air temperature of 27°C.

Preliminary Roost Assessment of the Buildings

- 2.3.5 The surveys were carried out in accordance with standard methodology including the *Bat Mitigation Guidelines* (Mitchell-Jones, 2004), the *Bat Workers' Manual 3rd Edition* (Mitchell-Jones & Mcleish, 2004) and *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)* (Collins, J. (ed), 2023).
- 2.3.6 An inspection of the external surfaces, walls and roofs of the buildings was carried out to find potential bat roosting habitat or accesses into internal areas where roosts may be present. Searches for evidence of bat presence in the form of droppings, urine stains, feeding signs, grease marks and other evidence were also carried out.
- 2.3.7 The internal survey involved an examination of the accessible internal areas (including roof voids) to search for roosting bats or evidence of past use of the buildings by bats such as droppings and prey remains.
- 2.3.8 A list of equipment used is detailed in **Table 2.1**.

Table 2.1: Survey Equipment used during Daytime Bat Survey

Ladders
LED Lenser P14 torch
Canon Ixus digital camera
8x20 binoculars
Ridgid Micro Inspection Camera Borescope CA-100

- 2.3.9 The suitability of each building has been assessed in accordance with Table 4.1 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)* (Collins, J. (ed), 2023), taking into account any presence of gaps suitable for access by bats, features suitable for use by roosting bats within the building (including crevice dwelling species and species which can roost in the open in roof voids), and the suitability of the surrounding habitats for use by foraging and commuting bats. The suitability of each building has been informed by the following categories as presented in **Table 2.2**.

Table 2.2: Suitability Categories for Roosting Habitats in Buildings

Suitability	Description
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices / suitable shelter at all ground / underground levels).
Negligible ^a	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 ^b and / or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ^c).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b 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).

Suitability	Description
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 ^b and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool / stable hibernation site.
^a Negligible is defined as ‘so small or unimportant as to be not worth considering, insignificant’. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute). ^b For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance. ^c Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten <i>et al.</i> , 2016 and Jansen <i>et al.</i> , 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.	

Ground Level Tree Assessment

- 2.3.10 A preliminary assessment of the trees within the site was conducted to assess their suitability for use by roosting bats, and to inform whether further surveys or precautionary measures were required.
- 2.3.11 Trees were assessed from the ground using binoculars and a high-powered torch. Each tree was searched for the presence of the following features:
- Woodpecker holes, rot holes, hazard beams, other vertical or horizontal cracks or splits in stems and branches, partially decayed platey bark, knot holes, man-made holes, tear-outs, cankers in which cavities have developed, other hollows or cavities, including butt-rots, double-leaders forming compression forks with included bark, gaps between overlapping stems or branches, partially detached Ivy (Hedera helix) with stem diameters in excess of 50mm and bat, bird or dormouse (Muscardinus avellanarius) boxes.*
- 2.3.12 Terms used to describe any features present follow (where possible) those outlined and described in *Bat Tree Habitat Key, 2nd Edition* (Andrews, H (ed), 2013) and *Bat Roosts in Trees: A Guide to Identification and Assessment for Tree-care and Ecology Professionals* (BTHK, 2018).
- 2.3.13 Trees have been assessed and described using the categories presented at Tables 4.2 and 6.2 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)*, (Collins, J. (ed), 2023), as presented in **Table 2.3**.

Table 2.3: Definition of Terms and Suitability Categories Used in Tree Survey for Roosting Bats

Terms and Suitability Categories	Description
PRF	Potential Roost Feature
None	Either no PRFs in the tree(s) or highly unlikely to be any.
FAR	Further Assessment Required to establish if PRFs are present in the tree
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

Habitat Assessment for Commuting / Foraging Bats

- 2.3.14 Habitats within and adjacent to the site were assessed for their value and suitability for commuting and foraging bats in accordance with Table 4.1 of *Bat Surveys for Professional Ecologists: Good Practice*

Guidelines (4th edn) (Collins, J. (ed), 2023). Reference has been made to the categories, descriptions and examples presented in **Table 2.4**.

Table 2.4: Consideration of Suitability of Foraging and Commuting Habitat for Bats

Suitability	Potential Flight Paths and Foraging Habitats
None	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade / protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible ^a	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
^a Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).	

Presence / Absence Surveys: Dusk Emergence Surveys

- 2.3.15 Three dusk emergence surveys, supplemented by night vision aids (NVAs), were conducted at Building 1 between August and September 2025, and two surveys were completed at Building 3 during this period. All surveys were conducted under suitable conditions. The dates of the surveys, surveyors, equipment used and weather conditions are presented in **Table 2.5**.
- 2.3.16 The dusk emergence surveys commenced at least 15 minutes before sunset, and continued for at least 1.5 hours after sunset.
- 2.3.17 Surveyors, experienced in conducting bat surveys, were positioned at suitable locations to maximise the coverage of the building to determine any entry or emergence by roosting bats. Any bat emergence or re-entry activity was recorded, with brief notes relating to bat activity at each survey position collated at the end of the survey.
- 2.3.18 Recording bat detector units² were used to determine any bat detected to species or group (Myotis species, for example, often cannot be reliably identified to species from their echolocation calls). Recorded calls were analysed after the survey using Anabat Insight bat call analysis software.

² i.e. Anabat Express (FS), Anabat Walkabout and Anabat Scout units.

- 2.3.19 Night vision aids (NVA)³, supplemented with additional infra-red lighting (comprising Nightfox XB5 torches and infra-red floodlights) were used at the surveyor positions presented in **Table 2.5**. Footage was subsequently reviewed using VLC Media Player to determine any emergence / re-entry at the buildings.
- 2.3.20 Surveyor positions and NVA locations are annotated on **Figure 3**. Photographs showing each survey position from the darkest point of the surveys are appended at **Photos 34 to 37**.

Table 2.5: Dusk Emergence Survey Dates, Weather Conditions and Surveyors

Date	5 th August 2025	26 th August 2025	23 rd September 2025
Sunset time:	21:00	20:15	19:07
Start & end time	20:45 until 22:30	20:00 until 21:45	18:50 until 21:00
Weather	14°C and dry with a light air (Beaufort scale 1)	18°C and dry with a light air (Beaufort scale 1)	14°C and dry with a light air (Beaufort scale 1)
Survey Position	Surveyor, Detector and NVA	Surveyor, Detector and NVA	Surveyor, Detector and NVA
1	Lynne Rigby, Anabat Scout & Canon XA60	Anabat Express (FS) & Guide TK612 ⁴	John Harrison-Bryant, Anabat Walkabout & Guide TK612
2	Julia Rigby, Anabat Scout & Canon XA60	Keiran Bolton, Anabat Scout & Guide TK612	Natalie Coffey, Anabat Scout & Guide TK612
3	Natalie Coffey, Anabat Scout & Guide TK612	Brian Robinson, Anabat Scout & Guide TK612	Oscar Caunce, Anabat Scout & Guide TK612
4	Leah Hart, Anabat Scout & Guide TK612	Stephen Bolton, Anabat Scout & Guide TK612	Sue Lonsdale, Anabat Scout & Guide TK612
5	Sue Lonsdale, Anabat Express, Batbox Duet & Canon XA60	-	Leah Hatrt, Anabat Scout & Canon XA20
6	Amy Sharples, Anabat Express, Batbox III & Canon XA10	-	Brian Robinson, Anabat Scout & Guide TK612

Bird Species

- 2.3.21 Bird species observed and heard during the survey were recorded.
- 2.3.22 Habitats throughout the site and in the immediate surrounding area were assessed for their value to roosting, feeding and nesting birds, as indicated by the amount of shelter, feeding value, woody vegetation structure and species diversity of tree and shrub species in the site.
- 2.3.23 During the internal inspection on 10th Jul 2025 all buildings were searched for pellets, faecal splashes and feathers which may indicate use by roosting or nesting barn owl in accordance with *The Barn Owl Conservation Handbook* (Barn Owl Trust, 2012) and *Barn Owl Tyto alba Survey Methodology and Techniques for use in Ecological Assessment. Developing Best Practice in Survey and Reporting* (Shawyer, 2011).

³ Canon XA10, XA20 and XA60 camcorders, and Guide TK612 thermal monoculars.

⁴ Surveyor position was unmanned, and the footage was subsequently reviewed by Brian Robinson

Great Crested Newt

Desktop Search for Ponds

- 2.3.24 In accordance with *Great crested newts: advice for making planning decisions* (Natural England, 2022) all ponds within an unobstructed 500 metres of a site should be considered for their suitability to support breeding great crested newts. The potential of the proposed development to impact upon any great crested newt population(s) whose breeding ponds are within 500 metres must be considered.
- 2.3.25 The search of habitats in the wider area up to a distance of 500 metres from the site boundary revealed the presence of nine ponds, as detailed in **Table 2.6**. All of the ponds are associated with the golf course to the west of the site.

Table 2.6: Ponds within 500 metres of the Site

Pond Reference	OS Grid Reference	Distance and Direction from Site Boundary (refer to Figure 1)
Pond 1	SD 71384 34523	210 metres to the west
Pond 2	SD 71319 34500	274 metres to the west
Pond 3	SD 71306 34517	287 metres to the west
Pond 4	SD 71301 34631	320 metres to the west
Pond 5	SD 71275 34435	324 metres to the west
Pond 6	SD 71193 34390	414 metres to the west
Pond 7	SD 71171 34407	431 metres to the west
Pond 8	SD 71153 34410	448 metres to the west
Pond 9	SD 71126 34413	474 metres to the west

Consideration of Requirement for Further Survey

- 2.3.26 The requirement for further survey at each pond was then assessed using the following criteria:
- Presence of dispersal barriers to great crested newt movements between ponds and the site, as detected during the walkover survey;
 - Distance of ponds from the site, and the potential influence of the proposed development of the site on any populations of great crested newt (if present at ponds), using the Natural England rapid risk assessment tool; and
 - Presence of other ponds which may form metapopulations and / or alter the influence of the site on ponds at greater distances.

Presence of Dispersal Barriers

- 2.3.27 No significant dispersal barriers are located between the ponds and the site.

Consideration of Distance of Ponds from Site and Relative Size of Site

- 2.3.28 The Natural England Rapid Risk Assessment tool from *GCN Method Statement WML-A14-2 (Version April 2020)* (Natural England, 2020) has been completed to inform the requirement for further surveys, and is presented in **Table 2.7**.
- 2.3.29 The tool has been completed based on the distances of the ponds from the site, and the size of the development site (0.51 hectares, or 'ha'), taking into account the total area of the site within 250 metres

of the nearest pond (0.2 hectares). The rapid risk assessment tool assumes that great crested newt are present.

Table 2.7: Rapid Risk Assessment Result

Component	Likely Effect	Notional Offence Probability Score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	1 – 5 ha lost or damaged	0.04
Individual great crested newts	No effect	0
Maximum:		0.01
Rapid risk assessment result:	Green: Offence Highly Unlikely	

2.3.30 The Natural England Rapid Risk Assessment indicates that the site is sufficiently small and distant from all ponds that any proposed development is highly unlikely to impact upon great crested newt populations (if present).

2.3.31 No further surveys in respect of great crested newt were considered necessary.

Reptile Species

2.3.32 The site and its surroundings were assessed in terms of their suitability for use by reptile species using the important characteristics for reptiles outlined in the draft document *Reptile Mitigation Guidelines* (Natural England, 2011), and the *Reptile Habitat Management Handbook* (Edgar, et al., 2010). These habitat characteristics are outlined in **Table 2.8**.

Table 2.8: Important Habitat Characteristics for Reptiles

1. Location (in relation to species range)	7. Connectivity to nearby good quality habitat
2. Vegetation Structure	8. Prey abundance
3. Insolation	9. Refuge opportunity
4. Aspect	10. Hibernation habitat potential
5. Topography	11. Disturbance regime
6. Surface geology	12. Egg-laying site potential

Other Wildlife

2.3.33 Evidence of other wildlife, including Priority Species, observed whilst on site, but for which specific surveys were not made, was recorded and has been included in this report where it is considered of relevance to the planning application.

2.3.34 Habitats have been assessed for their suitability for Priority Species identified in the data search results where this is considered relevant to the application.

2.4 Survey and Reporting Limitations

2.4.1 The whole site was accessible and surveys were completed at a suitable time of year. No significant survey limitations were experienced.

- 2.4.2 All measurements within this report are approximate only, and have been either measured (using QField) or estimated whilst on site or calculated using mapping software (QGIS) or internet-based mapping services such as MAGiC Maps and Google Earth.

2.5 Evaluation Methods

- 2.5.1 The habitats, vegetation and animal life were evaluated with reference to standard nature conservation criteria as described in *A Nature Conservation Review* (Ratcliffe, 1977) and *Guidelines for the Selection of Biological SSSIs* (Bainbridge, et al., 2013). These are size (extent), diversity, naturalness, rarity, fragility, typicality, recorded history, position in an ecological or geographical unit, potential value and intrinsic appeal.
- 2.5.2 Habitats have been assessed to determine whether they meet those described in *UK Biodiversity Action Plan: Priority Habitat Descriptions* (Maddock, A (ed), 2008); these lists are used to help draw up the statutory lists of Priority Habitats, as required under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006*. Where suitable, the ecological value of the habitats present has been assessed using the terms outlined in *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018). Each habitat and individual trees have been assessed to determine whether they are ‘irreplaceable habitat’, defined in *National Planning Policy Framework* (Ministry of Housing, Communities & Local Government, 2024)⁵ as ‘Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen’. The further detail presented in *The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024* (GOV.UK, 2024) has also been referred to.
- 2.5.3 Government advice on wildlife, as set out in the NPPF and associated government circulars has been taken into consideration. Legislation relating to protected species, such as those listed under Schedules 1, 5, 6 and 8 of the *Wildlife and Countryside Act 1981* (as amended) and *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*, is referenced where applicable, and any impacts to protected species are evaluated in accordance with current guidance.
- 2.5.4 The presence of any Priority Species, as listed under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006* is noted, and habitats are assessed in terms of their suitability and value for these species. The presence of habitats and / or species listed by the Lancashire BAP has been taken into account in the evaluation of the site.

⁵Hereafter the NPPF

3.0 SURVEY RESULTS

3.1 Desktop Study and Data Search

Statutory Designated Sites for Nature Conservation and SSSI Impact Risk Zones

3.1.1 The site is not and does not form part of any statutory designated site for nature conservation. The site lies within a Site of Special Scientific Interest (SSSI) Impact Risk Zone for the following statutory designated sites for nature conservation:

- a. Cock Wood Gorge SSSI, which is located 3 kilometres to the east of the site and is designated for its geological interest; and
- b. Harper Clough and Smalley Delph Quarries SSSI, which is located 2.5 kilometres to the south and is designated for its geological interest.

3.1.2 The SSSI Impact Risk Zone requires the Local Planning Authority to consult with Natural England on likely risks from the following development categories (Natural England, 2025):

- a. **Infrastructure:** Airports, helipads and other aviation proposals.
- b. **Minerals, Oil and Gas:** Planning applications for quarries, including: new proposals, Review of Minerals Permissions, extensions, variations to conditions etc. Oil and gas exploration / extraction.

3.1.3 The proposals do not meet any of the development categories which would require further consultation with Natural England on likely risks from the proposed development to the statutory designated sites for nature conservation present in the wider area.

Non-statutory Designated Sites for Nature Conservation

3.1.4 The site is not and does not form part of any non-statutory designated site for nature conservation, called 'Biological Heritage Sites' or 'BHS' in Lancashire.

3.1.5 Six BHS are located within a 2 kilometres radius from the centre of the site, and are summarised in **Table 3.1**.

Table 3.1: BHS Within a 2 Kilometres Radius from the Centre of the Site

BHS Name	Distance and Direction from the Site	Reasons for Designation
Smalley's Farm	Adjacent to the eastern site boundary	A complex of approximately 4 hectares of species-rich pastures, bounded by hedgerows, streams and small wooded cloughs, lying immediately to the south of Billington, near Whalley. The fields are predominantly neutral and poorly drained, with some areas of acid grassland, particularly along the field boundaries. Collectively and individually, these fields represent one of the most diverse sites known in the country for grassland fungi. In total, nearly 600 macro-fungi are present, including at least 23 species or varieties of pink-gills (<i>Entoloma</i> spp.), 35 waxcaps (<i>Hygrocybe</i> spp.), 18 fairy clubs (<i>Clavaria</i> spp., <i>Clavulinopsis</i> spp. and <i>Clavulina</i> spp.) and 4 earth tongues (<i>Geoglossum</i> spp. and <i>Trichoglossum</i> spp.).

BHS Name	Distance and Direction from the Site	Reasons for Designation
Cronshaw Chair	0.21 kilometres to the south-west	The BHS is noteworthy for the presence of invertebrates including Green Hairstreak and Birch Sawfly.
Dean Wood and Higher Dean Wood	0.94 kilometres to the east	Two semi-natural ancient woodlands
Dean Clough Reservoir	0.99 kilometres to the south	The BHS is important for the presence of breeding little grebe, a scarce breeding species in Lancashire.
Chew Bank Wood	1.62 kilometres to the north	Woodland which is ancient semi-natural in character.
Banks Wood and Marsh	1.87 kilometres to the east	Ancient semi-natural woodland listed in the <i>Lancashire Inventory of Ancient Woodland (Provisional)</i> , (English Nature, 1994), with flushes and areas of Alder carr, fen and species-rich grassland, along the western banks of the River Calder in Great Harwood. Of particular interest is Yellow Star-of-Bethlehem, a species included in the <i>Provisional Lancashire Red Data List of Vascular Plants</i> .

3.1.6 The presence of the 6 BHS is considered further at **Section 4.2**.

3.1.7 The site lies within the Forestry Commission (FC) / British Trust for Ornithology (BTO) Wader Zone. The suitability of the site for wading birds is considered further at **Section 4.2**.

Local Nature Recovery Strategy

3.1.8 The southern field within the site is listed as an 'Area that Could Become of Particular Importance' on the Lancashire LNRS. The measure associated with the designation states:

'Create appropriate semi-natural habitats to buffer, expand or connect existing woodland, incorporating natural colonisation wherever possible'.

3.1.9 The ecological value of the southern grassland is considered further at **Section 4.4**.

Priority Habitats Inventory

3.1.10 The Priority Habitats Inventory⁶ was checked via MAGiC Maps. No Priority Habitats are identified at the site by the inventory.

Ancient Tree Inventory

3.1.11 No ancient or veteran trees are identified at the site by the inventory.

Protected and Notable Species

3.1.12 No records of protected and notable species are held by LERN for the site.

⁶ A spatial dataset that describes the geographic extent and location of Natural Environment and Rural Communities Act (2006) Section 41 habitats of principal importance.

3.1.13 Records of protected and notable species for a 2 kilometres radius from the centre of the site are summarised in **Table 3.3**. Where distance and directional information is not provided this is due to the records for that species being provided to a 1km² level of accuracy (i.e. Monad level) or less.

Table 3.2: Records of Protected Species Within a 2 Kilometres Radius from the Centre of the Site

Taxon Group	Species Name and Designations ¹ and Notes
Amphibians	Common toad (<i>Bufo bufo</i>): WCAs5 (sale only), PS & LBAP. 1 record from 2020, located 695 metres to the south-west.
Birds – WCAs1 Species	Black tern (<i>Chlidonias niger</i>): WCAs1 1 record from 2007. Brambling (<i>Fringilla montifringilla</i>): WCAs1. 3 records, all from 2007. Common crossbill (<i>Loxia curvirostra</i>): WCAs1. 2 records, both from 2007. Fieldfare (<i>Turdus pilaris</i>): WCAs1. 5 records, dated between 1968 and 2007. Garganey (<i>Anas querquedula</i>): WCAs1. 2 records, dated 1968 and 1990. The closest record is 1350 metres to the south, and from 1968. Goldeneye (<i>Bucephala clangula</i>): WCAs1. 5 records, dated between 1968 and 2007. Green sandpiper (<i>Tringa ochropus</i>): WCAs1. 2 records, dated 1968 and 2007. The closest record is 1350 metres to the south, and from 1968. Greenshank (<i>Tringa nebularia</i>): WCAs1. 3 records, dated between 1968 and 2007. The closest record is 1350 metres to the south, and from 1968. Greylag goose (<i>Anser anser</i>): WCAs1. 2 records, both from 2007. Kingfisher (<i>Alcedo atthis</i>): WCAs1. 4 records, dated between 1968 and 2007. Osprey (<i>Pandion haliaetus</i>): WCAs1. 3 records, dated between 1968 and 1990. The closest record is 1350 metres to the south, and from 1968. Quail (<i>Coturnix coturnix</i>): WCAs1 1 record from 2007. Redwing (<i>Turdus iliacus</i>): WCAs1. 5 records, dated between 1968 and 2007. Wood sandpiper (<i>Tringa glareola</i>): WCAs1. 2 records, dated 1968 and 2007. The closest record is 1350 metres to the south, and from 1968. Black-tailed godwit (<i>Limosa limosa</i>): WCAs1, PS & LBAP. 3 records, dated between 1968 and 2007. The closest record is 1350 metres to the south, and from 1968. Common scoter (<i>Melanitta nigra</i>): WCAs1, PS & LBAP. 2 records, both from 2007. Scaup (<i>Aythya marila</i>): WCAs1 & PS. 4 records, dated between 1968 and 2007. The closest record is 1350 metres to the south, and from 1968. Goshawk (<i>Accipiter gentilis</i>): WCAs1 & LBAP. 1 record from 2010, located 1915 metres to the north-east. Hobby (<i>Falco subbuteo</i>): WCAs1 & LBAP 1 record from 2007. Little ringed plover (<i>Charadrius dubius</i>): WCAs1 & LBAP 1 record from 2007 Mediterranean gull (<i>Larus melanocephalus</i>): WCAs1 & LBAP 1 record from 2007 Merlin (<i>Falco columbarius</i>): WCAs1 & LBAP. 1 record from 1990, located 1740 metres to the south. Peregrine (<i>Falco peregrinus</i>): WCAs1 & LBAP. 3 records, all from 2007. Pintail (<i>Anas acuta</i>): WCAs1 & LBAP. 1 record from 1968, located 1350 metres to the south. Red kite (<i>Milvus milvus</i>): WCAs1 & LBAP 1 record from 2007. Spotted crane (<i>Porzana porzana</i>): WCAs1 & LBAP. 1 record from 1968, located 1350 metres to the south. Whimbrel (<i>Numenius phaeopus</i>): WCAs1 & LBAP 1 record from 2007. Whooper swan (<i>Cygnus cygnus</i>): WCAs1 & LBAP. 2 records, dated 1968 and 2007. The closest record is 1350 metres to the south, and from 1968.
Birds – PS and LBAP Species	PS & LBAP: Skylark (<i>Alauda arvensis</i>), tree pipit (<i>Anthus trivialis</i>), cuckoo (<i>Cuculus canorus</i>), lesser spotted woodpecker (<i>Dendrocopos minor</i>), yellowhammer (<i>Emberiza citrinella</i>), reed bunting (<i>Emberiza schoeniclus</i>), herring gull (<i>Larus argentatus</i>), grasshopper warbler

Taxon Group	Species Name and Designations ¹ and Notes
	(<i>Locustella naevia</i>), yellow wagtail (<i>Motacilla flava</i>), spotted flycatcher (<i>Muscicapa striata</i>), curlew (<i>Numenius arquata</i>), house sparrow (<i>Passer domesticus</i>), tree sparrow (<i>Passer montanus</i>), grey partridge (<i>Perdix perdix</i>), wood warbler (<i>Phylloscopus sibilatrix</i>), dunnoek (<i>Prunella modularis</i>), bullfinch (<i>Pyrrhula pyrrhula</i>), starling (<i>Sturnus vulgaris</i>), song thrush (<i>Turdus philomelos</i>), ring ouzel (<i>Turdus torquatus</i>) and lapwing (<i>Vanellus vanellus</i>). PS Only: Lesser redpoll (<i>Acanthis cabaret</i>), linnet (<i>Linaria cannabina</i>) and marsh tit (<i>Poecile palustris</i>). LBAP Only: Common sandpiper (<i>Actitis hypoleucos</i>), shoveler (<i>Anas clypeata</i>), teal (<i>Anas crecca</i>), wigeon (<i>Anas penelope</i>), pink-footed goose (<i>Anser brachyrhynchus</i>), meadow pipit (<i>Anthus pratensis</i>), swift (<i>Apus apus</i>), grey heron (<i>Ardea cinerea</i>), pochard (<i>Aythya ferina</i>), dunlin (<i>Calidris alpina</i>), ringed plover (<i>Charadrius hiaticula</i>), black-headed gull (<i>Chroicocephalus ridibundus</i>), raven (<i>Corvus corax</i>), kestrel (<i>Falco tinnunculus</i>), snipe (<i>Gallinago gallinago</i>), oystercatcher (<i>Haematopus ostralegus</i>), lesser black-backed gull (<i>Larus fuscus</i>), great black-backed gull (<i>Larus marinus</i>), red-breasted merganser (<i>Mergus serrator</i>), willow warbler (<i>Phylloscopus trochilus</i>), golden plover (<i>Pluvialis apricaria</i>), whinchat (<i>Saxicola rubetra</i>), common tern (<i>Sterna hirundo</i>), shelduck (<i>Tadorna tadorna</i>) and redshank (<i>Tringa totanus</i>).
Bony Fish	PS & LBAP: European eel (<i>Anguilla anguilla</i>), and brown / sea trout (<i>Salmo trutta</i>). LBAP Only: Bullhead (<i>Cottus gobio</i>) and brown trout (<i>Salmo trutta</i> subsp. <i>fario</i>).
Ferns	Moonwort (<i>Botrychium lunaria</i>): LBAP. 2 records, both from 1899.
Flowering Plants	LBAP Only: Yellow Star-of-Bethlehem (<i>Gagea lutea</i>), Green Hellebore (<i>Helleborus viridis</i>), Herb-paris (<i>Paris quadrifolia</i>), Solomon's-seal (<i>Polygonatum multiflorum</i>), Angular Solomon's-seal (<i>Polygonatum odoratum</i>), Bird's-eye Primrose (<i>Primula farinosa</i>), Dark-leaved Willow (<i>Salix myrsinifolia</i>) and Globeflower (<i>Trollius europaeus</i>).
Butterflies	PS & LBAP: Small heath (<i>Coenonympha pamphilus</i>) and wall (<i>Lasiommata megera</i>). LBAP Only: Ringlet (<i>Aphantopus hyperantus</i>) and dark green fritillary (<i>Argynnis aglaja</i>).
Moths	PS Only: Grey dagger (<i>Acronicta psi</i>), dusky brocade (<i>Apamea remissa</i>), white ermine (<i>Spilosoma lubricipeda</i>) and cinnabar (<i>Tyria jacobaeae</i>).
Terrestrial Mammals	European otter (<i>Lutra lutra</i>): EPS, WCAs5, PS & LBAP. 1 record from 2015, located 1885 metres to the north. Pipistrelle bat species (<i>Pipistrellus</i> sp.): EPS, WCAs5 & LBAP. 5 records, dated between 1998 and 2018. The closest record is 1360 metres to the west, and from 2007. Common pipistrelle (<i>Pipistrellus pipistrellus</i>): EPS & WCAs5. 8 records, dated between 1986 and 2020. The closest record is 910 metres to the west, and from 1986. European water vole (<i>Arvicola amphibius</i>): WCAs5, PS & LBAP 1 record from 1969. Brown hare (<i>Lepus europaeus</i>): PS & LBAP. 10 records, dated between 2007 and 2016. The closest record is 1000 metres to the east, and from 2009. West European hedgehog (<i>Erinaceus europaeus</i>): PS & LBAP. 5 records, dated between 2010 and 2020. The closest record is 795 metres to the west, and from 2010. Eurasian badger (<i>Meles meles</i>): PBA. 3 records, dated between 1989 and 2017. The closest record is 180 metres to the south-east, and from 2000.
¹Key to Designation Codes: EPS = European Protected Species under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. WCAs1 = Species receives full protection under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). WCAs5 = Species receives full protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). PBA = Protection of Badger Act 1992.	

Taxon Group	Species Name and Designations ¹ and Notes
PS = Priority Species listed under Section 41 of the NERC Act 2006.	
LBAP = Species listed on the Lancashire Biodiversity Action Plan.	

- 3.1.14 The presence of these protected and notable species within the wider area has been taken into account throughout this report.

3.2 Vegetation and Habitats

General Description

- 3.2.1 The approximately 0.65 hectares site is located with rural surrounds and supports a detached residential dwelling with a disused stable, hardstanding, gardens (comprising amenity grassland and ornamental shrubs), a field of grassland at its southern end (over which the new access is proposed) and boundary hedgerows at its northern and southern ends. Woodland is located adjacent to the western and eastern site boundaries.
- 3.2.2 The northern and western site boundaries are defined by fencing, beyond which lies pasture grassland to the north and Mytton Fold golf course to the west. The southern site boundary is defined by a hedgerow, beyond which lies Whalley Old Road, housing with gardens and pasture grassland. The eastern site boundary is partially defined by fencing, beyond which lies woodland, housing and gardens, and Smalley's Farm BHS.
- 3.2.3 The appended **Figure 2** can be referred to for all habitat descriptions. Photographs are appended in **Section 8.3**.

Woodland 1

- 3.2.4 Refer to **Photos 1** and **2**. An area of woodland is located adjacent to, and partially within, the western site boundary.
- 3.2.5 The woodland is characterised by a canopy layer of occasional and locally abundant Ash (*Fraxinus excelsior*) and Pedunculate Oak (*Quercus robur*), occasional and locally frequent Field Maple (*Acer campestre*) and Sycamore (*Acer pseudoplatanus*) and occasional Silver Birch (*Betula pendula*) and a shrub layer of occasional and locally abundant Holly (*Ilex aquifolium*), occasional and locally frequent Hawthorn (*Crataegus monogyna*) and occasional Sycamore, Hazel (*Corylus avellana*) and Beech (*Fagus sylvatica*). The field layer is characterised by occasional and locally abundant Ivy (*Hedera helix*), occasional and locally frequent Bramble (*Rubus fruticosus* agg.) and occasional Foxglove (*Digitalis purpurea*), Hart's-tongue fern (*Asplenium scolopendrium*), Hard-fern (*Blechnum spicant*) and Common Nettle (*Urtica dioica*). A plant species list is appended at **Table 8.1**.
- 3.2.6 The woodland holds characteristics of a *W10 Pedunculate Oak – Bracken – Bramble woodland* (Rodwell, 1991) NVC community, and is classified as A1.1.1 Broadleaved woodland - semi-natural in Phase 1 Habitat Survey terminology. The woodland is described by the UKHab as w1g other woodland: broadleaved.

Southern Grassland Field

- 3.2.7 Refer to **Photos 3** and **4**. The southern grassland field is located at the southern end of the site. The grassland is characterised by constant, frequent and locally abundant Tufted Hair-grass (*Deschampsia cespitosa*), constant and frequent Creeping Bent (*Agrostis stolonifera*), Crested Dog's-tail (*Cynosurus cristatus*), Red Fescue (*Festuca rubra*) and Yorkshire-fog (*Holcus lanatus*), constant, occasional and locally

frequent Common Bent (*Agrostis capillaris*) and Sweet Vernal-grass (*Anthoxanthum odoratum*) and occasional and locally frequent Compact Rush (*Juncus conglomeratus*), Soft-rush (*Juncus effusus*), Perennial Rye-grass (*Lolium perenne*), Oval Sedge (*Carex ovalis*), Timothy (*Phleum pratense*), Sneezewort (*Achillea ptarmica*) and White Clover (*Trifolium repens*). A plant species list is appended at **Table 8.2**.

- 3.2.8 The grassland field holds areas characteristic of the *MG6 Lolium perenne – Cynosurus cristatus* grassland NVC community (Rodwell, 1992) and the *MG10 Holcus lanatus – Juncus effusus* rush-pasture (Rodwell, 1992) and *MG9 Holcus lanatus – Deschampsia cespitosa* grassland communities (Rodwell, 1992) where it is seasonally damp. The habitat is classified as B2.2 Neutral grassland - semi-improved in Phase 1 Habitat Survey terminology, and is described by the UKHab as g3c6 *Lolium-Cynosurus* neutral grassland with the secondary codes 14 scattered rushes and 517 recent management.
- 3.2.9 The southern edge of the grassland supports very locally frequent Tormentil (*Potentilla erecta*), a species indicative of acidic soils; Oval Sedge can also be indicative of acidic conditions. The grassland was not considered to be species-rich or indicative of a lowland meadow Priority Habitat, but does hold species indicative of only low levels of agricultural improvement. The grassland is considered further at **Section 4.4**.

Garden Habitats

Amenity Grassland Lawn

- 3.2.10 Refer to **Photos 5** and **6**. The amenity grassland is located at the northern end of the site, and is characterised by constant, frequent and locally abundant Perennial Rye-grass, constant and frequent Red Fescue and Springy Turf-moss (*Rhytidiadelphus squarrosus*), constant, occasional and locally frequent White Clover and occasional and locally frequent Common Bent, Creeping Bent, Crested Dog's-tail, Yorkshire-fog and Creeping Buttercup (*Ranunculus repens*). A plant species list is appended at **Table 8.3**.
- 3.2.11 The amenity grassland within the garden is typical of a *MG7 Lolium perenne* leys and related grasslands (Rodwell, 1992) NVC community. The habitat is classified as J1.2 Cultivated / disturbed land - amenity grassland in Phase 1 Habitat Survey terminology, and is described by the UKHab as g4 modified grassland with the secondary code 106 mown.

Ornamental Shrubs

- 3.2.12 Refer to **Photos 7** and **8**. Areas of ornamental shrubs characterised by introduced and non-native species are located in the garden area at the northern end of the site. The ornamental shrubs are not typical of any NVC community and are classified as J1.4 Introduced shrub in Phase 1 Habitat Survey terminology, and is described by the UKHab as u1 built up and urban areas with the secondary code 847 introduced shrub.

Scrub, Tall forbs and Ferns

- 3.2.13 Refer to **Photo 9**. A distinct area of habitat characterised by scrub, tall forbs and an abundance of ferns is located parallel and to the south of the access track at the northern end of the site.
- 3.2.14 The habitat is characterised by constant and abundant Lady-fern (*Athyrium filix-femina*), occasional Hawthorn and Holly, very locally frequent Goat Willow, occasional and locally frequent Creeping Bent, Red Fescue, Yorkshire-fog, Creeping Buttercup and Bramble and occasional and very locally frequent Common Nettle. A plant species list is appended at **Table 8.4**.

- 3.2.15 The habitat area is not typical of any NVC community, and is best described as C3.1 Other tall-herb and fern - tall ruderal in Phase 1 Habitat Survey terminology. The habitat is described by the UKHab as g3 neutral grassland with the secondary codes 10 Scattered scrub and 16 tall forbs.

Vegetation Colonising Hardstanding

- 3.2.16 Refer to **Photos 10** and **11**. Compacted stone, paved and concrete slab hardstanding is located at the northern end of the site, associated with the garden and buildings, and is characterised by occasional and locally frequent Great Willowherb (*Epilobium hirsutum*) and Broad-leaved Willowherb (*Epilobium montanum*), occasional Red Fescue, Herb-Robert (*Geranium robertianum*), Yorkshire-fog and Perennial Rye-grass and rare Creeping Thistle (*Cirsium arvense*), Crested Dog's-tail, Nipplewort (*Lapsana communis*) and Ribwort Plantain (*Plantago lanceolata*). A plant species list is appended at **Table 8.5**.
- 3.2.17 The veg colonising the hardstanding is not typical of any NVC community, is classified as J1.3 Cultivated / disturbed land – ephemeral / short perennial in Phase 1 Habitat Survey terminology, and is described by the UKHab as u1b6 other developed land with the secondary code 81 ruderal or ephemeral.

Improved Grassland

- 3.2.18 The vegetation to the west of the buildings comprises a field of improved grassland in agricultural management. The improved grassland is typical of a *MG7 Lolium perenne* leys and related grasslands (Rodwell, 1992) NVC community. The habitat is classified as B4 Improved grassland in Phase 1 Habitat Survey terminology, and is described by the UKHab as g4 modified grassland.

Buildings

- 3.2.19 The buildings within the site are described in detail in relation to their suitability for use by roosting bats at **Section 4.4**. An area of dense Ivy is located at the south-western corner of Building 3; the buildings are otherwise devoid of vegetation. The buildings are classified as J3.6 Buildings in Phase 1 Habitat Survey terminology, and is described by the UKHab as u1b5 buildings.

Hedgerows

Hedgerow 1

- 3.2.20 Refer to **Photo 12**. Hedgerow 1 is located at the southern end of the site and is 360 metres long⁷, 2 to 3 metres in height, and 2 metres wide. The hedgerow is managed by flailing.
- 3.2.21 The section of hedgerow within and adjacent to the site is characterised by occasional and locally abundant Sycamore, Hazel, Blackthorn (*Prunus spinosa*), Pedunculate Oak and Goat Willow, occasional and locally frequent Hawthorn, Holly and Dog-rose (*Rosa canina*). The field layer is characterised by frequent and locally abundant Bramble (*Rubus fruticosus* agg.), occasional and locally frequent Common Knapweed (*Centaurea nigra*) and Ivy and occasional Mugwort (*Artemisia vulgaris*), Creeping Thistle Cock's-foot (*Dactylis glomerata*) and Broad Buckler-fern (*Dryopteris dilatata*). A plant species list is appended at **Table 8.6**.
- 3.2.22 The hedgerow holds characteristics of a *W21 Crataegus monogyna* – *Hedera helix* scrub and *W22 Prunus spinosa* – *Rubus fruticosus* agg. scrub (Rodwell, 1991) of the NVC, and is classified as J2.3.1 Hedge and trees, native species-rich in Phase 1 Habitat Survey terminology. The hedgerow is described by the UKHab

⁷ Only a 15 metres long section is located within the site, however.

as h2a5 species-rich native hedgerow with the secondary codes 11 hedgerow with trees and 116 flailed hedgerow.

- 3.2.23 The hedgerow is a Priority Species as it is composed of at least 80% native woody species and is more than 20 metres long. The hedgerow is 'important' in accordance with *The Hedgerows Regulations 1997* Wildlife and Landscape criteria; a full assessment of the hedgerow is appended at **Table 8.7**.

Hedgerow 2

- 3.2.24 Refer to **Photo 13**. Hedgerow 2 is associated with the garden area at the northern end of the site, and is 73 metres long. The hedgerow is 1.5 metres wide and 1.5 metres tall, and is flailed.
- 3.2.25 The hedgerow is characterised by constant, occasional and locally abundant Hawthorn, occasional and locally abundant Holly and Hazel, occasional Dog-rose and locally abundant Hornbeam (*Carpinus betulus*). The field layer is characterised by the adjacent amenity grassland. A plant species list is appended at **Table 8.8**.
- 3.2.26 The hedgerow holds characteristics of a W21 *Crataegus monogyna* – *Hedera helix* scrub (Rodwell, 1991) of the NVC, and is classified as J2.1.1 Intact hedge, native species-rich in Phase 1 Habitat Survey terminology. The hedgerow is described by the UKHab as h2a5 species-rich native hedgerow with the secondary code 116 flailed hedgerow.
- 3.2.27 The hedgerow is a Priority Species as it is composed of at least 80% native woody species and is more than 20 metres long. The hedgerow is not 'important' in accordance with *The Hedgerows Regulations 1997* Wildlife and Landscape criteria as it forms part of a garden curtilage.

Invasive Plant Species

- 3.2.28 No Japanese Knotweed is present at the site. Refer to **Figure 2**; stands of Indian Balsam, Virginia-creeper (*Parthenocissus quinquefolia*) and Montbretia (*Crocsmia crocosmiiflora*) are present at the garden area of the site, and a bed of planted Wall Cotoneaster (*Cotoneaster horizontalis*) is located to the south-east of Building 1. A shrub of Hollyberry Cotoneaster (*Cotoneaster bullatus*) is located within Hedgerow 1.
- 3.2.29 These species are listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended); it is an offence to spread or cause their spread in the wild. This is considered further at **Section 4.3**.

3.3 Animal Life

Badger

- 3.3.1 No badger or signs of badger were detected within the site or within the accessible 50 metres around the site. The presence of badger is reasonably discounted. The habitats within and surrounding the site are suitable for use by foraging and sheltering badger however; this is considered further at **Section 4.4**.

Bat Species

Daytime Survey: Buildings

Building 1

- 3.3.2 Refer to **Photos 14 to 22**. Building 1 is a detached and unoccupied two storey detached residential dwelling. The walls are constructed mortared blockwork and stone which are faced with an external render. The building supports a complex roof of slate with clay ridge tiles.
- 3.3.3 Gaps suitable for access by bats are present at the gable ends, timber fascias, under lead flashing and slates.
- 3.3.4 Two bat droppings were located under the north-western gable end and on a window under the gable end.
- 3.3.5 Internally the building supports two roof voids, which are located above the eastern and western ends of the building. Both voids are 1.6 metres tall (i.e. from the ridgeline to the floor of the void) and both are insulated with fibreglass insulation on the floor of the void. The roofing slates are lined with a mixture of bitumastic roofing felt and modern breathable roofing membrane and are supported on traditional timber purlins and rafters.
- 3.3.6 Taking into account the suitability of the habitats within and surrounding the site for foraging and commuting bats it is considered that Building 1 is of 'high' suitability for use by roosting bats.
- 3.3.7 50 droppings were located scattered along the eastern roof void, and approximately 100 droppings (both old and new) were located on the floor of the void, at the join of the two pitches, in the western roof void.
- 3.3.8 Both aggregations of droppings were confirmed to be of brown long-eared bat (*Plecotus auritus*); results of the DNA analysis of the droppings are appended at **Section 8.4**.
- 3.3.9 Use of Building 1 by roosting bats is considered further at **Section 4.4**.

Building 2

- 3.3.10 Refer to **Photos 23 to 27**. Building 2 is a disused single storey stable constructed from walls of block work to 2 metres with single-ply timber panels above, which support a pitched roof of corrugated metal sheeting, plastic skylights and corrugated asbestos sheeting.
- 3.3.11 Gaps suitable for access by bats are present at gaps in the timber roofing panels, at the open doorway at the south-eastern end of the building, and at the joins of the walls of roofs throughout.
- 3.3.12 No features suitable for use by either crevice dwelling species of bat, such as common pipistrelle (*Pipistrellus pipistrellus*), or species known to roost in the open in voids, such as brown long-eared bats, are present however; the building is open, airy and well-lit internally, with no voids or suitably sheltered crevices typically used by roosting bats present.
- 3.3.13 The building is considered to be of 'negligible' suitability for use by roosting bats.

Building 3

- 3.3.14 Refer to **Photos 29 to 31**. Building 3 is a single-storey stable building which adjoins Building 2 at its northern and eastern elevations. The building is constructed from walls of mortared stone which support a pitched roof of stone tiles.
- 3.3.15 Gaps suitable for access by bats are present in the mortared stone walls, under the stone roofing tiles and at the gable ends of the building. Internally the building is open to the roof, which is lined with plaster.

- 3.3.16 No bats or signs of bats were detected at the internal or external areas of the building. The building is assessed to be of 'moderate' suitability for use by roosting bats.

Other Buildings and Structures

- 3.3.17 Refer to **Photos 32** and **33**. Two small sheds, constructed from walls of single-ply timber and supported pitched roofs of bitumastic roofing felt, are present to the south-east of Building 1.
- 3.3.18 Neither support any features suitable for use by roosting bats, and both are assessed to be of 'negligible' suitability.

Trees

- 3.3.19 No trees were identified as supporting any features suitable for use by roosting bats during the survey; all trees within the site were assessed to conform to the roost suitability category 'none'.

Habitat Assessment for Commuting and Foraging Bats

- 3.3.20 The woodland, hedgerows and grassland are suitable for use by foraging bats and provide habitat connectivity across the site.
- 3.3.21 The habitats present may be suitable for and contribute to the wider foraging area of common species of edge-feeding foraging bats, such as common pipistrelle, and also low numbers of species known to forage over open habitats and over wide areas, such as noctule (*Nyctalus noctula*). The site and its surroundings are not subject to an abundance of artificial illumination.
- 3.3.22 The site is located within a wider area characterised by woodland, small pasture grassland fields and waterbodies. The habitats within the site are assessed to be of 'moderate' suitability for use by roosting bats, and the habitats within the wider area are assessed to be of 'high' suitability.

Dusk Emergence Surveys⁸

Survey 1: 5th August 2025

- 3.3.23 One common pipistrelle bat emerged from Roost 2 under the skylight on the south-eastern elevation of Building 1 at 21:22 (Roost 2, emergence point A; refer to **Photo 37**).
- 3.3.24 No other emergence was detected, and no emergence was detected at Building 3.
- 3.3.25 In terms of general bat activity, the following species were detected during the survey:
- Soprano pipistrelle (*Pipistrellus pygmaeus*) were detected between 21:00 and 22:26 with the first bat detected 1 minute after sunset. A total of 39 call sequences were recorded during the survey.
 - Brown long-eared bat were detected between 21:08 and 22:21 with the first bat detected 9 minutes after sunset. A total of 18 call sequences were recorded during the survey.
 - Common pipistrelle were detected between 21:11 and 22:26 with the first bat detected 12 minutes after sunset. A total of 125 call sequences were recorded during the survey.

⁸ All bat emergence points are noted at **Figure 3**.

- d. Myotis species were detected between 22:03 and 22:20 with the first bat detected 64 minutes after sunset. A total of 4 call sequences were recorded during the survey.
- e. Noctule were detected between 22:09 and 22:09 with the first bat detected 69 minutes after sunset. A total of 9 call sequences were recorded during the survey.

3.3.26 No other species were recorded. Data are appended in **Table 8.9**.

Survey 2: 26th August 2025

3.3.27 Bats were observed emerging from Building 1 at the following times and locations:

- Two common pipistrelle (in total) were observed emerging from the eastern pitch of the northern gable of Building 1 at 20:23 and 20:44 (Roost 2, emergence point B; refer to **Photos 35 and 36**);
- Two common pipistrelle (in total) were observed emerging from the western pitch of the northern gable of Building 1 at 20:34 and 20:37 (Roost 2, emergence point C; refer to **Photos 35 and 36**);
- Three common pipistrelle (in total) were observed emerging from the southern pitch of the western gable of Building 1 at 20:38, 20:42 and 20:43 (Roost 2, emergence point D; refer to **Photo 37**);

3.3.28 A total of 7 common pipistrelle were observed emerging from three locations during the survey. No other emergence was detected.

3.3.29 In terms of general bat activity, the following species were detected during the survey:

- a. Soprano pipistrelle were detected between 20:23 and 21:41 with the first bat detected 8 minutes after sunset. A total of 17 call sequences were recorded during the survey.
- b. Common pipistrelle were detected between 20:34 and 21:47 with the first bat detected 20 minutes after sunset. A total of 300 call sequences were recorded during the survey.
- c. Myotis species were detected between 21:32 and 21:45 with the first bat detected 77 minutes after sunset. A total of 9 call sequences were recorded during the survey.

3.3.30 Data are appended in **Table 8.10**.

Survey 3: 23rd September 2025

3.3.31 Bats were observed emerging from Building 1 at the following times and locations:

- One common pipistrelle was observed emerging from the western pitch of the northern gable of Building 1 at 19:23 (Roost 2, emergence point C; refer to **Photos 35 and 36**);
- One common pipistrelle was observed emerging from the southern pitch of the western gable of Building 1 at 19:25 (Roost 2, emergence point D; refer to **Photo 36**);
- Three common pipistrelle (in total) were observed emerging from the gable end of the western gable of Building 1 at 19:17, 19:18 and 19:37 (Roost 2, emergence point E; refer to **Photo 36**);
- Four common pipistrelle (in total) were observed emerging from behind the guttering at the south-eastern elevation of Building 1 at 19:17, 19:18 and 19:37 (Roost 2, emergence point F; refer to **Photo 37**).

3.3.32 A total of 9 common pipistrelle were observed emerging from four emergence points at Building 1 during the survey. No other emergence was detected and no emergence was detected at Building 3.

3.3.33 In terms of general bat activity, the following species were detected during the survey:

- Noctule were detected between 19:17 and 20:18 with the first bat detected 10 minutes after sunset. A total of 77 call sequences were recorded during the survey.
- Soprano pipistrelle were detected between 19:17 and 20:41 with the first bat detected 11 minutes after sunset. A total of 292 call sequences were recorded during the survey.
- Common pipistrelle were detected between 19:23 and 20:40 with the first bat detected 16 minutes after sunset. A total of 365 call sequences were recorded during the survey.
- Brown long-eared bat were detected between 19:47 and 20:32 with the first bat detected 40 minutes after sunset. A total of 20 call sequences were recorded during the survey.
- Myotis species were detected between 19:56 and 20:20 with the first bat detected 50 minutes after sunset. A total of 15 call sequences were recorded during the survey.

3.3.34 Data are appended in **Table 8.11**.

Summary of Results

3.3.35 A summary of the survey results presented above is provided in **Table 3.3**. The results are evaluated at **Section 4.4**.

Table 3.3: Summary of Bat Survey Results

Building / Tree Ref	Suitability for Use by Roosting Bats	Results of Surveys
Building 1	High and two confirmed roosts	Confirmed day roost of brown long-eared bats located at roof voids of building; no emergence detected in 2025, however, indicating that the roost was not used during this period. Based on the absence of bats in Summer 2025 and the presence of old and more fresh droppings, all survey evidence is indicative of use of Building 1 by a brown long-eared bat day roost over a long period (Roost 1). Building 1 also used as a day roost (Roost 2) for common pipistrelle detected during the activity surveys; six separate emergence locations detected, and a peak count of 9 bats was recorded.
Building 2	Negligible	No requirement for further survey.
Building 3	Moderate	No bats were detected during the two surveys completed.
Other Buildings and Structures	None	The presence of roosting bats is reasonably discounted at the other buildings within the site.
Trees	None.	No requirement for further survey.

Bird Species

3.3.36 Birds detected in the site in July, August and September 2025 are listed in **Table 3.4**.

Table 3.4: Bird Species Detected on 10th July, 5th August, 26th August and / or 23rd September 2025

Scientific Name	Common Name	BOCC Status ¹
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<i>Aegithalos caudatus</i>	Long-tailed tit	Green
<i>Columba palumbus</i>	Woodpigeon	Amber
<i>Corvus corone</i>	Carrion crow	Green
<i>Corvus monedula</i>	Jackdaw	Green
<i>Cyanistes caeruleus</i>	Blue tit	Green
<i>Erithacus rubecula</i>	Robin	Green
<i>Parus major</i>	Great tit	Green
<i>Passer domesticus</i>	House sparrow	Red
<i>Pica pica</i>	Magpie	Green
<i>Troglodytes troglodytes</i>	Wren	Amber
¹ BOCC: Birds of Conservation Concern (Stanbury, et al., 2021). Priority Species are presented in bold .		

3.3.37 The trees, shrubs and hedgerow are suitable for use by nesting passerine (i.e. perching) species, including those detected within the site during the survey. Old swallow (*Hirundo rustica*) nests were noted in Building 3. The suitability of habitats within the site for nesting birds is considered further at **Section 4.4**.

3.3.38 No barn owl or signs of barn owl were detected at the buildings and trees within the site.

Reptiles

3.3.39 There are no piles of garden waste or other suitable debris for use by sheltering or hibernating reptiles, and the site supports no favourable habitat for basking reptiles. The habitats within the site are reasonably unlikely to support a large population or a variety of invertebrate prey.

3.3.40 The site is not adjacent or linked to any areas of favourable habitat for reptile species, and there are no records of reptile for the site or the wider area. The presence of reptiles within the site is reasonably discounted.

Other Wildlife

3.3.41 The site supports suitable habitat for sheltering and foraging hedgehog (*Erinaceus europaeus*) and brown hare (*Lepus europaeus*); both are Priority Species. The site is unlikely to form core or important habitat for either species due to its relatively small size, however. The suitability of the site for hedgehog is considered further at **Section 4.4**.

4.0 EVALUATION AND ASSESSMENT

4.1 Introduction and Description of Proposals

4.1.1 In accordance with *Rose Hill Farm: Proposed Site Plan 07* (Zara Moon Architects, 2026) it is proposed to demolish the existing buildings and redevelop the site to a new residential dwelling with an associated outbuilding and garage. An access road is proposed across the southern grassland field.

4.1.2 **Section 4.2** provides an assessment of any impacts of the proposed development on the designated sites for nature conservation present in the wider area. The ecological value of habitats within the site is evaluated at **Section 4.3**, and protected and notable species are considered at **Section 4.4**.

4.1.3 An assessment of the proposals under the 'three tests' used by Natural England to assess European Protected Species Mitigation (EPSM) licence applications is also presented at **Section 4.4**.

4.2 Designated Sites for Nature Conservation

- 4.2.1 The proposals are located in proximity to Smalley's Farm BHS, which is located at the eastern site boundary. The proposed development should seek to avoid impacting Smalley's Farm BHS, located to the south-east of the site, either directly or indirectly during the proposed development.
- 4.2.2 It is recommended that a suitable buffer is used to avoid direct impacts to the BHS during any proposed construction works. Any operations which could impact the hydrology of the adjacent land, or create dust or other pollutants during the construction phase should be regulated by the enforcement of a Construction Environmental Management Plan (CEMP) or similar, and appropriate fencing should be used to ensure works do not impact upon the BHS.
- 4.2.3 It is noted that the BHS is designated for its grassland fungi, and the grassland field at the southern end of the site may also provide suitable habitat for grassland fungi. Works within the southern grassland field should be restricted to as small an area as reasonably practicable to reduce impacts to the grassland.
- 4.2.4 Recommendations for the protection of the BHS during the proposed works are presented at **Section 5.4**. It is otherwise considered that the proposals are unlikely to impact any statutory or non-statutory designated sites for nature conservation.

4.3 Vegetation and Habitats

- 4.3.1 Only common and widespread plant species were found. None of the habitats present are representative of semi-natural habitat. The NVC communities present are typical of the geographical area and conditions present. Hedgerows 1 and 2 are Priority Habitat; no other Priority Habitats are present within the site however. No irreplaceable habitats were detected within the site.
- 4.3.2 In terms of each habitat's importance in a geographical context⁹, the areas of woodland, Hedgerows 1 and 2, and the grassland field are considered to be of 'local' importance as they support habitats of value to nesting birds and foraging birds and bats, and will contribute as wildlife links across the wider area. The grassland field supports species indicative of both damp and acidic conditions, and is indicative of grassland which has not been subjected to high levels of agricultural improvement.
- 4.3.3 The garden habitats are of 'site' value only, and hardstanding and buildings are not considered to hold any importance on a geographical scale.
- 4.3.4 The proposals will retain the woodland habitats and the majority of the grassland at the southern end of the site. The proposals will also retain Hedgerow 2. An approximately 10 metres long section of Hedgerow 1 will be removed to create the access to the site, and an area of the southern grassland field will be removed to create the access.
- 4.3.5 The proposals present an opportunity to create additional native hedgerow within the site as part of the site design, and to manage the retained areas of the grassland field (which are in the ownership of the client) to encourage their plant species diversity.

⁹ Using the terms presented at Section 4.7 of *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018), i.e. International and European, National, Regional, Local Authority-wide area, River Basin District, Estuarine system / Coastal cell or Local. The term 'site' value is additionally used to highlight ecological features considered to be of importance in the context of the wider site habitats, but which are of negligible value in the context of the local area.

- 4.3.6 Recommendations relating to the retention and protection of the woodland and grassland habitats and for any compensatory planting required as a consequence of the proposed development are presented at **Section 5.3**.
- 4.3.7 Measures for the protection of habitats during the proposed works are presented at **Section 5.4**.
- 4.3.8 Indian Balsam, Wall Cotoneaster and Hollyberry Cotoneaster, Virginia Creeper and Montbretia, all of which are invasive plant species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), have been detected within the site, or are within close proximity to the site. It is considered that the proposals present an opportunity for the eradication of these species as part of the proposed development. Further guidance is presented at **Section 5.4**.

4.4 Animal Life

Bats

Foraging and Commuting Bats

- 4.4.1 Habitats within and adjacent to the site are suitable for foraging and commuting bats. The proposals have the potential to degrade the habitats within the site for foraging and commuting bats, and other wildlife, via the adoption of an inappropriate lighting regime at the site. Recommendations relating to the retention of features suitable for use by foraging and commuting bats, and features to enhance habitats for roosting bats at the site are presented at **Section 5.5**.

Roosting Bats

- 4.4.2 It is proposed to demolish Building 1 and replace the building with a new residential dwelling.
- 4.4.3 Building 1 supports a day roosts of brown long-eared bat and common pipistrelle (with six emergence points identified). The proposals have the potential to harm individual bats and to impact roosting bats and bat roosts. The buildings do not provide optimum conditions for use by bats in the hibernation season. The buildings do not have any underground features or cellars that are accessible to bats and their structural condition is not likely to provide thermally stable conditions for regular / long-term use by roosting bats in the hibernation season or features of a 'classic' hibernation roost.
- 4.4.4 All bats and their roosts are legally protected, by both UK and European legislation. Under Regulation 43 of the *Conservation of Habitats and Species Regulations 2017* (as amended) it is a criminal offence to:
- Deliberately capture, injure, or kill a bat.
 - Deliberately disturb a bat.
 - Damage or destroy a breeding site or resting place of a bat (bats do not have to be in occupation at the time).
 - Possess or control a bat.
 - Transport a bat.
 - Sell or exchange a bat.
 - Offer for sale or exchange any bat, alive or dead, or any part of a bat.

4.4.5 Also under Section 9 of the *Wildlife and Countryside Act 1981* (as amended), it is a criminal offence against bats to:

- a. Intentionally or recklessly disturb a bat occupying a structure or place used for shelter or protection.
- b. Intentionally or recklessly obstruct access to any structure or place used for shelter or protection by bats.

4.4.6 Any works that will affect the roosts must only be carried out in the presence of an appropriate European Protected Species Mitigation (EPSM) licence issued by Natural England.

4.4.7 To achieve the licence the applicant must be able to demonstrate to Natural England that the ‘three tests’ of Regulation 55 of *The Conservation of Habitats and Species Regulations 2017* (as amended) will be satisfied. An initial assessment of the three tests is considered below.

Rarity of Species Detected in a UK Context

4.4.8 In accordance with Table 3.1 of *UK Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats* (Reason & Wray, 2025) both common pipistrelle and brown long-eared bats are classed as ‘widespread all geographies’.

Importance of Roosts Detected in a Geographical Context

4.4.9 In accordance with Table 3.2 of *UK Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats* (Reason & Wray, 2025) the roosts are given the following importance in a geographical context:

- *Brown long-eared non-breeding day roosts:* Site.
- *Common pipistrelle non-breeding day roosts:* Site.

4.4.10 No brown long-eared bats were detected during the dusk emergence surveys completed in 2025, and a peak count of 9 common pipistrelle was detected. It is therefore considered that the roosts at the site, in combination, are of ‘District’ importance¹⁰.

Impacts to Roosting Bats

4.4.11 The proposals seek to demolish Building 1. In the absence of mitigation, the detected roosts will be destroyed by the works. In the absence of mitigation there is a high potential for bats to be killed or injured during the proposed works.

4.4.12 It is the intention however to implement a mitigation strategy to ensure that bats are protected during the proposed works, and that suitable roosting habitat is available at the site during and following the completion of works. The objectives of the mitigation strategy and all relevant measures are presented at the appended **Section 9.0**.

¹⁰ *Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.4* (CIEEM, 2018) recommends describing importance by assigning a feature to a geographic frame of reference, i.e. international and European; UK/national; regional; Metropolitan, County, vice-County, Council area (in Scotland) or other local authority-wide area; and local. This approach has been adopted below, with the caveat that the term ‘district’ is used to reflect LPA jurisdictions in England; sub-county areas elsewhere; and ‘local’ has been interpreted to mean the site and relatively close surroundings (such as a parish).

- 4.4.13 In the absence of mitigation, impacts to bats are assessed to be adverse and will:
- Impact roosts of District importance; and
 - Impact a low (estimated based on droppings) number of brown long-eared bats and a low number of common pipistrelle.

- 4.4.14 In the presence of appropriate mitigation, the impacts to bats are assessed to be low and appropriate mitigation and compensation for the loss of the roosts can be incorporated into the site design.

Natural England EPSM Licence and The 'Three Tests'

- 4.4.15 In determining whether or not to grant a licence Natural England must apply the requirements of Regulation 55 of the Regulations and, in particular, the three tests set out in sub-paragraphs (2)(e), (9)(a) and (9)(b):

(1) Regulation 55(2)(e) states: *'a licence can be granted for the purposes of 'preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment', hereafter referred to as the 'Overriding Public Importance Test';*

(2) Regulation 55(9)(a) states: *'the relevant licensing body must not grant a licence under this regulation unless it is satisfied that there is no satisfactory alternative', hereafter referred to as the 'No Satisfactory Alternative Test'; and*

(3) Regulation 55(9)(b) states: *'the relevant licensing body must not grant a licence under this regulation unless it is satisfied that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.', hereafter referred to as the 'Favourable Conservation Status' test.*

- 4.4.16 The mitigation strategy presented at the appended **Section 9.0** addresses how the proposed works can be completed in accordance with the 'Favourable Conservation Status' test.
- 4.4.17 The 'Overriding Public Importance' and 'No Satisfactory Alternative' tests will be addressed as part of the EPSM licence application. In summary the demolition of Building 1 and its replacement with a new residential dwelling is necessary to the continued use of the land for residential purposes, as the landowner does not consider that the existing building is fit for purpose, or can be renovated to meet the needs of them or their family.
- 4.4.18 In the absence of works Building 1 will remain unoccupied, and the building is likely to deteriorate, and cause its suitability for use by roosting bats to decline.

Other Wildlife

- 4.4.19 The site supports habitats suitable for use by nesting birds; all wild birds are protected while they are nesting under the *Wildlife and Countryside Act 1981* (as amended).
- 4.4.20 The site supports suitable habitat for foraging and sheltering hedgehog and brown hare, both of which are Priority Species. It is considered unlikely that the site will provide core or important habitat for either species, however, due to the site's small size relative to the typical ranges of these species.

- 4.4.21 No badgers or signs of badger were detected, however it is recognised that the site and its surroundings are suitable for use by foraging and sheltering badger.
- 4.4.22 The proposed works have the potential to kill or injure individual hedgehog, brown hare and disturb nesting birds during the construction phase of the proposed development, and disturb badger setts if any are created at or near the site prior to the commencement of works.
- 4.4.23 Measures for the protection of nesting birds, brown hare, hedgehog, badger and other wildlife during the construction phase of the proposed development are presented at **Section 5.4**.
- 4.4.24 The proposals present an opportunity to create features suitable for use by nesting birds as part of the development in the form of bird boxes, and to ensure that wildlife is able to move across the site and have access to any proposed garden habitats. Measures to include within the site design for nesting birds and other wildlife are presented at **Section 5.5**.
- 4.4.25 The presence of protected or notable species is otherwise reasonably discounted at the site.

5.0 RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENT

5.1 Introduction

- 5.1.1 These recommendations aim to ensure that the development is implemented in accordance with relevant wildlife legislation, Natural England guidance, the principles of the NPPF, local planning policy and best practice.
- 5.1.2 In accordance with Chapter 15, paragraph 193(d) of the NPPF:
‘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’.
- 5.1.3 Where possible, opportunities to enhance the ecological interest and habitat connectivity and seek biodiversity gain through appropriate landscape planting and habitat creation have been identified.
- 5.1.4 All recommendations are appropriate to the geographical area, the habitats in the wider area, the wildlife present in the local area (and likely to use the site post-construction) and take into consideration the end use of the site as a residential dwelling.

5.2 Survey Validity

- 5.2.1 If works have not commenced by the start of May 2027 then updated surveys will be required to ensure this survey finding remains valid as part of any Natural England licence application.

5.3 Recommendations in Relation to Site Layout

- 5.3.1 It is recommended that the proposals seek to retain the woodland habitats, the hedgerows and, as much as possible, the grassland field at the southern end of the site.

- 5.3.2 Any losses of hedgerow will require the planting of an equal or greater length of native species-rich hedgerow; it is recommended that at least 15m of native species-rich hedgerow is incorporated into the site design to compensate for the loss of Hedgerow 1 to create the access at the southern end of the site.
- 5.3.3 It is considered that the proposals present an opportunity to move the grassland field into long-term management for its benefits to biodiversity; it is recommended that the proposals include a long-term Habitat Management Plan for the retained habitats. Grassland management should incorporate either appropriate low levels of seasonal grazing, or a mowing regime designed to encourage the plant species diversity.
- 5.3.4 It is also considered, due to the site's proximity to Smalley's Farm BHS and the similarity of the grassland in the site to the habitats described in the BHS, that a study to determine the fungal diversity of the areas of the southern field to be impacted by the proposals may be required. The study may comprise contacting North West Fungus Group to determine their existing knowledge of the field. Subject to the results of the survey a mitigation strategy can be prepared to describe the measures to protect, and conserve in the long-term, the field's fungal diversity, as needed.

5.4 Protection of Existing Vegetation and Animal Life

Protection of Woodland, Trees, Grassland, Hedgerows and BHS

- 5.4.1 During the construction phase, temporary protective demarcation fencing will be used to protect the woodland, trees, grassland and hedgerows to be retained and Smalley's Farm BHS. The fencing must extend outside the canopy of the retained trees or shrubs, or at a suitable buffer to the other retained habitats, and must remain in position until all areas have been developed to ensure protection is provided throughout the construction phase.
- 5.4.2 The fencing will be in accordance with *BS5837:2012 Trees in Relation to Design, Demolition and Construction: Recommendations* (BSI, 2012).

Invasive Plant Species

- 5.4.3 It is an offence under the *Wildlife and Countryside Act 1981* (as amended) to cause the spread of Indian Balsam, Hollyberry Cotoneaster, Wall Cotoneaster Virginia Creeper and Montbretia in the wild. It is recommended that a specialist contractor is employed for the eradication / control of these species at the site, and that this is completed under a suitable Invasive Species Management Plan.
- 5.4.4 It is recommended that monitoring is established during the construction period to ensure that these species are not spread within the site or wider area during the construction period.

Lighting

- 5.4.5 Paragraph 198(c) in Chapter 15 (conserving and enhancing the natural environment) of the NPPF states that development should:

'limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'

- 5.4.6 Any lighting to be used at the site during construction should be directional and screened where possible, this specification should be included within a Construction Environment Management Plan (CEMP), or similar.

5.4.7 The lighting scheme to be implemented at the developed site must involve the use of appropriate products and screening, where necessary, to ensure no excessive artificial lighting shines over the retained habitats, Smalley's Farm BHS, areas of ecological enhancement and any landscape planting, as lighting overspill may deter use by wildlife such as foraging bats.

5.4.8 The lighting scheme will be designed with reference to current guidance, namely:

- a. *Guidance Note 08/23: Bats and Artificial Lighting at Night* (Institution of Lighting Professionals & Bat Conservation Trust, 2023); and
- b. *Bats and lighting: Overview of current evidence and mitigation guidance* (Stone, 2014).

Protection of Nesting Birds

5.4.9 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended) while they are breeding. Any works such as building demolition or vegetation clearance that will affect habitats suitable for use by nesting birds are scheduled to commence outside the bird nesting season. Commencement of works in the nesting season must be informed by a pre-works nesting bird survey, carried out by a suitably experienced ecologist. The bird breeding season typically extends between March to August inclusive.

5.4.10 If breeding birds are detected the ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. This may involve cordoning off an area of the site until the young birds have fledged.

Protection of Other Wildlife

5.4.11 It is recommended that an updated survey for badger is completed prior to the commencement of works, to determine whether any setts have been created within a 50 metre buffer of the site. If setts have been created in this area a Method Statement may be required to inform how works may progress whilst ensuring the protection of badgers and their setts. A licence may be required to complete works if it is considered that works will damage or destroy a badger sett.

5.4.12 The following Reasonable Avoidance Measures (RAMs) are adopted during the demolition and construction phases of the proposed development.

- a. All site personnel must be made aware of this RAMs, and the RAMs should be made part of the site induction for all personnel involved in soil strip, ground clearance, or other relevant activities;
- b. Prior to any soil strip, vegetation will be strimmed to a height of no less than 0.15 metres and all arisings removed;
- c. During construction, any holes, trenches or other pits which hedgehog (or other wildlife) could fall into will be covered overnight, or have sloped banks or ramps to allow escape; and
- d. If any wildlife species (such as hedgehog) is detected it must be carefully picked up by an operative wearing clean gloves, placed in a clean bucket, and moved to an area of suitable habitat beyond the construction zone.

5.5 Enhancing Habitats for Wildlife

Enhancing Habitats for Roosting Bats

- 5.5.1 Note that works relating to compensation for the loss of roosts associated with the proposed development are presented at the appended **Section 9.0**.
- 5.5.2 It is recommended to provide enhancement for roosting bats at the site that bat boxes are erected onto suitable retained mature trees within the site. An ecologist will advise on the siting of the bat boxes whilst on site.
- 5.5.3 Bat boxes should be installed to the following guidelines (Bat Conservation Trust, 2024)
- At least 4 metres above the ground (where safe installation is possible);
 - Sheltered from strong winds and exposed to the sun for part of the day (usually south or south-west). Ideally several bat boxes will be installed to provide a variety of different thermal options for bats. Grouping a number of boxes each with a different aspect can achieve this; while a number of boxes is preferable to one, a single box is still viable and may be used by roosting bats;
 - Located close to unlit linear features, such as lines of trees or hedgerows; and
 - Installed where the bat box entrance is not cluttered or impeded by branches, or accessible to predators (such as cats) by large branches underneath them.
- 5.5.4 Suitable bat boxes are the Schwegler 1FF, Greenwood Ecohabitat's single or double cavity boxes and Schwegler 1FD, see **Insert 1**.



Insert 1: Schwegler 1FF, Greenwood Ecohabitat's single cavity and Schwegler 1FD bat boxes

Nesting Birds

House Sparrow

- 5.5.5 House sparrows are associated with suburban areas. Monitoring suggests a severe decline in the UK house sparrow population, estimated as dropping by 71 per cent between 1977 and 2008 with large falls in both rural and urban populations (RSPB, 2023).
- 5.5.6 The installation of house sparrow terrace nest boxes is recommended at the proposed new housing. The boxes will not be positioned over windows or doorways where droppings may become a nuisance. RSPB advice states that boxes should ideally be sited facing north to east, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest.

5.5.7 Such bird boxes are available from the NHBS (www.nhbs.com) or Wild Care (www.wildcare.co.uk). ERAP (Consultant Ecologists) Ltd will advise on the siting of bird boxes.

5.5.8 An example of a suitable house sparrow bird box is given below at **Insert 2**.



Insert 2: Schwegler 1SP House Sparrow Nesting Terrace

Swift

5.5.9 The swift (*Apus apus*) has been added to *The Birds of Conservation Concern* (Stanbury, et al., 2021) Red list owing to the recorded recent declines and its identified status as a high conservation priority.

5.5.10 The construction of the residential properties provides an opportunity for the installation of additional nesting opportunities for swift to assist their conservation. Suitable swift nest boxes are illustrated at **Insert 3**.



Insert 3: Examples of swift nest boxes¹¹

Maintenance of Habitat Connectivity Throughout the Developed Site

5.5.11 To ensure habitat connectivity is maintained as part of the development proposals, gaps within the proposed fencing to allow access by other wildlife (including hedgehog) should be incorporated across the site; example accesses are presented at **Insert 4**, as reproduced from *Hedgehogs and Development* (British Hedgehog Preservation Society / PTES, 2019). It is recommended that appropriate wildlife gaps (at least 0.1 metre tall and 0.15 metre wide) are installed at suitable intervals around the base of the proposed fencing.

¹¹ From left to right No. 17A Schwegler Swift Nest Box (Triple Cavity) as installation (centre), Manthorpe Swift Nesting Box (right) and Ibstock Eco-habitat for Swift (right), all available from www.NHBS.com and / or Wild Care (www.wildcare.co.uk).



Insert 4: Showing wildlife access gap within fencing

Landscape Planting

- 5.5.12 It is recommended that the landscape planting within the site is composed from native species and species known to be of value for the attraction of wildlife.
- 5.5.13 It is recommended that trees which support blossom and fruit which will attract insects are incorporated into the landscape planting. Suitable species are presented in **Table 5.1**.

Table 5.1: Suitable Native Species for Tree and Shrub Planting

Scientific Name	Common Name	Scientific Name	Common Name
<i>Acer campestre</i>	Field Maple	<i>Prunus spinosa</i>	Blackthorn
<i>Corylus avellana</i>	Hazel	<i>Rosa arvensis</i>	Field Rose
<i>Crataegus monogyna</i>	Hawthorn	<i>Rosa canina</i>	Dog-rose
<i>Ilex aquifolium</i>	Holly	<i>Sambucus nigra</i>	Elder
<i>Malus sylvestris</i>	Crab Apple	<i>Sorbus aucuparia</i>	Rowan
<i>Prunus avium</i>	Wild Cherry	<i>Ulmus glabra</i>	Wych Elm
<i>Prunus padus</i>	Bird Cherry	<i>Viburnum opulus</i>	Gelder Rose

- 5.5.14 The understorey and ground cover planting design should be prepared to optimise the attraction of invertebrates such as feeding bumblebees and butterflies. Where possible the use of native species should be maximised but where necessary non-native species known to be attractive to invertebrates should be used.
- 5.5.15 Provision of wildflower grassland within the landscape design is also recommended, where feasible. Wildflower grassland mixtures such as Emorsgate Seeds EM5 Meadow Mixture for Loamy Soils¹² or British Wildflower Seeds Special General Meadow Seed Mix¹³ should be considered as part of the landscape design.
- 5.5.16 Planting schemes that include flowering species such as *Viburnum*, *Ceanothus*, *Hebe*, *Lavandula*, *Lonicera*, *Potentilla*, *Rosmarinus* and *Vinca* can maximise opportunities for feeding invertebrates and for the attraction of foraging bats and birds.
- 5.5.17 For further plants suitable for the attraction of pollinators please refer to the *Perfect for Pollinators Plant List* (Royal Horticultural Society, 2012). It is recommended that the selection of plant species at the site ensures that a variety of flowering species are available throughout the year.

¹²<https://wildseed.co.uk/product/mixtures/complete-mixtures/meadow-mixtures-for-specific-soils/meadow-mixture-for-loamy-soils/>

¹³ <https://britishwildflowermeadowseeds.co.uk/collections/neutral-soils/products/special-general-meadow-seed-mix-44>

5.5.18 Other appropriate plants to include within the landscaping scheme include night-scented flowers which will attract moth species and bats; a list of suggested species is presented at **Table 5.2**.

Table 5.2: Recommended Plants for Use in Gardens to Attract Bats¹⁴

Flowers for Borders	
Aubretia species (<i>Aubretia</i> sp.)	Michaelmas Daisy (<i>Aster</i> sp.)
Candytuft (<i>Iberis sempervirens</i>)	Night-scented Stock (<i>Matthiola longipetala</i>)
Cherry pie (<i>Heliotropium arborescens</i>)	Oxeye Daisy (<i>Leucanthemum vulgare</i>)
Corncockle (<i>Agrostemma githago</i>)	Fiddleneck (<i>Phacelia tanacetifolia</i>)
Cornflower (<i>Centaurea cyanus</i>)	Poached Egg Plant (<i>Limnanthes douglasii</i>)
Corn Marigold (<i>Glebionis segetum</i>)	Primrose sp. (<i>Primula</i> sp.)
Corn Poppy (<i>Papaver rhoeas</i>)	Red Campion (<i>Silene dioica</i>)
Coneflower species (<i>Echinacea</i> sp.)	Common Valerian (<i>Valeriana officinalis</i>)
Bluebell (<i>Hyacinthoides non-scripta</i>)	Scabious species (<i>Scabiosa</i> sp.)
Evening primrose (<i>Oenothera biennis</i>)	St John's Wort species (<i>Hypericum</i> sp.)
Honesty (<i>Lunaria annua</i>)	Sweet William (<i>Dianthus barbatus</i>)
Ice plant 'Pink lady' (<i>Delosperma cooperi</i>)	Tobacco Plant species (<i>Nicotiana</i> sp.)
Knapweed species (<i>Centaurea</i> sp.)	Vervain species (<i>Verbena</i> sp.)
Mallow species (<i>Malva</i> sp.)	Wallflower species (<i>Erysimum</i> sp.)
Mexican aster (<i>Cosmos bipinnatus</i>)	
Herbs	
Wild Angelica (<i>Angelica sylvestris</i>)	Hyssop (<i>Hyssopus officinalis</i>)
Bergamot (<i>Monarda didyma</i>)	Lavender species (<i>Lavandula</i> sp.)
Borage (<i>Borago officinalis</i>)	Lemon Balm (<i>Melissa officinalis</i>)
Coriander (<i>Coriandrum sativum</i>)	Marjoram (<i>Origanum majorana</i>)
English Marigold (<i>Calendula officinalis</i>)	Rosemary (<i>Rosmarinus officinalis</i>)
Fennel (<i>Foeniculum vulgare</i>)	Sweet Cicely (<i>Myrrhis odorata</i>)
Feverfew (<i>Tanacetum parthenium</i>)	Thyme species (<i>Thymus</i> sp.)

6.0 CONCLUSION

- 6.1 This report demonstrates that the proposed demolition of the development at the site is feasible and acceptable in accordance with ecological considerations and the NPPF.
- 6.2 It is possible to implement reasonable actions for the protection of the nearby Smalley's Farm BHS.
- 6.3 It is possible to implement reasonable actions for the protection and long-term conservation of fauna such as roosting bats, nesting birds and commuting / foraging bats associated with the site.
- 6.4 An initial assessment of the proposals in accordance with the 'Three Tests' used by Natural England to assess EPSM licence applications has been completed as part of the report. This report presents a mechanism demonstrating how the Favourable Conservation Status of bats can be ensured during the proposed works.
- 6.5 Measures to conserve the habitat connectivity through the site are entirely feasible.
- 6.6 Development at the site will provide an opportunity to secure ecological enhancement for fauna typically associated with residential dwellings and the local area such as breeding birds and roosting bats.

¹⁴ Extracted from *Encouraging bats, A guide for bat-friendly gardening and living* (Bat Conservation Trust, 2016).

- 6.7 It is concluded that, provided the works are completed in accordance with the recommendations presented in this report, and under an appropriate EPSM licence for bats, the proposals are feasible and acceptable in accordance with ecological considerations and relevant planning policy.

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8.0 APPENDIX 1: TABLES, PHOTOGRAPHS AND FIGURES

8.1 Plant Species Lists

Table 8.1: Plant Species List for Woodland 1

Scientific Name	Common Name	DAFOR	Cover
Canopy Layer			
<i>Acer campestre</i>	Field Maple	O/LF	10%
<i>Acer pseudoplatanus</i>	Sycamore	O/LF	20%
<i>Betula pendula</i>	Silver Birch	O	10%
<i>Fraxinus excelsior</i>	Ash	O/LA	20%
<i>Quercus robur</i>	Pedunculate Oak	O/LA	20%
Shrub Layer			
<i>Acer campestre</i>	Field Maple	LF	<1%
<i>Acer pseudoplatanus</i>	Sycamore	O	5%
<i>Corylus avellana</i>	Hazel	O	<1%
<i>Crataegus monogyna</i>	Hawthorn	O/LF	5%
<i>Fagus sylvatica</i>	Beech	O	<1%
<i>Fraxinus excelsior</i>	Ash	O	5%
<i>Ilex aquifolium</i>	Holly	O/LA	5%
<i>Sorbus aucuparia</i>	Rowan	O	<1%
<i>Ulex europaeus</i>	Gorse	LA	5%
Field Layer			
<i>Asplenium scolopendrium</i>	Hart's-tongue fern	O	<1%
<i>Blechnum spicant</i>	Hard-fern	O	<1%
<i>Digitalis purpurea</i>	Foxglove	O	<1%
<i>Dryopteris dilatata</i>	Broad Buckler-fern	O/LF	<1%
<i>Hedera helix</i>	Ivy	O/LA	10%
<i>Rubus fruticosus</i> agg.	Bramble	O/LF	<1%
<i>Urtica dioica</i>	Common Nettle	O	<1%
¹ Key to DAFOR: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species			

Table 8.2: Plant Species List for Grassland Field

Scientific Name	Common Name	DAFOR	Cover
Woody Species			
<i>Alnus glutinosa</i>	Alder (sapling)	R	<1%
Herbaceous Species			
<i>Achillea millefolium</i>	Yarrow	O	<1%
<i>Achillea ptarmica</i>	Sneezewort	O/LF	<1%
<i>Agrostis capillaris</i>	Common Bent	O/LF*	5%
<i>Agrostis stolonifera</i>	Creeping Bent	F*	10%
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	O/LF*	10%
<i>Cardamine flexuosa</i>	Wavy Bitter-cress	R	<1%
<i>Carex ovalis</i>	Oval Sedge	O/LF	5%
<i>Cerastium fontanum</i>	Common Mouse-ear	O	<1%
<i>Cirsium arvense</i>	Creeping Thistle	R	<1%
<i>Cirsium palustre</i>	Marsh Thistle	O	<1%
<i>Cynosurus cristatus</i>	Crested Dog's-tail	F*	30%
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	F/LA*	30%

Scientific Name	Common Name	DAFOR	Cover
<i>Epilobium montanum</i>	Broad-leaved Willowherb	R	<1%
<i>Festuca rubra</i>	Red Fescue	F*	10%
<i>Holcus lanatus</i>	Yorkshire-fog	F*	20%
<i>Juncus articulatus</i>	Jointed Rush	LF	<1%
<i>Juncus conglomeratus</i>	Compact Rush	O/LF	5%
<i>Juncus effusus</i>	Soft-rush	O/LF	10%
<i>Lolium perenne</i>	Perennial Rye-grass	O/LF	10%
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil	LF	<1%
<i>Phleum pratense</i>	Timothy	O/LF	5%
<i>Plantago lanceolata</i>	Ribwort Plantain	O	<1%
<i>Poa pratensis</i>	Smooth Meadow-grass	O	<1%
<i>Potentilla erecta</i>	Tormentil	VLF	<1%
<i>Prunella vulgaris</i>	Selfheal	O	<1%
<i>Ranunculus acris</i>	Meadow Buttercup	O	<1%
<i>Ranunculus repens</i>	Creeping Buttercup	O	<1%
<i>Ranunculus sceleratus</i>	Celery-leaved Buttercup	O	<1%
<i>Rumex acetosa</i>	Common Sorrel	O	<1%
<i>Stellaria media</i>	Common Chickweed	R	<1%
<i>Taraxacum officinale</i> agg.	Dandelion	R	<1%
<i>Trifolium pratense</i>	Red Clover	LF	<1%
<i>Trifolium repens</i>	White Clover	O/LF	5%
<i>Urtica dioica</i>	Common Nettle	R	<1%
<i>Vicia cracca</i>	Tufted Vetch	R	<1%

¹**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species

Table 8.3: Plant Species List for Modified Grassland

Scientific Name	Common Name	DAFOR	Cover
Woody Species			
<i>Alnus glutinosa</i>	Alder (sapling)	VLF	<1%
Herbaceous Species			
<i>Agrostis capillaris</i>	Common Bent	O/LF	5%
<i>Agrostis stolonifera</i>	Creeping Bent	O/LF	5%
<i>Calluna vulgaris</i>	Heather	R	<1%
<i>Carex hirta</i>	Hairy Sedge	VLF	<1%
<i>Cynosurus cristatus</i>	Crested Dog's-tail	O/LF	5%
<i>Equisetum arvense</i>	Field Horsetail	LF	5%
<i>Festuca rubra</i>	Red Fescue	F*	10%
<i>Holcus lanatus</i>	Yorkshire-fog	O/LF	10%
<i>Lolium perenne</i>	Perennial Rye-grass	F/LA*	70%
<i>Plantago lanceolata</i>	Ribwort Plantain	O	<1%
<i>Prunella vulgaris</i>	Selfheal	R	<1%
<i>Ranunculus repens</i>	Creeping Buttercup	O/LF	5%
<i>Rhytidiadelphus squarrosus</i>	Springy Turf-moss	F*	10%
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R	<1%
<i>Taraxacum officinale</i> agg.	Dandelion	O	<1%
<i>Trifolium pratense</i>	Red Clover	VLF	<1%
<i>Trifolium repens</i>	White Clover	O/LF*	5%

¹**Key to DAFOR:** D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species

Table 8.4: Plant Species List for Area of Scrub, Tall Forbs and Ferns

Scientific Name	Common Name	DAFOR	Cover
Woody Species			
<i>Crataegus monogyna</i>	Hawthorn	O	5%
<i>Fraxinus excelsior</i>	Ash	R	<1%
<i>Ilex aquifolium</i>	Holly	O	<1%
<i>Quercus robur</i>	Pedunculate Oak	R	<1%
<i>Salix caprea</i>	Goat Willow	VLF	<1%
<i>Spiraea douglasii</i>	Steeple-bush	VLA	<1%
Herbaceous Species			
<i>Agrostis stolonifera</i>	Creeping Bent	O/LF	5%
<i>Athyrium filix-femina</i>	Lady-fern	A*	80%
<i>Calystegia sepium</i>	Hedge Bindweed	O	<1%
<i>Cirsium arvense</i>	Creeping Thistle	R	<1%
<i>Digitalis purpurea</i>	Foxglove	R	<1%
<i>Epilobium montanum</i>	Broad-leaved Willowherb	VLF	<1%
<i>Equisetum arvense</i>	Field Horsetail	VLF	<1%
<i>Festuca rubra</i>	Red Fescue	O/LF	5%
<i>Geranium robertianum</i>	Herb-Robert	R	<1%
<i>Heracleum sphondylium</i>	Hogweed	O	<1%
<i>Holcus lanatus</i>	Yorkshire-fog	O/LF	5%
<i>Hypericum androsaemum</i>	Tutsan	VLF	<1%
<i>Plantago lanceolata</i>	Ribwort Plantain	O	<1%
<i>Prunella vulgaris</i>	Selfheal	R	<1%
<i>Ranunculus repens</i>	Creeping Buttercup	O/LF	<1%
<i>Rubus fruticosus</i> agg.	Bramble	O/LF	5%
<i>Rumex acetosa</i>	Common Sorrel	VLF	<1%
<i>Tussilago farfara</i>	Colt's-foot	O	<1%
<i>Urtica dioica</i>	Common Nettle	O/VLF	<1%
¹ Key to DAFOR: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species			

Table 8.5: Plant Species List for Vegetation Colonising Hardstanding

Scientific Name	Common Name	DAFOR	Cover
<i>Cirsium arvense</i>	Creeping Thistle	R	<1%
<i>Cynosurus cristatus</i>	Crested Dog's-tail	R	<1%
<i>Epilobium hirsutum</i>	Great Willowherb	O/LF	<1%
<i>Epilobium montanum</i>	Broad-leaved Willowherb	O/LF	<1%
<i>Festuca rubra</i>	Red Fescue	O	<1%
<i>Geranium robertianum</i>	Herb-Robert	O	<1%
<i>Holcus lanatus</i>	Yorkshire-fog	O	<1%
<i>Lapsana communis</i>	Nipplewort	R	<1%
<i>Linaria purpurea</i>	Purple Toadflax	R	<1%
<i>Lolium perenne</i>	Perennial Rye-grass	O	<1%
<i>Lolium perenne</i>	Perennial Rye-grass	O	<1%
<i>Plantago lanceolata</i>	Ribwort Plantain	R	<1%
<i>Plantago major</i>	Greater Plantain	R	<1%
<i>Poa annua</i>	Annual Meadow-grass	R	<1%
<i>Ranunculus acris</i>	Meadow Buttercup	R	<1%
<i>Ranunculus repens</i>	Creeping Buttercup	R	<1%
<i>Stellaria media</i>	Common Chickweed	R	<1%
<i>Taraxacum officinale</i> agg.	Dandelion	R	<1%
<i>Urtica dioica</i>	Common Nettle	R	<1%
¹ Key to DAFOR: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species			

Table 8.6: Plant Species List for Hedgerow 1

Scientific Name	Common Name	DAFOR	Cover
Woody Species			
<i>Acer pseudoplatanus</i>	Sycamore	O/LA	10%
<i>Corylus avellana</i>	Hazel	O/LA	5%
<i>Cotoneaster bullatus</i>	Hollyberry Cotoneaster	R	<1%
<i>Crataegus monogyna</i>	Hawthorn	O/LF	30%
<i>Fagus sylvatica</i>	Beech	VLA	<1%
<i>Fraxinus excelsior</i>	Ash	O	5%
<i>Ilex aquifolium</i>	Holly	O/LF	5%
<i>Lonicera periclymenum</i>	Honeysuckle	VLA	<1%
<i>Prunus spinosa</i>	Blackthorn	O/LA	20%
<i>Quercus robur</i>	Pedunculate Oak	O/LA	10%
<i>Rosa canina</i>	Dog-rose	O/LF	5%
<i>Salix caprea</i>	Goat Willow	O/LA	10%
Field Layer			
<i>Artemisia vulgaris</i>	Mugwort	O	<1%
<i>Centaurea nigra</i>	Common Knapweed	O/LF	<1%
<i>Chamerion angustifolium</i>	Rosebay Willowherb	R	<1%
<i>Cirsium arvense</i>	Creeping Thistle	O	<1%
<i>Dactylis glomerata</i>	Cock's-foot	O	<1%
<i>Dryopteris dilatata</i>	Broad Buckler-fern	O	<1%
<i>Hedera helix</i>	Ivy	O/LF	<1%
<i>Heracleum sphondylium</i>	Hogweed	O	<1%
<i>Rubus fruticosus</i> agg.	Bramble	F/LA	10%
<i>Stachys sylvatica</i>	Hedge Woundwort	O	<1%
<i>Urtica dioica</i>	Common Nettle	O	<1%
¹ Key to DAFOR: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species			

Table 8.7: Hedgerow Description and Assessment in Accordance with *The Hedgerows Regulations 1997*

	Hedgerow Name	Hedgerow 1		
Description	Height x width (metres)	2 to 3 x 2		
	Length (metres)	77		
	Continuity	90%		
	Management	Flailed		
Woody Species	Section number ¹	1	2	3
	Qualifying woody species	5	N/A	N/A
	Average Number	5		
Number of Features Present	(a) Bank or wall along at least ½ length	No		
	(b) Gaps which in agg. do not exceed 10%	Yes		
	(c)-(e) 1 standard tree per 50m	Yes		
	(f) At least 3 woodland species within 1m	No		
	(g) Ditch along at least ½ its length	No		
	(h) Connections scoring 4 points or more	No		
	(i) Parallel hedge within 15m	Yes		
	Total Features	3		
Hedgerow Importance	Criteria for Hedgerow Importance 1	No		
	Criteria for Hedgerow Importance 2:	Yes		
	Criteria for Hedgerow Importance 3:	Yes		
Hedgerow Important Criteria	Criteria for Hedgerow Importance 1: Hedgerow contains species listed as: (1) Part 1 of Schedule 1, Schedule 5 or Schedule 8 of <i>Wildlife and Countryside Act 1981</i> (as amended); (2) Declining breeders in ‘Red Data Birds of Britain’; and / or (3) Categorised as ‘endangered’, ‘extinct’ or ‘vulnerable’			
	Criteria for Hedgerow Importance 2: Hedgerow includes (Number of woody species required reduced by one in Lancashire): (i) At least 7 woody species (on average); (ii) At least 6 woody species (on average) and at least 3 features; (iii) At least 6 woody species (on average), including one of: Black Poplar, Large-leaved Lime, Small-leaved Lime or Wild Service Tree; and / or; (iv) At least 5 woody species (on average), and has 4 features			
	Criteria for Hedgerow Importance 3: Is adjacent to is adjacent to a bridleway, footpath or byway and includes at least 4 woody species on average and 2 features from (a) to (g).			

¹Up to and including 100 metres length = 1 section required.
100 to 200 metres length = 2 sections required
Greater than 200 metres length = 3 sections required.

Table 8.8: Plant Species List for Hedgerow 2

Scientific Name	Common Name	DAFOR	Cover
Woody Species			
<i>Carpinus betulus</i>	Hornbeam	LA	5%
<i>Corylus avellana</i>	Hazel	O/LF	5%
<i>Crataegus monogyna</i>	Hawthorn	O/LA*	50%
<i>Fagus sylvatica</i>	Beech	R	<1%
<i>Ilex aquifolium</i>	Holly	O/LA	20%
<i>Prunus laurocerasus</i>	Cherry Laurel	R	<1%
<i>Rosa canina</i>	Dog-rose	O	<1%
Field Layer			
<i>Hedera algeriensis</i>	Algerian Ivy	VLA	<1%
<i>Rubus fruticosus agg.</i>	Bramble	O/LF	<1%
¹ Key to DAFOR: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species			

8.2 Data from Dusk Emergence Surveys

Table 8.9: Dusk Emergence Survey 1, 5th August 2025, Sunset Time 21:00, Start Time 20:45

Survey Position 1: Lynne Rigby

Time	Species	Notes
21:29 until 22:17	Common pipistrelle	No emergence detected. Occasional foraging over the site.
21:48	Soprano pipistrelle	No emergence detected. Infrequent foraging detected, heard not seen.
22:09	Noctule	No emergence detected. Infrequent foraging detected, heard not seen.
22:09	Brown long-eared bat	No emergence detected. Infrequent foraging detected, heard not seen.
The Anabat Scout made the following recordings: 10 call sequences of common pipistrelle between 21:29 and 22:17. 2 call sequences of soprano pipistrelle, both at 21:48. 3 call sequences of noctule, all at 22:09. 3 call sequences of brown long-eared bat, all at 22:09.		

Survey Position 2: Julia Rigby

Time	Species	Notes
21:44 until 22:17	Common pipistrelle	No emergence detected. Occasional foraging over the site.
22:09	Noctule	No emergence detected. Infrequent foraging detected, heard not seen.
22:26	Soprano pipistrelle	No emergence detected. Infrequent foraging detected, heard not seen.
The Anabat Scout made the following recordings: 12 call sequences of common pipistrelle between 21:44 and 22:17. 2 call sequences of noctule, both at 22:09. 2 call sequences of soprano pipistrelle, both at 22:26.		

Survey Position 3: Natalie Coffey

Time	Species	Notes
21:38 until 22:24	Common pipistrelle	No emergence detected. Occasional foraging over the site.
21:54 until 22:09	Brown long-eared bat	No emergence detected. Infrequent foraging detected, heard not seen.
22:09	Noctule	No emergence detected. Infrequent foraging detected, heard not seen.
22:15	Soprano pipistrelle	No emergence detected. Infrequent foraging detected, heard not seen.
22:20	Myotis species	No emergence detected. Infrequent foraging detected, heard not seen.
The Anabat Scout made the following recordings: 18 call sequences of common pipistrelle between 21:38 and 22:24. 3 call sequences of brown long-eared bat between 21:54 and 22:09. 2 call sequences of noctule, both at 22:09. 1 call sequence of soprano pipistrelle at 22:15. 2 call sequences of Myotis species at 22:20.		

Survey Position 4: Leah Hart

Time	Species	Notes
21:22 until 22:15	Common pipistrelle	Roost 2, emergence point A; refer to Photo 37: One common pipistrelle bat emerged from Roost 2 under the skylight on the south-eastern elevation of Building 1 at 21:22. Occasional foraging over the site.
21:28 until 22:15	Soprano pipistrelle	No emergence detected. Occasional foraging over the site.
22:09	Noctule	No emergence detected. Infrequent foraging detected, heard not seen.
The Anabat Scout made the following recordings: 6 call sequences of common pipistrelle between 21:22 and 22:15. 10 call sequences of soprano pipistrelle between 21:38 and 22:15. 1 call sequence of noctule at 22:09.		

Survey Position 5: Sue Lonsdale

Time	Species	Notes
21:29 until 22:26	Common pipistrelle	No emergence detected. Occasional foraging over the site.
21:48 until 22:26	Soprano pipistrelle	No emergence detected. Infrequent foraging detected, heard not seen.
21:52 until 22:17	Brown long-eared bat	No emergence detected. Infrequent foraging detected, heard not seen.
The Anabat Express FS made the following recordings: 14 call sequences of common pipistrelle between 21:29 and 22:26. 3 call sequences of soprano pipistrelle between 21:48 and 22:26. 5 call sequences of brown long-eared bat between 21:52 and 22:17.		

Survey Position 6: Amy Sharples

Time	Species	Notes
21:00 until 21:53	Soprano pipistrelle	No emergence detected. Occasional foraging over the site.
21:08 until 22:21	Brown long-eared bat	No emergence detected. Infrequent foraging detected, heard not seen.
21:11 until 22:06	Common pipistrelle	No emergence detected. Occasional foraging over the site.
22:03	Myotis species	No emergence detected. Infrequent foraging detected, heard not seen.
22:09	Noctule	No emergence detected. Infrequent foraging detected, heard not seen.
The Anabat Express FS made the following recordings: 21 call sequences of soprano pipistrelle between 21:00 and 21:53. 7 call sequences of brown long-eared bat between 21:08 and 22:21. 65 call sequences of common pipistrelle between 21:11 and 22:06. 2 call sequences of Myotis species, both at 22:03. 1 call sequence of noctule at 22:09.		

Table 8.10: Dusk Emergence Survey 2, 26th August 2025 Sunset Time 20:15, Start Time 20:00

Survey Position 1: NVA Only, Footage Subsequently Reviewed by Brian Robinson

Time	Species	Notes
20:24 until 21:41	Soprano pipistrelle	No emergence detected.
20:35 until 21:44	Common pipistrelle	No emergence detected.
21:41 until 21:44	Myotis species	No emergence detected.
The Anabat Scout made the following recordings: 7 call sequences of soprano pipistrelle between 20:24 and 21:41. 98 call sequences of common pipistrelle between 20:35 and 21:44. 3 call sequences of Myotis species between 21:41 and 21:44.		

Survey Position 2: Keiran Bolton

Time	Species	Notes
20:23 until 21:47	Common pipistrelle	Roost 2, emergence point B; refer to Photos 35 and 36: Two common pipistrelle (in total) were observed emerging from the eastern pitch of the northern gable of Building 1 at 20:23 and 20:44 Roost 2, emergence point C; refer to Photos 35 and 36: Two common pipistrelle (in total) were observed emerging from the western pitch of the northern gable of Building 1 at 20:34 and 20:37.
20:23 until 21:41	Soprano pipistrelle	No emergence detected. Infrequent foraging detected, heard not seen.
21:32 until 21:44	Myotis species	No emergence detected. Infrequent foraging detected, heard not seen.
The Anabat Scout made the following recordings: 104 call sequences of common pipistrelle between 20:23 and 21:47. 8 call sequences of soprano pipistrelle between 20:23 and 21:41. 5 call sequences of Myotis species between 21:32 and 21:44.		

Survey Position 3: Brian Robinson

Time	Species	Notes
20:37 until 21:38	Common pipistrelle	Roost 2, emergence point B; refer to Photos 35 and 36: Two common pipistrelle (in total) were observed emerging from the eastern pitch of the northern gable of Building 1 at 20:23 and 20:44. Roost 2, emergence point C; refer to Photos 35 and 36: Two common pipistrelle (in total) were observed emerging from the western pitch of the northern gable of Building 1 at 20:34 and 20:37. Roost 2, emergence point D; refer to Photo 36): Three common pipistrelle (in total) were observed emerging from the southern pitch of the western gable of Building 1 at 20:38, 20:42 and 20:43. Frequent foraging around the site.
21:32	Myotis species	No emergence detected. Infrequent foraging detected, heard not seen.
The Anabat Scout made the following recordings: 163 call sequences of common pipistrelle between 20:37 and 21:38. 2 call sequences of Myotis species, both at 21:32		

Survey Position 4: Stephen Bolton

Time	Species	Notes
20:38 until 21:29	Common pipistrelle	No emergence detected. Frequent foraging over the site.
20:46 until 21:41	Soprano pipistrelle	No emergence detected. Infrequent foraging detected, heard not seen.
21:33 and 21:45	Myotis species	No emergence detected. Infrequent foraging detected, heard not seen.
The Anabat Scout made the following recordings: 33 call sequences of common pipistrelle between 20:38 and 21:29. 9 call sequences of soprano pipistrelle between 20:46 and 21:41. 2 call sequences of Myotis species at 21:33 and 21:45.		

Table 8.11: Dusk Emergence Survey 3, 23rd September 2025, Sunset Time 19:07, Start Time 18:50

Survey Position 1: John Harrison-Bryant

Time	Species	Notes
19:36 until 20:11	Common pipistrelle	No emergence detected. Occasional foraging activity around the site.
19:37 until 20:06	Soprano pipistrelle	No emergence detected. Infrequent activity detected, heard not seen.
19:39 until 19:43	Noctule	No emergence detected. Occasional activity, detected, observed flying high over site.
19:47 until 19:56	Brown long-eared bat	No emergence detected. Infrequent activity detected, heard not seen.
19:56	Myotis species	No emergence detected. Only one call sequence detected, heard not seen.
The Anabat Scout made the following recordings: 25 call sequences of common pipistrelle between 19:36 and 20:11. 3 call sequences of soprano pipistrelle between 19:37 and 20:06. 6 call sequences of noctule between 19:39 and 19:43. 2 call sequences of brown long-eared bat at 19:47 and 19:56. 1 call sequence of Myotis species at 19:56.		

Survey Position 2: Natalie Coffey

Time	Species	Notes
19:17 until 19:43	Noctule	No emergence detected. Occasional activity, detected, observed flying high over site.
19:18 until 20:39	Soprano pipistrelle	No emergence detected. Frequent foraging activity at the site.
19:23 until 20:38	Common pipistrelle	Roost 2, emergence point C; refer to Photos 35 and 36: One common pipistrelle was observed emerging from the western pitch of the northern gable of Building 1 at 19:23. Frequent foraging activity at the site.
20:00 until 20:20	Myotis species	No emergence detected. Infrequent activity detected, heard not seen.
20:24 until 20:32	Brown long—eared bat	No emergence detected. Infrequent activity detected, heard not seen.
The Anabat Scout made the following recordings: 12 call sequences of noctule between 19:17 and 19:43. 43 call sequences of soprano pipistrelle between 19:18 and 20:39. 90 call sequences of common pipistrelle between 19:23 and 20:38. 2 call sequences of Myotis species at 20:00 and 20:20. 2 call sequences of brown long-eared bat at 20:24 and 20:32.		

Survey Position 3: Oscar Counce

Time	Species	Notes
19:17 until 19:41	Noctule	No emergence detected. Occasional activity, detected, observed flying high over site.
19:23 until 20:40	Common pipistrelle	Roost 2, emergence point C; refer to Photos 35 and 36: One common pipistrelle was observed emerging from the western pitch of the northern gable of Building 1 at 19:23. Roost 2, emergence point D; refer to Photos 35 and 36:

		One common pipistrelle was observed emerging from the southern pitch of the western gable of Building 1 at 19:25. Roost 2, emergence point E; refer to Photo 36: Three common pipistrelle (in total) were observed emerging from the southern pitch of the western gable of Building 1 at 19:17, 19:18 and 19:37. Frequent foraging activity at the site.
19:17 until 20:40	Soprano pipistrelle	No emergence detected. Frequent foraging activity at the site.
20:01 until 20:20	Myotis species	No emergence detected. Infrequent activity detected, heard not seen.
20:32:	Brown long-eared bat	No emergence detected. Infrequent activity detected, heard not seen.
The Anabat Scout made the following recordings: 20 call sequences of noctule between 19:17 and 19:41. 67 call sequences of common pipistrelle between 19:23 and 20:40. 84 call sequences of soprano pipistrelle between 19:17 and 20:40. 4 call sequences of Myotis species between 20:01 and 20:20. 2 call sequences of brown long-eared bat, both at 20:32.		

Survey Position 4: Sue Lonsdale

Time	Species	Notes
19:17 until 19:43	Noctule	No emergence detected. Occasional activity, detected, observed flying high over site.
19:26 until 20:40	Common pipistrelle	Roost 2, emergence point F; refer to Photo 37: Four common pipistrelle (in total) were observed emerging from behind the guttering at the south-eastern elevation of Building 1 at 19:17, 19:18 and 19:37. Frequent foraging activity at the site.
19:26 until 20:41	Soprano pipistrelle	No emergence detected. Frequent foraging activity at the site.
19:47 until 20:19	Brown long-eared bat	No emergence detected. Infrequent activity detected, heard not seen.
19:56 until 20:04	Myotis species	No emergence detected. Infrequent activity detected, heard not seen.
The Anabat Scout made the following recordings: 16 call sequences of noctule between 19:17 and 19:43. 41 call sequences of common pipistrelle between 19:26 and 20:40. 64 call sequences of soprano pipistrelle between 19:26 and 20:41. 4 call sequences of brown long-eared bat between 19:47 and 20:19. 3 call sequences of Myotis species between 19:56 and 20:04.		

Survey Position 5: Leah Hart

Time	Species	Notes
19:17 until 19:56	Noctule	No emergence detected. Occasional activity, detected, observed flying high over site.
19:18 until 20:38	Soprano pipistrelle	No emergence detected. Frequent foraging activity at the site.
19:28 until 20:38	Common pipistrelle	No emergence detected. Frequent foraging activity at the site.
19:56 until 20:20	Myotis species	No emergence detected. Infrequent activity detected, heard not seen.
20:24 until 20:32	Brown long-eared bat	No emergence detected. Infrequent activity detected, heard not seen.
The Anabat Scout made the following recordings: 14 call sequences of noctule between 19:17 and 19:56. 47 call sequences of soprano pipistrelle between 19:18 and 20:38. 86 call sequences of common pipistrelle between 19:28 and 20:38. 4 call sequences of Myotis species between 19:56 and 20:20. 2 call sequences of brown long-eared bat at 20:24 and 20:32.		

Survey Position 6: Brian Robinson

Time	Species	Notes
19:26 until 20:22	Common pipistrelle	No emergence detected. Occasional foraging over the site.
19:26 until 20:28	Soprano pipistrelle	No emergence detected. Occasional foraging over the site.
19:47 until 20:26	Brown long-eared bat	No emergence detected. Infrequent activity calls detected, heard not seen.
19:40 until 19:41	Noctule	No emergence detected. Infrequent activity calls detected, heard not seen.
The Anabat Scout made the following recordings: 22 call sequences of common pipistrelle between 19:26 and 20:22. 21 call sequences of soprano pipistrelle between 19:26 and 20:28. 3 call sequences of brown long-eared bat between 19:47 and 20:26. 3 call sequences of noctule between 19:40 and 19:41.		

8.3 Photographs

Table 8.12: Photographs



Photo 1: Woodland 1



Photo 2: Woodland 1



Photo 3: Grassland field



Photo 4: Grassland field



Photo 5: Amenity grassland

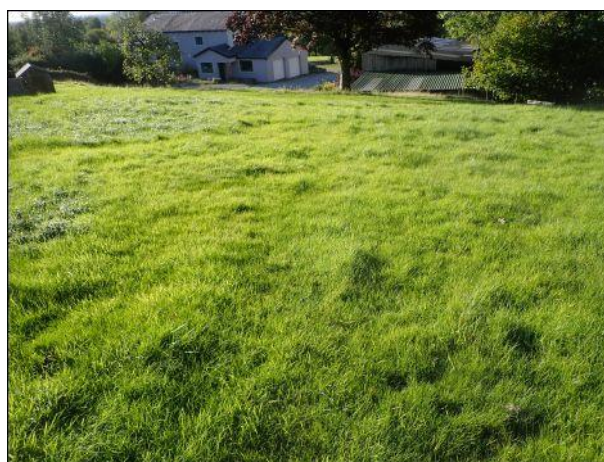


Photo 6: Amenity grassland



Photo 7: Ornamental shrubs



Photo 8: Ornamental shrubs



Photo 9: Scrub, tall-forbs and ferns



Photo 10: Vegetation colonising hardstanding



Photo 11: Vegetation colonising hardstanding



Photo 12: Hedgerow 1



Photo 13: Hedgerow 2



Photo 14: Building 1, southern elevation



Photo 15: Building 1, eastern elevation



Photo 16: Building 1, northern elevation



Photo 17: Building 1, western elevation

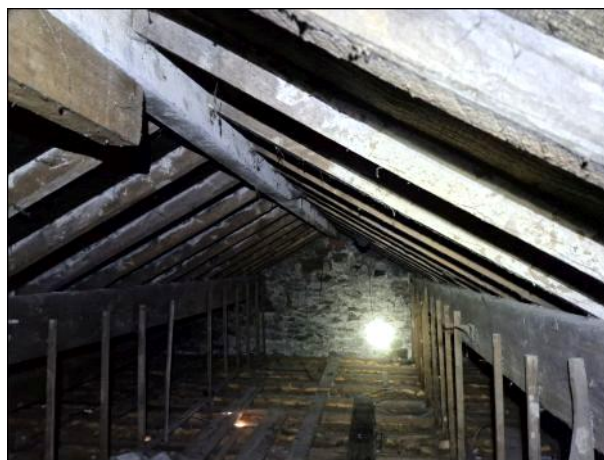


Photo 18: Building 1, eastern roof void



Photo 19: Building 1, western roof void



Photo 20: Scattered droppings in eastern roof void



Photo 21: Roof beams above large aggregation of droppings in western roof void



Photo 22: Mix of very old, old and more fresh droppings in western roof void



Photo 23: Building 2, north-western corner



Photo 24: Building 2, northern elevation



Photo 25: Building 2, eastern elevation



Photo 26: Building 2, internal area



Photo 27: Building 2, internal area

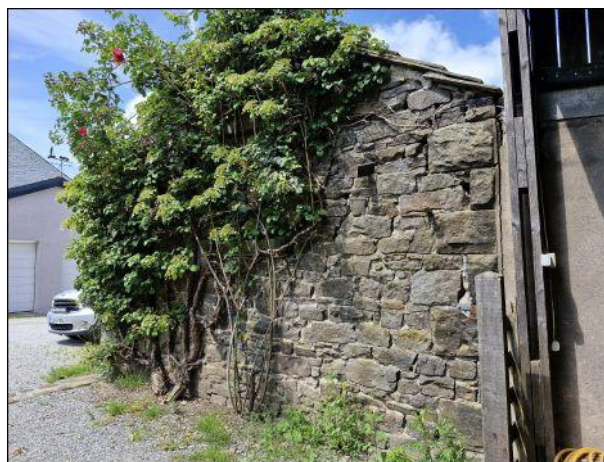


Photo 28: Building 3, southern elevation



Photo 29: Building 3, southern and western elevations



Photo 30: Building 3, northern and western elevations



Photo 31: Building 3, internal area



Photo 32: Small shed within the site



Photo 33: Small chicken shed within the site



Photo 34: Dusk emergence survey position 1



Photo 35: Dusk emergence survey position 2, showing Roost 2 emergence points B and C



Photo 36: Dusk emergence survey position 3, showing Roost 2 emergence points B, C, D and E



Photo 37: Dusk emergence survey position 4, showing Roost 2 Emergence Points A and F



Photo 38: Dusk emergence survey position 5



Photo 39: Dusk emergence survey position 6

8.4 DNA Results

Eastern Roof Void



2 September 25

Re: Identification Results for Victoria Burrows, ERAP Ltd

Job number 21836, received 15 August 2025

Sample labelled: 2025-218 Smalley Farm (1st Loft)

PCR amplification successful. DNA sequence:

GGCAAATACCTAGAAGAGACCCAAAGTTTCACCATGATGAAATATTTGAGGGAGCAG
GTAAGTCAATGAATGAATCATTGATAATTTTATGAGAGGGTGGGACTTTTGAATGTT
GGTCAT

Phylogenetic analysis identification: *Plecotus auritus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.

Professor Robin Allaby

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Western Roof Void



2 September 25

Re: Identification Results for Victoria Burrows, ERAP Ltd

Job number 21837, received 15 August 2025

Sample labelled: 2025-218 Smalley Farm (2nd Loft)

PCR amplification successful. DNA sequence:

AAGAGACCCAAAGTTTCACCATGATGAAATATTTGAGGGAGCAGGTAAGTCAATGAA
TGAATCATTGATAATTTTATGAGAGGGTGGGACTTTTCAATGTTGGTCAT

Phylogenetic analysis identification: *Plecotus auritus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.

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8.5 Figures

Figure 1: Aerial Image of the Site and its Surroundings

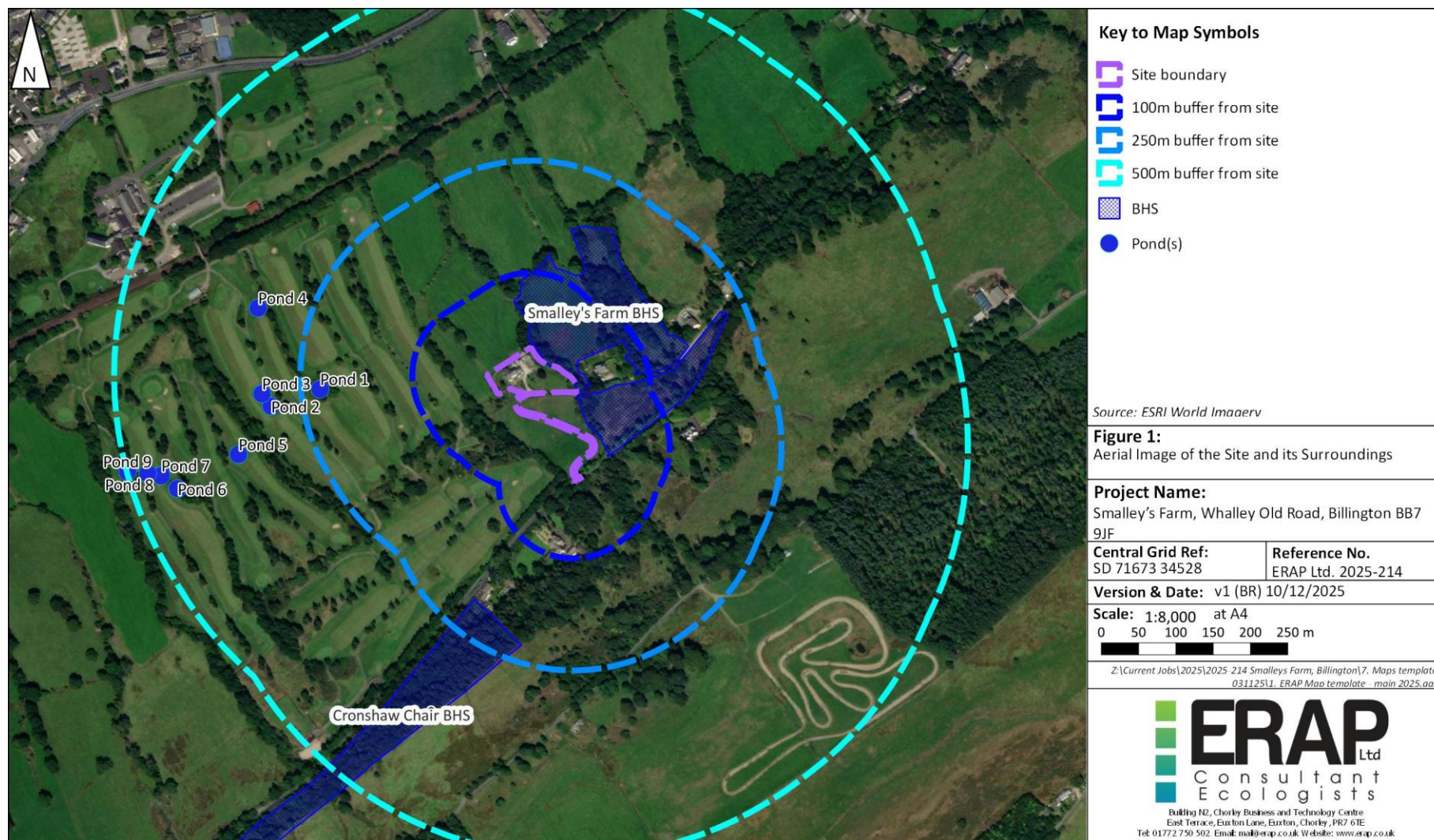
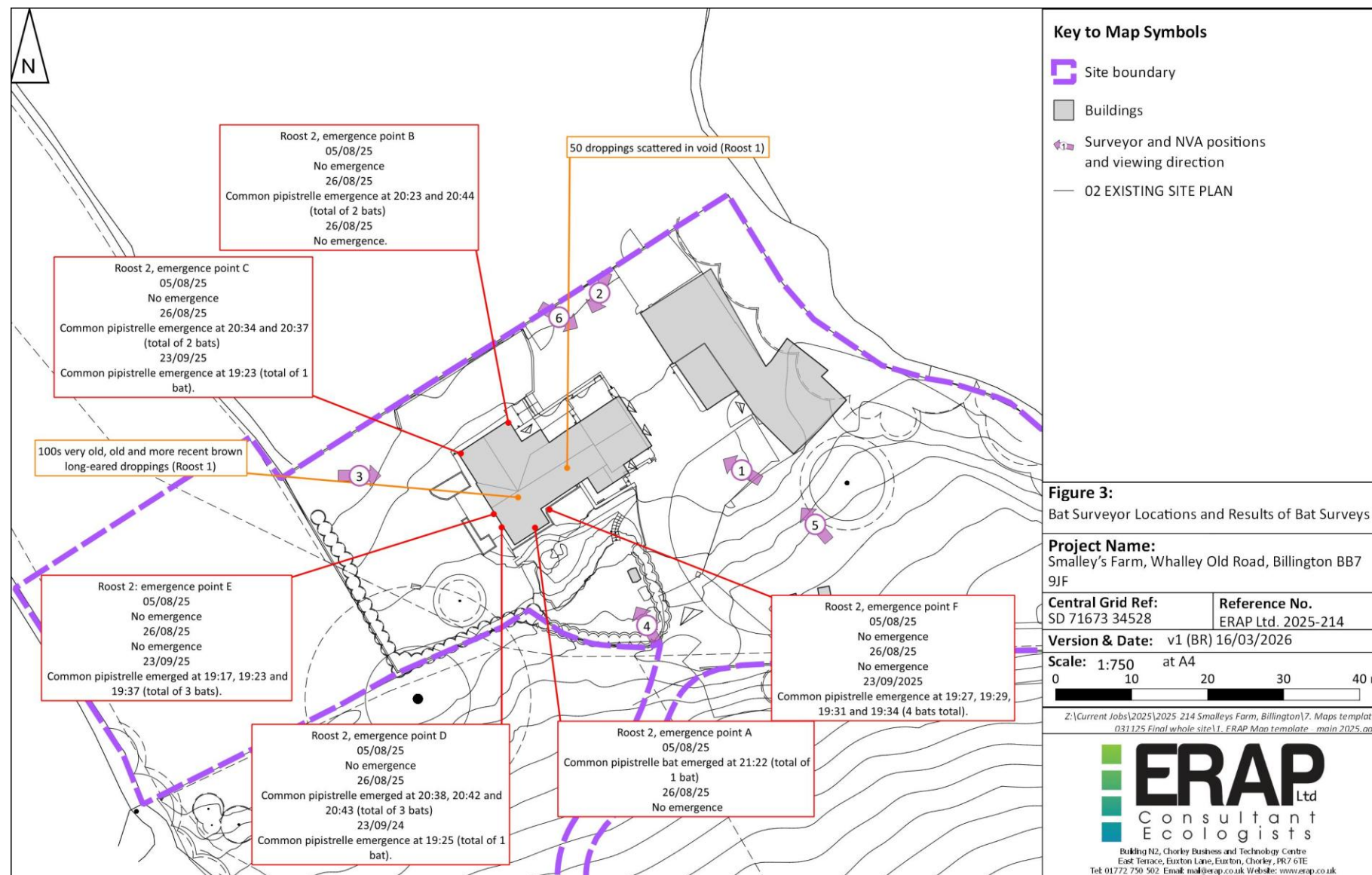


Figure 2: Phase 1 Habitat and Vegetation Map



Figure 3: Bat Surveyor Locations and Results of Bat Surveys



9.0 DRAFT METHOD STATEMENT AND MITIGATION STRATEGY FOR ROOSTING BATS

9.1 Introduction

9.1.1 This draft mitigation strategy has been prepared to outline the licensable actions and the works to be carried out to secure the favourable conservation status of brown long-eared bat and common pipistrelle at the site.

9.2 Provision of Roosting Facilities Prior to the Commencement of Works and During the Construction of the New Building

9.2.1 The appended **Figure 4** shows the proposed roosting provision to be provided prior to the commencement of works at Building 1 (to ensure constant roosting provision at the site), thereby securing continuity of roosting habitat at the site during the construction phase of the proposed development. The following measures are proposed prior to the commencement of works:

- a. Install a Greenwood's Ecohabitats three crevice bat box onto a suitable tree at the site boundary and / or on land within ownership of the client prior to the commencement of works at Building 1.
- b. Install two Greenwood's Ecohabitats single-crevice bat boxes onto suitable trees at the site boundary prior to the commencement of works at Building 1.
- c. If suitable trees are not available at the site then the boxes will be installed on poles.

9.2.2 The boxes (refer to **Insert 5** below) will be installed once planning permission has been granted and in advance of any works at Building 1.

THREE CREVICE BAT BOX



Insert 5: Greenwood's Ecohabitats Three Cavity Bat Box and Single-cavity Boxes

9.3 Long-term Roosting Facilities at the Site: Provision of a Bat Root within the Proposed Garage

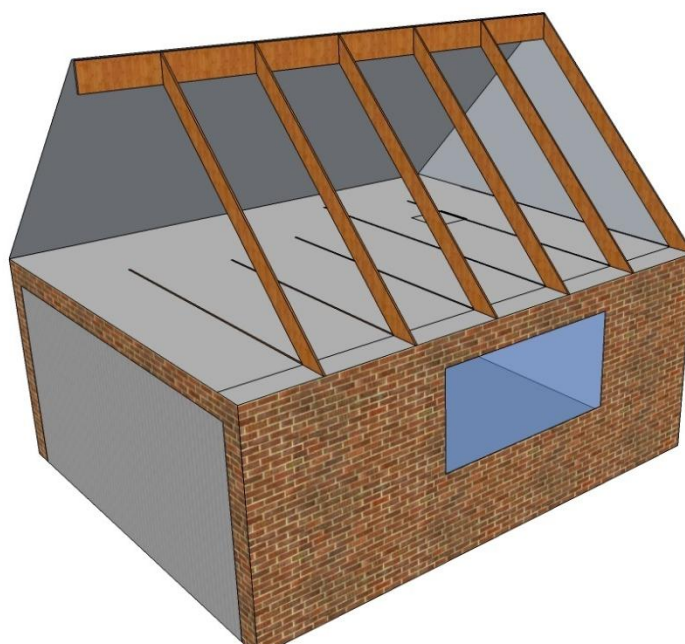
9.3.1 It is not considered feasible at the site to incorporate suitable facilities for roosting bats within the proposed new dwelling. It is considered that suitable provision for roosting bats can be provided within the proposed garage however, and that a roof void favourable for use by brown long-eared bats can be created within the garage.

- 9.3.2 The garage will be located in proximity to the woodland at the eastern margin of the site and will therefore be located close to favourable habitat for foraging and commuting bats.
- 9.3.3 The bat roost will aim to replicate the existing roost in the following dimensions and to a similar construction:
- The void of the garage will be constructed to replicate an open void as provided by traditional timber purlins and rafters, and the roofing slates will be lined by hessian backed Type 1F bitumastic roofing felt;
 - The void will be insulated with fibreglass insulation; and
 - Ideally the roofing slates and clay ridge tiles will be re-used from the existing building.
- 9.3.4 The garage should be at least 4 metres tall at its ridgeline.
- 9.3.5 Additional measures to increase the suitability of the bat house for roosting brown long-eared bats will be installed as part of the proposed construction of the building.
- 9.3.6 The minimum acceptable requirements for a replacement roost are summarised below, with additional key points to consider in terms of materials and construction.

Table 9.1: Minimum Dimensions and Suitable Construction Materials and Methods

Building footprint / basic design and dimensions	
Roof type	Pitched or hipped (provided a sufficiently-sized void remains, see below); gable ends are preferred, as this provides a greater internal void area.
Minimum height of ridgeline	4 metres (can be higher if this allows the ground floor to be a usable space, such as for storage).
Ideal height of void (floor to apex)	1.6 metres (to replicate existing roof void).
Minimum width/length	Minimum 4 x 4 metres.
Roof pitch	42° is ideal (this creates a favourable thermal regime within the void, suitable for use by maternity colonies of bats).
Roof construction	Traditional rafters and purlin. Modern pre-fabricated trusses must be avoided.
Ridge alignment	North to south (to replicate existing roof void).
Wall construction	Cavity walls are required to provide a stable thermal regime. Mortared blockwork is acceptable for the internal wall, and gaps can be created in the mortar to provide additional features for roosting bats. The external skin can be brick, rendered blockwork, or blockwork faced with overlapping timber, for example.
Location / alignment / surrounding habitats	
Location	As close to existing roost as possible (provided surrounding habitat remains suitable). Ideally, it should be close to existing flightlines / suitable habitat (such as hedgerows and tree lines) and have an entrance close to appropriate habitat. It is considered that locating the bat house to the north-west or north-east of the site would be most appropriate in this instance.
Lighting: internal	The replacement roost must remain dark; no skylights, electric lighting or other light sources should be included within the roost.
Lighting: external	The roosts should be located at locations where bat access / egress and flight lines to the roost(s) will not be impacted by artificial lighting. Many bat species prefer to fly in dark areas straight into vegetation, so external lighting on the site should be avoided.
Construction materials	
Roof covering	Slate will be used, ideally re-using the same slates from the existing roost at Building 1. This will allow the creation of the bat access points and allow for a suitable thermal regime within the void.

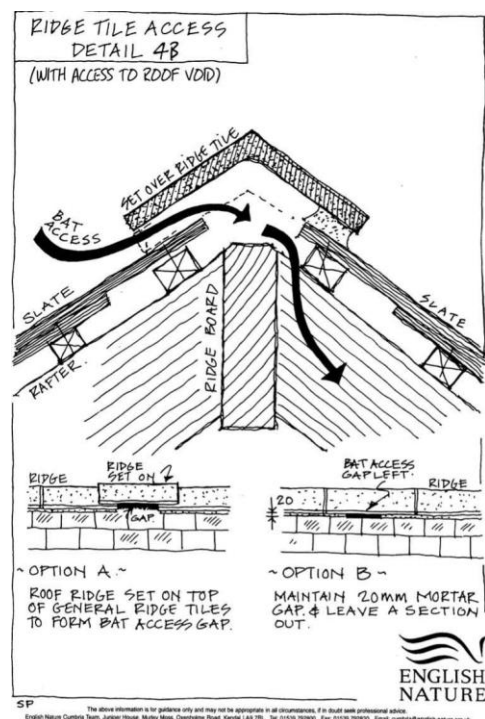
Underfelting	Traditional hessian backed 1F bitumastic roofing felt. Modern breathable membranes are unsuitable as bats can become entangled in the long plastic strands used to protect the membranes.
Roofing timbers	The timber used to construct the roofs will be purchased pre-treated from the supplier (using Protim E406 or another suitable treatment product) and the timber will be allowed to dry before it is used in order that there will be no treatment residue or wet chemical solutions on the timber when complete.
Insulation	There is no requirement to provide insulation, however if the voids are to be insulated then fibreglass insulation should be installed on the floor of the void.
Access for monitoring	A hatch will be provided for monitoring, however suitable signage must be installed to make clear the void is a bat roost and disturbance must be avoided.



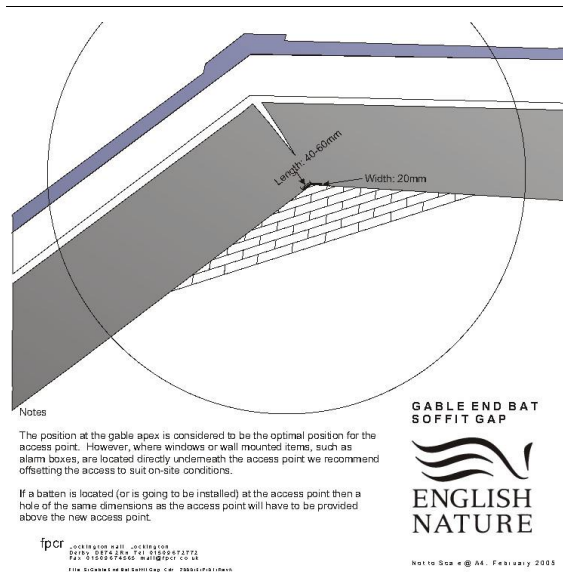
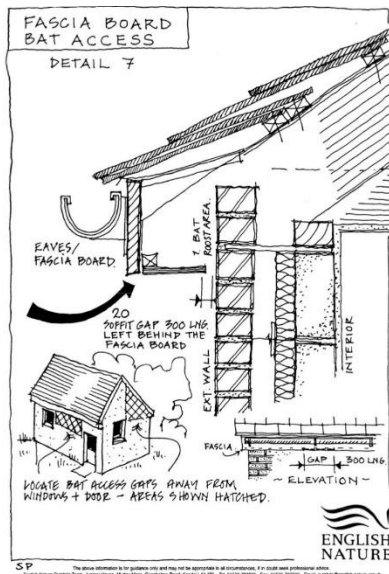
Insert 6: Example of a suitable void space over the proposed garage

Table 9.2: Roost Access and Additional Features to be Installed within the Garage for Roosting Brown Long-eared Bats

Factor	Description
Access to void	One lead slate access point at the ridgeline and suitable access gaps at the gable ends of the building will be created to ensure bats are able to access the void (refer to Inserts 7 and 8).
Access to the ridge beam	Refer to Insert 7 . The top slate/tile batten needs to be placed 20 mm from the ridge board. At about two metre intervals along the ridge, the roof felt should have 30 x 100 mm slots cut out beside the ridge boards to allow bats access to the ridge tiles (where most loft dwelling bats prefer to roost). When the ridge tiles are laid it is important to ensure the space within the ridge tiles remain unfilled with mortar and that there are lengths of tile which remain unobstructed. Some blockages in the ridge are needed to prevent through draughts. In addition it is useful to have a few small torn holes through the felt at several levels from apex to half way down the roof slope to allow bats into the space between tile and felt (40 x 60 mm holes torn on three sides and one end allowed to hang down).
Triple ridge board	Refer to Insert 9 . A 'triple ridge board' will be installed along the length of the ridge line to create numerous suitable locations for roosting bats; this feature is known to provide a further roosting location for brown long-eared bats.
Timber batten along ridge beam	Installation of a timber batten along the main ridge beam, to create a suitable (20mm) crevice will provide further roosting provision within the void for bats.
Seeding with droppings	Droppings and any other materials impregnated with odours from the existing roost can be added to the completed building as these may encourage rapid colonisation. It is best to place these to one side of the roof in a line on polythene sheet, away from where an observer is likely to walk and clear of the apex where most roosting will occur and new droppings should be produced.

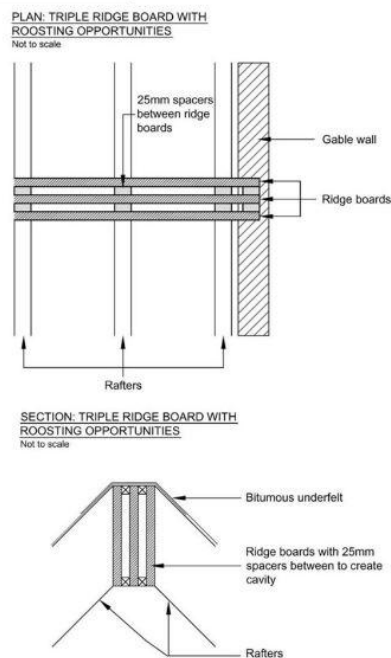


Insert 7: Examples of a ridge tile access (1 to be created at the garage)



Insert 8: Examples of access created at gable ends at fascias / soffits (to be created at the either gable end) of the garage

**ROOST OPPORTUNITY:
TRIPLE RIDGE BOARD**



Insert 9: Examples of a 'Triple Ridge Board' system to be used within the bat house to create additional roosting locations for use by brown long-eared bats

Precautionary Approach to Demolition of Building 1

- 9.3.7 Precautionary measures are proposed in order that the presence of any bats within the building will be detected during the proposed works to the areas concerned. A protocol (outlined below under 'capture and exclusion') will be followed should bats be found or suspected during works to ensure the protection of any bats sheltering within the building(s).

Consideration of Roofing Membranes and Timber Treatments

- 9.3.8 Note that any roosting structure built into the proposed new dwelling must be in accordance with the current Natural England position statement in relation to roofing membranes, as presented below:

'Use of safe roofing membranes

You must include a certificate that proves the roofing membrane has passed a 'snagging propensity test' if you're using a non-bitumen coated roofing membrane.

A snagging propensity test checks that the membrane can stand the repeated snagging actions of roosting bats. To pass, a membrane must show no change in the average number of loops per cm² as rotations are increased from 0 to 1000.

You do not need a certificate for bitumen 1F felt that has a non-woven, short fibre construction.'

- 9.3.9 Currently ERAP (Consultant Ecologists) Ltd is aware of one roofing membrane which can provide a snagging propensity test certificate, namely TLX 'Bat Safe'. Otherwise, as stated, bituminous roofing felt that does not contain non-woven spunbonded polypropylene filaments (i.e. bitumen 1F) is appropriate.

9.4 Capture and Exclusion During the Demolition of Building 1

Timing

- 9.4.1 In accordance with Figure 4 of the *Bat Mitigation Guidelines* (Mitchell-Jones, 2004) and the 2023 mitigation guidelines, and based on the detection of day roosts, there are no seasonal timing restrictions on the works (subject to the absence of nesting birds).

Pre-works Inspection

If Works are Conducted When Temperatures are Mild (Early Autumn / Spring)

- 9.4.2 If works are to be conducted whilst temperatures are mild, and there is a chance that bats may be active, immediately prior to the commencement of demolition a precautionary dawn re-entry survey will be conducted to detect any bats entering the building. Following this, the licensed bat surveyor will be present during the roof strip.
- 9.4.3 If a single (or a low number of) bats is present the licensed ecologist will carefully collect the bat(s), using a hand held static net or by direct handling, place the bat in an appropriate container, and release the bat at the site later the same day. Instruction will then be provided to proceed carefully with the removal of the remainder of the ridge copings and roof tiles under the supervision of the licensed ecologist, as appropriate.
- 9.4.4 If a greater number of bats are discovered, work will cease and a revised approach will be adopted.

If Works are Conducted When Temperatures are Cold (Late Autumn / Winter)

- 9.4.5 If weather conditions prior to the commencement of works are unsuitable for bat activity (i.e. protracted spells of cold weather during the autumn / winter period), then a dawn survey will not be conducted, but the roosting locations will be carefully examined using a video borescope prior to commencement of works.

- 9.4.6 If works are commenced during the winter period, when bats are likely to be hibernating, then a pre-works inspection using a video borescope of all available areas will be conducted by the licensed ecologist. In the event that any torpid bats are present or are suspected anywhere within the building, works in that area will cease and re-commence under suitable conditions outside the bat hibernation period (i.e. April onwards the following year).
- 9.4.7 If bats are found unexpectedly during the works, those features will, if possible, be replaced to their former condition in order that the bats are protected and remain undisturbed (under the supervision of the licensed bat worker). If this is not possible, or if it is considered that the bats have become disturbed by the attempted removal of the feature, then the bats will necessarily be taken into care until conditions are suitable for their release at the site.

Supervision of Works Following Precautionary Inspection

- 9.4.8 The licensed ecologist will be present on site during the careful removal, by hand, of the features associated with the day roosts at the building, and any other features assessed to be suitable for use by roosting bats, such as the ridge copings and roof edge tiles, particularly in the vicinity of the roosts.
- 9.4.9 If bats are discovered during the works when the licensed bat worker is not present, all workers must withdraw from the area and the bat worker must be contacted for guidance (ERAP (Consultant Ecologists) Ltd. on 01772 750502).

9.5 Mechanism for Ensuring Implementation / Success

- 9.5.1 If the licensed ecologist has any concerns regarding the quality of workmanship or there is non-compliance with the terms and conditions of the license and the mitigation strategy and / or guidance provided by the licensed bat worker then this will result in additional site visits to make inspections.
- 9.5.2 It is always the intention to ensure all parties are aware of the importance of the Natural England EPSM Licence and compliance with the mitigation strategy and this is achieved through good communication. In extreme / significant cases of non-compliance however the licensed bat surveyor will report the issue to Natural England and further action may be taken.

Figure 4: Draft Compensation and Mitigation Plan for Roosting Bats

