

Blackthorn Farm, Culverstone Green

Bat Survey Report

Prepared on behalf of

Esquire Developments

Final Report

25 November 2025

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Blackthorn Farm, Culverstone Green

Bat Survey Report

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Blackthorn Farm, Culverstone Green

Bat Survey Report

Contents

1. INTRODUCTION.....	1
2. METHODS	3
3. RESULTS.....	7
4. ECOLOGICAL EVALUATION	13
5. REFERENCES.....	14

Figures

Figure 1	Site Location
Figure 2	Night-time Bat Walkover Transect
Figure 3	Automated Static Detector Locations
Figure 4	Ground-level Tree Inspection Results
Figure 5	Preliminary Roost Assessment Results
Figure 6a	Spring Night-time Bat Walkover Results
Figure 6b	Summer Night-time Bat Walkover Results
Figure 6c	Autumn Night-time Bat Walkover Results

APPENDICES

Appendix 1	Relevant Legislation and Policy
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Blackthorn Farm, Culverstone Green

Bat Survey Report

Executive Summary

Ecological Planning & Research (EPR) conducted a Bat Survey in relation to the Proposed Development on land at Blackthorn Farm, Culverstone Green.

A Ground Level Tree Inspection, Preliminary Roost Assessment, a Bat Emergence Survey, Night-time Bat Walkover (NBW) survey, and automated static detector survey were all conducted in 2025.

The Site contains habitats suitable for bat roosting, foraging, and commuting. Of the on-site trees, two are classed as PRF-M (i.e. having suitability to support multiple bats). However, these are located within the central woodland shaw and will not be directly impacted. A small number of other trees support features that could be used by individual roosting bats.

The on-site stables were of low bat roosting suitability, and all other structures were of negligible potential. No bat emergences were recorded during the survey.

During the NBW survey, foraging behaviour by Common Pipistrelles was recorded around the stables and track, and the level of observations was less for Soprano Pipistrelle, Noctule, Leisler's and Serotine.

The automated static detector survey recorded at least eight species of bats, with most calls by Common Pipistrelle. Activity was greatest near the central woodland compared to alongside the adjacent road.

Overall, the Site is of ecological importance at the **Local Level** (at least) because three to four bat species (including an unknown *Myotis* species) use it on an occasional or regular basis. All other bat species use the Site infrequently or rarely.

Information about impact avoidance and mitigation will be provided in the Ecological Impact Assessment (EclA), which will follow in due course. However, some principles and information is already provided in the Outline EclA.

Blackthorn Farm, Culverstone Green

Bat Survey Report

1. INTRODUCTION

- 1.1 Ecological Planning & Research (EPR) was commissioned by Esquire Developments to conduct a series of bat surveys in relation to the Proposed Development on land at Blackthorn Farm, Culverstone Green (hereafter referred to as 'the Site').
- 1.2 This comprised a Ground Level Tree Assessment (GLTA), a Preliminary Roost Assessment (PRA), an Emergence Survey, Night-time Bat Walkovers (NBW), and automated bat detector surveys.
- 1.3 **Figure 1** shows the location of the Site.

Relevant Legislation

- The Environment Act 2021
 - The Conservation of Habitats and Species Regulations 2017 (as amended)
 - The Wildlife and Countryside Act 1981 (as amended)
 - The Countryside and Rights of Way (CROW) Act 2000
 - The Natural Environment and Rural Communities (NERC) Act 2000
- 1.4 **Appendix 1** provides further detail.

Likely Biophysical Changes

- 1.5 Biophysical change means an "*alteration in biological and/or physical conditions of the environment (e.g., changes in the atmospheric concentration of carbon dioxide, altered soil pH or change in the frequency of a plant species in an area)*" (CIEEM, 2018).
- 1.6 The predicted biophysical changes that could be generated from the Proposed Development and be of relevance to bats are provided in **Table 1.1**, along with their likely Zone of Influence.

Table 1.1 Activities and biophysical changes associated with the proposed development which may give rise to ecological impacts on bats, and the associated Zone(s) of Influence.

Activity	Potential Impact	Zone of Influence
<i>Site Clearance and Construction Phase</i>		
Vegetation clearance and ground works.	Loss and fragmentation of Habitat. Disturbance. Direct harm or death of individuals.	The Site and up to the Core Sustenance Zone (CSZ) of associated bat species present.
Drainage.	Change of groundwater flows and/or water quality, that may in turn affect suitable habitat.	The Site and immediate surrounds.
Access and travel on / off site	Disturbance.	The Site and up to the Core Sustenance Zone (CSZ) of associated bat species present.
Assembly and storage areas for machines and materials, construction compounds	Loss and fragmentation of habitat/flight lines. Disturbance.	The Site and up to the Core Sustenance Zone (CSZ) of associated bat species present.
Construction of new roads and buildings.	Habitat fragmentation.	The Site and up to the Core Sustenance Zone (CSZ) of associated bat species present.
Lighting of work area	Disturbance to bats commuting, foraging, and breeding habitats.	The Site and up to the Core Sustenance Zone (CSZ) of associated bat species present.
Creation of new habitats through implementation of a soft landscaping scheme	Beneficial restoration and creation of new habitat for foraging, commuting and/or roosting bats.	The Site and up to the Core Sustenance Zone (CSZ) of associated bat species present.
<i>Operational Phase</i>		
Access and travel on / off the Site, including increased number of people visiting areas on and around it for recreational purposes.	Disturbance (e.g., increased interactions with people and their pets). Potential increase in mortality rates from increased access, interactions with people.	The Site and up to the Core Sustenance Zone (CSZ) of associated bat species present.
Occupation of new houses: urban effects	Disturbance (including illumination). Increased risk of cat predation. Degradation and pollution of bat foraging habitats through urban effects (such as fly tipping, arson etc).	The Site and up to the Core Sustenance Zone (CSZ) of associated bat species present.
Implementation of habitat management plans	Enhancement of existing habitats for bats and the creation of new habitats.	The Site and up to the Core Sustenance Zone (CSZ) of associated bat species present.

Zone of Influence (Zol)

- 1.7 The Zol of a development is defined by the EclA Guidelines as “...*the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities*” (CIEEM, 2018).
- 1.8 Some of the changes affecting bats, such as light illumination and loss of foraging habitat, have effects beyond the construction footprint because bats can travel several kilometres to reach foraging sites.
- 1.9 Due to their mobile nature, the Zol for bats is likely to be greater than other faunal groups. For the most common and larger bat species that are most likely to occur, such as Noctule *Nyctalus noctule*, this could potentially be up to 4km. The 4km distance is based on Bat Conservation Trust Core Sustenance Zones (CSZs) (BCT, 2016). However, the Zol could be larger if Barbastelle *Barbastella barbastellus* is regularly using the habitats within or near to the Site because their associated CSZ extends to 6km.

Survey Objectives

- 1.10 The survey objectives are detailed in **Table 1.2**.

Table 1.2 Survey objectives

Survey	Objectives
Ground Level Tree Assessment	Classify trees within the Site for their suitability to support roosting bats and inform the scope of any additional surveys.
Preliminary Roost Assessment	Classify the buildings within the Site for their suitability to support roosting bats and inform the scope of any additional surveys.
Emergence Survey	Identify whether bats are roosting within the internal or external features of the buildings within the Site. Determine whether a European Protected Species Mitigation (EPSM) licence (or other licence type) is likely to be required to facilitate development.
Night-time Bat Walkover	Identify the bat species present on the Site and identify how bats are utilising the Site.
Automated Static Detector Survey	Identify the bat species present on the Site.

2. METHODS

Desktop Study

- 2.1 A biological records data search was commissioned from the Kent and Medway Biological Records Centre. These records are discussed in **Section 3**.

Field Survey

- 2.2 All survey work was informed by guidance in the Bat Conservation Trust's Bat Surveys - Good Practice Guidelines (BCT, 2023).

Habitat Assessment

- 2.3 A habitat assessment was completed as part of the Preliminary Ecological Appraisal, in March 2025.

Ground Level Tree Assessment

- 2.4 A survey of mature trees within the Site for Potential bat Roost Features (PRFs) was undertaken on 1st July 2025 by Philip Brown BSc (Hons) MSc (R)) MCIEEM (licence ref: 2015-18270-CLS-CLS), and Rebecca Sanders BSc (Hons).

Preliminary Roost Assessment

- 2.5 An external assessment of the on-site built structures was carried out on the 14th May 2025 by Philip Brown, to inform the survey scope of bat surveys in 2025.
- 2.6 Using a high-powered torch, camera and binoculars, information on age, type, construction materials, setting, potential roost sites, adjacent habitat, etc. was used to assess the suitability of buildings for roosting bats.

Emergence Survey

- 2.7 A dusk emergence survey was carried out on 1st July 2025 of the stables (Buildings 2, 3, and 4). This began 15 minutes before sunset. The survey continued for 1.5 hrs after sunset. See **Table 2.1** for further information.
- 2.8 During the emergence survey, surveyors were equipped with either an Anabat Scout or Bat Logger with in-built recording capabilities. Where appropriate, recordings were analysed using Kaleidoscope.
- 2.9 Surveyors were given a plan of the Site on which to note bat activity. The following information was recorded for any bats seen or heard; species, time, behaviour (whether it was feeding, commuting, social calling, or swarming) and if seen, direction of flight. If a bat was seen emerging or re-entering a roost in a tree or structure this was noted and described. Behaviour was determined by observed flight patterns and call characteristics.
- 2.10 The emergence survey was completed by Josh Kinal BSc (Hons), Philip Brown, Sean Manley BSc (Hons) MCIEEM, Rhys Davies BSc (Hons), and Rebecca Sanders.

Table 2.1 Survey timings

Date	Sunset	Start	End	Start Temp (°C)	End Temp (°C)	Cloud Cover (%)	Wind (Beaufort Scale)	Rain
01/07/25	21:18	21:03	22:48	26	22	0	2	None

Night-time Bat Walkover (NBW)

- 2.11 Three NBW surveys across spring, summer and autumn were completed in 2025 to identify commuting routes, foraging areas and help locate any on-site or nearby roosts. One transect route was devised to cover most of the Site (see **Figure 2**).
- 2.12 The transect route was surveyed for a minimum of two hours after sunset (see **Table 2.2**). The direction of travel was alternated between survey visits to ensure that different areas were surveyed at different times. A fixed-point survey was conducted for the first 30 minutes of the survey, where the surveyors would stop and watch bat activity from that point.
- 2.13 During the transect surveys, surveyors used a handheld bat detector (Anabat Scout or BatLogger M3). Recordings were analysed using Kaleidoscope when necessary.
- 2.14 The following information was recorded for any bats seen or heard; species, time, behaviour (whether it was feeding, commuting, social calling, or swarming) and if seen, direction of flight, and if it emerged or re-entered a tree. Behaviour was determined by observed flight patterns and call characteristics heard on the bat detector.
- 2.15 During each NBW, temperature and weather information was also recorded to ensure that conditions were suitable for bat activity, and to identify trends and help explain any anomalies in data or bat behaviour. Weather conditions and sunset/sunrise times for each survey undertaken are given in **Table 2.2**.

Table 2.2 Timing and weather conditions during surveys

Date	Start	Finish	Sunset	Start Temp (°C)	End Temp (°C)	Wind (Beaufort Scale)	Rain	Cloud Cover (%)
14/05/25	20:41	22:41	20:41	12	13	0	None	10-0
04/06/25	21:08	23:08	21:08	15	14	1	None	0
02/09/25	19:42	21:42	19:42	17	16	1-2	None	90-100

Automated Static Detector Surveys

- 2.16 Two automated static full spectrum detectors were deployed over five consecutive nights to provide additional information to support the ecological assessment of how bats use the Site, and further information is provided in **Table 2.3**.
- 2.17 The recordings were analysed using Kaleidoscope, with the number of bats, species, and any social calling activity noted where possible.

- 2.18 The automated static detectors were located to cover those habitats considered suitable for bats and/or to understand the potential impacts of the Proposed Development (see **Figure 3** for automated static detector locations).

Table 2.3 Time and weather conditions during automated static detector survey

Date	Temperature range (°C)	Wind (kph)	Rain
06/05/2025 – 10/05/2025	21 – 4	<29	None
18/06/2025 – 22/06/2025	32 – 16	<29	None
01/07/2025 – 14/07/25	21 – 8	<29	Rain from 3:19 – 3:49 on 01/07/25, 3:44 to 4:59 on 13/07/25
26/08/25 – 30/08/25	25 – 14	<29	Rain from 3:20 to 10:50
22/09/25 – 26/09/25	18 – 7	<29	None
20/10/25 – 24/10/25	16 – 6	33 on 23/10/25	None

Considerations

- 2.19 When the biological data search or other ecologists in their reports recorded a ‘Long-eared Bat’ *Plecotus* sp, it has been assumed that they are most likely to be of the common and widespread Brown Long-eared Bat *Plecotus auritus* because the Site (and that part of Kent within which the Site is located) is outside of the main distribution for the much rarer and range-restricted Grey Long-eared Bat *P. austriacus*.
- 2.20 The survey visits were undertaken at an appropriate time of year and in accordance with guidance unless stated otherwise.
- 2.21 The GLTA was undertaken in July when the trees were in full leaf, therefore some PRFs may have been obscured. Trees that bordered private land could not be viewed from all angles due to access limitations, therefore roosting features which were not visible from within the Site may have been missed.
- 2.22 Bats are often nomadic and invariably move between roosts at different times of year. Therefore, any bat survey will only provide a snapshot of how bats are using features at that point in time. This is of relevance in relation to bat roosts in trees, and animals are known to switch tree roosts frequently.
- 2.23 The NBW transect route had to be altered to avoid horses within fields during the spring and summer surveys. The fixed-point location A was moved towards the entrance of the Site during the summer survey to avoid horses.
- 2.24 When analysing data from the static detectors, it is not always possible to assign a call to species level due to poor-quality call data, or large amount of noise distorting the call. In these cases, the call is designated to genus level (e.g. *Myotis* species) or to a group, such as ‘Low-frequency bats’ (which includes Serotine *Eptesicus serotinus*, Noctule *Nyctalus noctula*, and Leisler’s *N. leisleri*).

- 2.25 Bat species that typically have quieter echolocation calls, particularly Long-eared *Plecotus* species, may be under recorded as their quieter calls makes them less likely to be detected compared to other bat species.

Incidental Observations

- 2.26 A Tawny Owl *Strix aluco* was heard on the Nighttime Bat Walkover on the 14th of May 2025.
- 2.27 A Glow-worm *Lampyrus noctiluca* was seen near the stables during the emergence survey on the 1st of July 2025.

3. RESULTS

Desktop Study

3.1 Bat records within 5km of the Site included the following species:

- Brown Long-eared bat
- Common Pipistrelle *Pipistrellus pipistrellus*
- Daubenton's bat *Myotis daubentonii*
- Leisler's
- Long-eared species (unknown) *Plecotus sp*
- Myotis species (unknown) *Myotis sp*
- Natterer's bat *M. nattereri*
- Noctule
- Serotine bat
- Soprano Pipistrelle *P. pygmaeus*

3.2 The above records included information about hibernation and maternity roosts, however some records are associated with 'historic records' dating back more than 10 years. Within the last 10 years, the following species have been recorded as having roosts but no records relate to areas within the Site boundary:

- Brown Long-eared bat
- Common Pipistrelle
- Daubenton's bat
- Leisler's
- Long-eared species
- Myotis Species
- Natterer's bat
- Noctule
- Serotine bat
- Soprano Pipistrelle

Field Surveys

Habitat Assessment

- 3.3 The Preliminary Ecological Appraisal (PEA) in 2025 found that the Site has suitable habitats for foraging, roosting and commuting bats.
- 3.4 Two buildings were assessed as having a low suitability to support roosting bats, and all other buildings were considered to provide negligible suitability.
- 3.5 The Site contains mature established trees, and good connectivity to surrounding habitats. The on-site habitats are similar to surrounding areas.

Ground Level Tree Assessments

- 3.6 Seventeen trees were identified within the Zol of the development proposals that also support PRFs (see **Figure 4** and **Table 3.1** for their location and associated bat roost suitability).

Table 3.1 Number of trees/groups of trees found to have suitability for roosting bats during the GLTI.

Suitability for Roosting Bats	Number of trees/groups
Potential Roosting Feature-I	15
Potential Roosting Feature-M	2

Preliminary Roost Assessment

- 3.7 Eight buildings were present within the Site boundary (**Table 3.2**) (see **Figure 5** for their location and associated bat roost suitability).

Table 3.2 Onsite buildings and their bat roost suitability

ID	Description	Suitability and recommendations
1	Static mobile home, metal clad, single story, in semi-regular use.	Negligible Surveyed external only
2	Stables, single skinned weather boarding on upper level, bordered up to 1.5m internally, Boarding generally tight internally and weatherboard generally tight externally. Roof was made from corrugated asbestos. Internal roof frame is timber with double ridge. East and west facing gable ends. Weather board on gable end with sub access between. Gap in weather board leading to gap behind. Internal something on western end. Enclosed/sheltered area on overhang at something.	Low Internal and external inspected

ID	Description	Suitability and recommendations
3	<p>Stable. breezeblock single skin single story corrugated asbestos roof.</p> <p>Eastern end rendered with no internal access.</p> <p>Timber bargeboard eastern end and gaps in render/brick work allowing possible access/roosting opportunity for bats.</p> <p>Type of breezeblock used appears to have cavities and may form tunnel network but no obvious access into these cavities but may be possible from top of wall between asbestos roof.</p> <p>Wooden bargeboard at west end and gap into breezeblock on northwestern corner near mortar joint.</p>	Low
4	<p>Six stables, most used for storage.</p> <p>Single skinned weather board on upper elevations and boarded on lower elevations.</p> <p>Onduline style roof covering, saggy, broken and gappy in multiple places.</p> <p>Access for bats between roof layers and bird nest present.</p> <p>Timber frame roof and ridge beam.</p> <p>Final bay locked and not accessible.</p>	Negligible to low External and internal inspected
5	Corrugated metal and asbestos on timber frame, all single skin and all very gappy and airy.	Negligible
6	<p>Small box made of composite material, completely sealed, self-contained.</p> <p>Open access portion on south side open to something.</p> <p>Gap for possible access via drilled out keyhole, but inside the area in light in daytime.</p>	Negligible
7	<p>Single skinned shed, boarded at bottom but open on top. Light inside.</p> <p>Clear corrugated plastic roof.</p>	Negligible
8	Low level single skin brick structure.	Negligible

- 3.8 There were two buildings present outside of the Site boundary but within the ZOI (see **Table 3.3**).

Table 3.3 Off-site building bat roost suitability

ID	Description	Suitability
A	House with whitewash bordering Site	Low
B	White house bordering site. North-west corner	Low

Emergence Surveys

- 3.9 No at emergences were recorded during the survey on 1st July 2025 of Buildings 2, 3, and 4.
- 3.10 Observations made during the same survey included a Common Pipistrelle at 21:41 (23 minutes after sunset), and frequent foraging by the same species within the parking area / southern field.

Soprano Pipistrelles were recorded infrequently, and most flew from the east then westwards, along the track or to the southern field.

- 3.11 A Noctule was recorded at 21:42 (24 minutes after sunset) foraging above the southern field. Leisler's and Serotine bats were also recorded passing infrequently during the survey.

Night-time Bat Walkover (NBW) Survey

- 3.12 The visits are summarised in **Figures 6a, 6b** and **6c**.
- 3.13 The visits indicate that the Site is being used by five species or groups of bats:
- Common Pipistrelle
 - Long-eared species
 - Noctule
 - Soprano pipistrelle
 - Low-frequency bat
- 3.14 Foraging behaviour was recorded along the track, around the stables, and the wooded area in the centre of the Site. **Tables 3.4** and **3.5** summarise the NBW survey results per season and per species.

Table 3.4 Summary of NBW survey results across the Site per season

Season	Summary of Night-time Bat Walkover results across the Site
Spring	A total of three bat species were recorded. The first bat recorded was a Common Pipistrelle at 21:06 (25 minutes after sunset). Common and Soprano Pipistrelle were seen foraging along the track and around the stables. A Long-eared bat was recorded in the centre of the Site.
Summer	Three bat species or groups were recorded. The first bat recorded was a Common Pipistrelle at 21:21 (13 minutes after sunset) seen passing from the conifers by the Site entrance, and a total of 14 bats were seen following this flight path. Common pipistrelles were seen foraging along the track, around the stables, and in and around the woodland going through the centre of the Site. A low-frequency bat was heard near the woodland in the centre of the Site at 22:48 (100 minutes after sunset). A Noctule was heard to the south of the central woodland at 21:46 (38 minutes after sunset).
Autumn	Two bat species were recorded. The first bat recorded was a Common Pipistrelle at 19:53 (11 minutes after sunset) foraging by the entrance to the Site. Common Pipistrelle were seen foraging along the treelines. A Soprano Pipistrelle was heard along the edge of the central woodland at 21:01 (19 minutes after sunset).

Table 3.5 Summary of NBW survey results across the Site per species

Species	Summary of Night-time Bat Walkover results across the Site
Common Pipistrelle	There were 92 total passes over the survey covering most of the Site. Spring had 25 passes. There were 40 passes during the summer transect. There were 27 passes during the autumn transect. Most of the activity was foraging behaviour.
Soprano Pipistrelle	There were three passes during the spring survey, none during the summer survey, and one during the autumn survey.
Long-eared species <i>Plecotus sp</i>	There was one pass during the spring survey and none during the summer survey.
Low Frequency bat (<i>Nyctalus/Eptesicus sp</i>)	There was one pass during the summer survey of an unidentified 'Big Bat' species.
Noctule	There was one pass during the summer survey along the southern border of the central woodland.

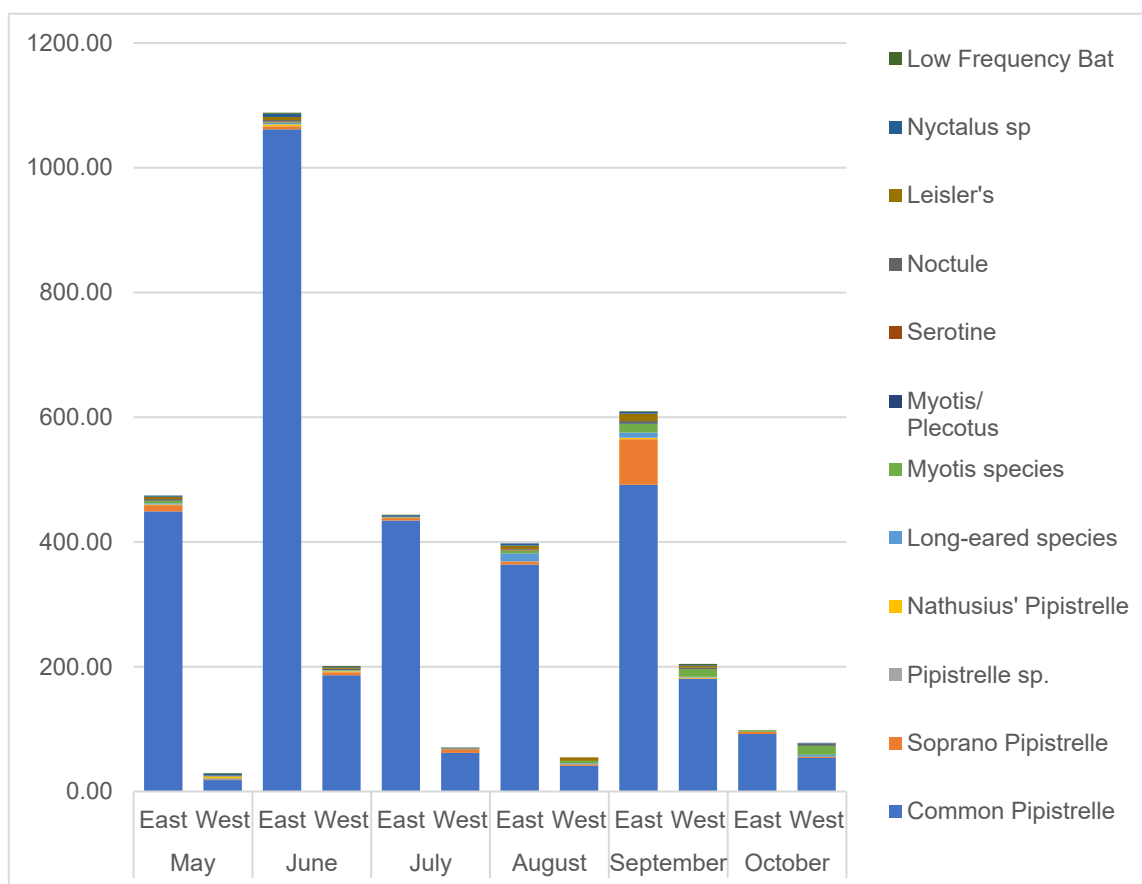
- 3.15 During these survey visits, three bat species were observed that indicated roots maybe nearby but off-site. These were Common Pipistrelle, Soprano Pipistrelle and a Long-eared bat (most likely Brown Long-eared Bat).

Automated Static Bat Activity Surveys

Species Recorded

- 3.16 The static detectors identified 21,269 bat passes from eight different bat species and groups;
- Common Pipistrelle
 - Leisler's
 - Long-eared species
 - Myotis species
 - Nathusius' Pipistrelle *Pipistrellus nathusii*
 - Noctule
 - Serotine
 - Soprano Pipistrelle
- 3.17 Overall, Common Pipistrelle was the most frequently recorded species (91.5% of all calls). Soprano Pipistrelle, Myotis species, and Leisler's were occasionally heard (3.1%, 1.7% and 1% respectively). Nathusius' Pipistrelle, Long-eared bats, and Noctules were heard infrequently (0.35%, 0.85%, and 0.52%). Serotine were rarely heard (0.07%).
- 3.18 The locations of the automated static detectors are shown in **Figure 3**. The highest number of bat passes were recorded at the eastern static by the central woodland accounting for 83% of all bat calls.

Chart 1: Number of passes, per night, per automated static detector – across months and location



ECOLOGICAL EVALUATION

- 3.19 The surveys confirm that the Site provides suitable habitat for roosting, commuting, and foraging bats. However, no bat roosts have been recorded. **Table 4.1** shows the bat species recorded within the ZoI of the Site.
- 3.20 Two trees had features suitable to support multiple bats (PRF-M), but these are not due to be removed to facilitate development. In the unlikely event these do need to be removed once detailed design work has been completed, they will require further survey. Either with endoscopes, ladders, tree climbing, and/or emergence surveys.
- 3.21 A total of 15 trees had features suitable to support individual roosting bats. All remaining trees were of negligible suitability to support roosting bats.
- 3.22 Bat activity was greatest around the stable yard and woodland. Activity along the hedgerow by the adjacent A227 (South Street) was relatively low.
- 3.23 Most passes were from Common Pipistrelle, with very low occurrences of other bat species.

Table 4.1 Bat species recorded within the Zone of Influence

Bat Species	UK Distribution	UK Status	Use of Site
Common Pipistrelle <i>Pipistrellus pipistrellus</i>	Widespread	Common	Common
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	Widespread	Common	Occasional
Nathusius Pipistrelle <i>Pipistrellus nathusii</i>	Restricted	Unknown	Infrequent
Leislers' <i>Nyctalus leisleri</i>	Restricted	Uncommon	Occasional
Noctule <i>Nyctalus noctula</i>	Widespread	Frequent	Infrequent
Eurasian Serotine <i>Cnephaeus serotinus</i>	Restricted	Rare	Rare
Brown Long-eared <i>Plecotus auritus</i>	Widespread	Common	Rare
Myotis species <i>Myotis sp</i>	Widespread	Frequent	Occasional

- 3.24 Overall, the Site is of ecological importance at the **Local Level** (at least) because three to four species (including an unknown Myotis species) use it on an occasional or regular basis. All other bat species use the Site infrequently or rarely.

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Figures

Figure 1	Site Location
Figure 2	Night-time Bat Walkover Transect Route
Figure 3	Automated Static Detector Locations
Figure 4	Ground-level Tree Inspection Results
Figure 5	Preliminary Roost Assessment Results
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Figure 6b	Summer Night-time Bat Walkover Results
Figure 6c	Autumn Night-time Bat Walkover Results

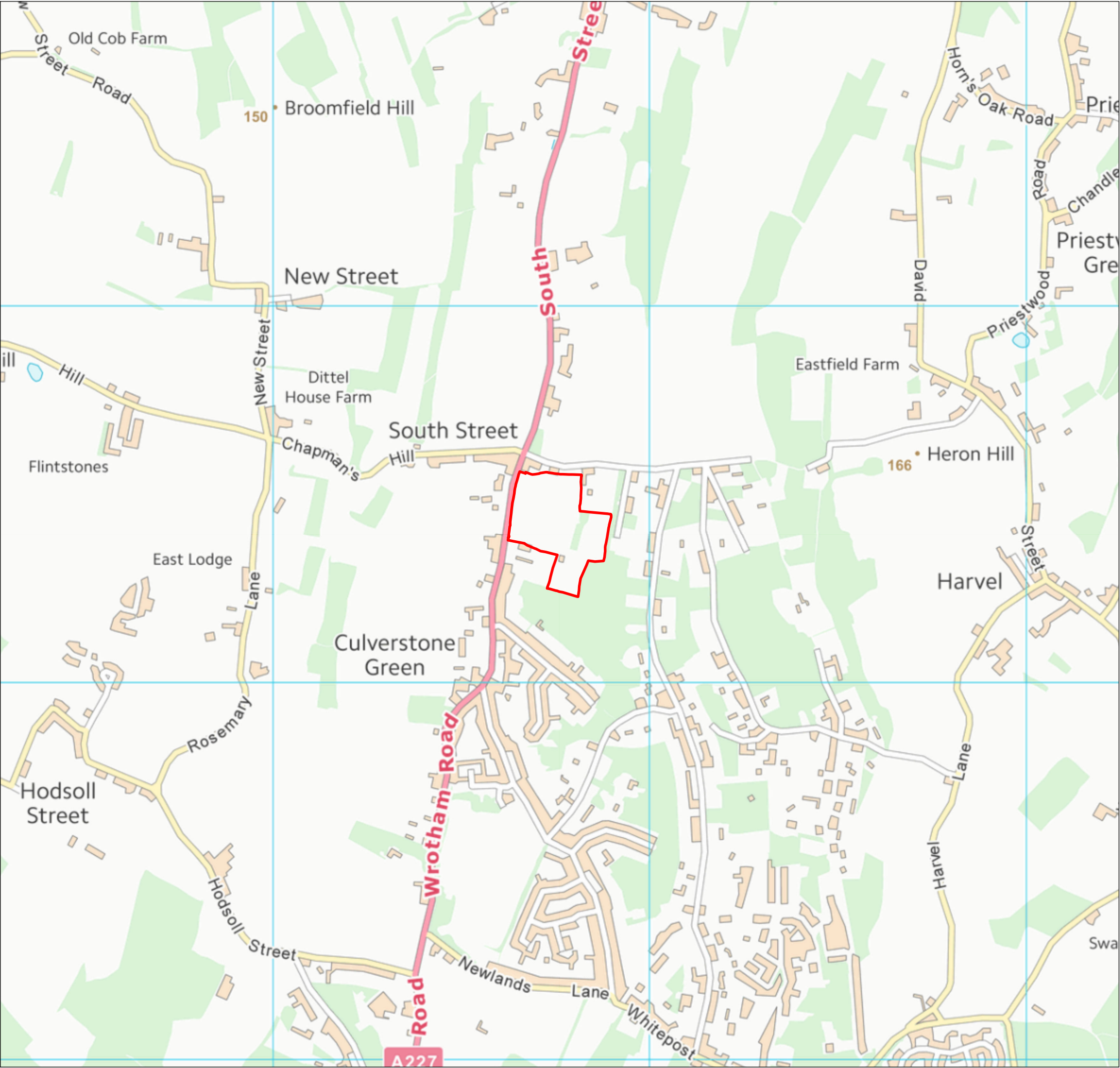


Figure 1 Site Location

KEY
 Site boundary




SCALE: 1:10,000 at A3
0 100 200 300 400 500 Metres



CLIENT: Esquire Developments Ltd
PROJECT: Blackthorn Farm, Culverstone Green
DATE: 15 July 2025



Figure 2 Night-time Bat Walkover Transect

- KEY
-  Site boundary
 -  Fixed point survey location
 -  Bat Transects

SCALE: 1:1,250 at A3

0 20 40 60 80 Metres





CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm, Meopham

DATE: 19 May 2025



Figure 3 Automated Static Detector Locations

- KEY
-  Site boundary
 -  Automated detector location

SCALE: 1:1,250 at A3

0 20 40 60 80 Metres



CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm, Meopham

DATE: 24 July 2025



Figure 4 Ground-Level Tree Inspection Results

KEY

Site boundary

PRF-M

PRF-I

SCALE: 1:1,250 at A3

020406080

Metres

N



CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm, Meopham

DATE: 22 July 2025

Figure 5 Preliminary Roost Assessment Results

KEY

Site boundary

Low suitability

Negligible suitability



SCALE: 1:1,250 at A3

0 20 40 60 80 Metres



CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm, Culverstone Green

DATE: 24 July 2025



Figure 6a Spring Night-time Bat Walkover Results

KEY

Site boundary

X

Fixed point survey locations

- - -

Transects

Common Pipistrelle (heard not seen)

Soprano Pipistrelle (heard not seen)

Long-eared species (heard not seen)

Common Pipistrelle observed flight

Soprano Pipistrelle observed flight

(f)

Foraging

(p)

Pass

(s)

Social calling

x3

Number of bats

SCALE: 1:1,250 at A3

0 20 40 60 80 Metres



CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm, Meopham

DATE: 23 May 2025

Y:\Blackthorn Farm, Meopham 5274\GIS\Bats\MapX_Bat_Transects_Results_14052024_P1274_3805_230525.aprx

Aerial Image: Maxar, Microsoft

P32/74



Figure 6b Summer Night-time Bat Walkover Results

KEY

- Site boundary
- Surveyor position
- Common Pipistrelle (heard not seen)
- Noctule (heard not seen)
- Low-frequency bat (heard not seen)
- Common Pipistrelle observed flight
- Emergence
- Bat Transects
- (e) Emergence
- (f) Foraging
- (p) Pass
- x3 Number of bats

SCALE: 1:1,250 at A3

0 20 40 60 80 Metres

N



CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm, Meopham

DATE: 23 June 2025

World Imagery: Maxar, Microsoft

P32/74



Figure 6c Autumn Night-time Bat Walkover Results

- KEY
- Site boundary
 - Fixed point survey location
 - Common Pipistrelle (heard not seen)
 - Unidentified bat (heard not seen)
 - Common Pipistrelle observed flight
 - Bat transect route
 - (f) Foraging
 - (p) Pass
 - x3 Number of bats

SCALE: 1:1,250 at A3

0 20 40 60 80 Metres

N



CLIENT: Esquire Developments Ltd

PROJECT: Blackthorn Farm, Meopham

DATE: 07 October 2025

Appendix 1

Summary of Relevant National Legislation

The Environment Act 2021

The Environment Act 2021 placed a requirement on the Secretary of State to make regulations setting out long-term targets for air quality, water, biodiversity, resource efficiency and waste reduction. It also required the Government to produce an Environmental Improvement Plan, to report on progress towards its goals annually, to meet the targets that are set in relation to the improvement of the natural environment and to produce remedial plans should this not be achieved.

In relation to water quality, the Act placed new duties on the Government, Environment Agency and sewerage undertakers to reduce the frequency and harm of discharges from storm overflows on the environment, and for monitoring the quality of watercourses affected by those overflows.

It also included a requirement for an independent Office for Environmental Protection (OEP) to be established, with responsibilities for monitoring and reporting on progress against environmental improvement plans and targets. The OEP also has investigation and enforcement powers against public authorities failing to comply with environmental law when exercising their functions.

The Act made provision for 10% biodiversity gain to become a condition of planning permission in England, through amendments to the Town and Country Planning Act 1990. These amendments came into force on the 12th February 2024 (delayed to 2nd April 2024 for 'small sites') and are implemented through a series of new statutory instruments collectively referred to in this document as the 'Biodiversity Net Gain Regulations' (detailed further below). The 10% biodiversity gain is measured through a biodiversity metric published by the Department of the Environment, Food and Rural Affairs (DEFRA) on behalf of the Secretary of State. The Act also establishes Biodiversity Net Gain as a requirement for Nationally Significant Infrastructure Projects (NSIPs).

The Act also strengthens the biodiversity duty placed on public authorities through amendments to the Natural Environment and Rural Communities Act 2006 Section 40, requiring such authorities to not only conserve but also enhance biodiversity when exercising their functions. Public authorities will also be required to publish summary reports of actions taken under Section 40 at least every five years.

The Act provides the legal basis for the creation of Local Nature Recovery Strategies (LNRs) for England (including specifying their content), and the preparation and publication of species conservation strategies and protected sites strategies.

The Act also created a new legal vehicle known as a 'Conservation Covenant' which is a voluntary, legally binding private agreement between landowners and responsible bodies (the latter designated by the Secretary of State) which conserve the natural or heritage features of the land, enabling long-term conservation. Conservation Covenants are designed to 'run with the land' when it is sold or passed on and are intended to become a primary mechanism for the delivery of Biodiversity Net Gain (BNG).

The Act provides new powers for the Government to amend in future Regulation 9 and Part 6 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations') – but "only if satisfied that the regulations do not reduce the level of environmental protection provided by the Habitats Regulations".

Several aspects of protected species licencing have also been adjusted by the Act. These include the removal of several inconsistencies between the Habitats Regulations and the Wildlife & Countryside Act 1981 (as amended), ensuring that licences issued under the former piece of legislation also apply under the latter, and making it now possible for licences to be issued under Section 16(3) of the Wildlife & Countryside Act 1981 (as amended) for purposes of overriding public interest. The maximum term of a licence that can be issued by Natural England has also been extended from 2 to 5 years.

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

The Conservation of Habitats and Species Regulations 2017 (as amended) (known as the “Habitats Regulations”) were originally drawn up to transpose the European Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the “Habitats Directive”) into UK legislation. Following the UK’s exit from the European Union, the Habitats Regulations – as amended by Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – remain in force until such a time as they are superseded by new or updated domestic legislation.

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which previously formed part of the Natura 2000 network of protected areas across Europe and are now part of the UK’s “National Sites Network”. New National Sites may be designated under the Regulations.

The Regulations also prohibit certain actions relating to European Protected Species (EPS), which include *inter alia* Hazel Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, European Otter *Lutra lutra*, Sand Lizard *Lacerta agilis*, Smooth Snake *Coronella austriaca* and all native species of bat.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 is a key mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

Table A1.1: Relevant Schedules of the Wildlife & Countryside Act 1981 (as amended)

Schedule	Protected Species
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead)
Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale

Further information on legally protected species is provided in the relevant sub-sections of this Appendix.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006 was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England. This was published in 2007 and is commonly referred to as the "S41 list". Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on Species and Habitats of Principal Importance is provided in the relevant sub-sections of this Appendix.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000 have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

Species Protection

Bats

There are 18 species of bat native in the UK, seven of which are Species of Principal Importance in England under S41 of the NERC Act 2006. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts) or intentionally or recklessly disturb a bat whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a bat; and
- Possess, sell or transport a bat, or anything derived from it.

Development proposals affecting bats or their roosts require a European Protected Species mitigation licence from Natural England.