Elite Ecology

Passionate about Ecology

Townhead Farm,

Foxt



Preliminary Roost Assessment

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0. Executive Summary

0.1 This report has been prepared at the request of Mr. Ian Titterton (Stubbrook Developments). It relates to the potential presence of bats and birds at the proposed re-development site located at Townhead Farm, Foxt Road, Foxt, Staffordshire, ST10 2HW (OS Grid Reference: SK 03702 48969). To fulfill this brief, Elite Ecology undertook both a desktop study and a field survey.

0.2 The surveyed structure will be converted into a residential structure.

0.3 Due to the amount of potential ingress/egress points and suitable roosting features, the buildings were deemed as having **'negligible'** potential for bats to roost and **'low'** potential for birds to nest.

0.4 Summary

Bat presence/absence

From the survey visit undertaken on the site, it can be concluded that the surveyed structure contains no bat roost. However, foraging and commuting bats are anticipated within the local landscape, and their presence can be assumed.

Bird presence/absence

From the survey visit undertaken on the site, it can be concluded that the surveyed structure contains no birds nests. However, the surrounding landscape provides all of the necessary habitat elements that birds require, and their presence can be assumed.

Ecological value of building units

The ecological value of the buildings has been deemed as 'negligible' to bats, with no suitability for the structure to support roosting specimens. The ecological value of the buildings to birds has been deemed 'low' due to the absence of nests, but the clear access to nest during the forthcoming breeding season.

0.5 Recommendations

Based on the results from the survey visit undertaken on the site, there are no compulsory recommendations for 'Townhead Farm'. However, enhancements are recommended for the local bat and bird populations (please see section 5 and Appendix G for more information).

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1 Introduction

1.1 Report rationale

This report has been prepared at the request of Mr. Ian Titterton (Stubbrook Developments). It relates to the potential presence of bats and birds at the proposed re-development site located at Townhead Farm, Foxt Road, Foxt, Staffordshire, ST10 2HW (OS Grid Reference: SK 03702 48969). To fulfill this brief, Elite Ecology undertook both a desktop study and a field survey.

1.2 Site description

The site itself is situated within a rural setting and is located in the village of Foxt in Staffordshire. Hard standing ground and pastureland are situated in the immediate vicinity of the building, as well as a conglomeration of other buildings (residential dwellings and agricultural barns). This report relates to one building located on the proposed re-development site, with this structure measuring approximately 269m^2. Therefore, the site is considered to contain potential to support the local bat and bird populations by offering roosting/nesting, commuting and foraging opportunities.

Figure 1: An aerial photograph of the surveyed building at Townhead Farm, Foxt (as shown by the red outline).



1.3 Proposed works

The surveyed structure will be converted into a residential structure.

1.4 Aims of surveys

The aims of the surveys were to undertake an assessment of the building(s), vegetation and surrounding area to establish whether any bats and birds may be present and, if so, in what way they are using the site. The actions of the surveyors on the site and during the production of this report were conducted in accordance with Bat Conservation Trust (BCT) guidelines (3rd edition).

1.4.1 This survey effort considered the potential for all **bat and bird species (including barn owls)** onsite:

- To establish the possibility of bat roosts and bird nests being present at the proposed development site.
- To assess any roost/nest status (i.e. what type and numbers of individuals).
- To assess suitable food, resources and habitat requirements on site and in the local landscape.

1.4.2 The information will subsequently be used in conjunction with the knowledge of the proposed works at the site to determine the potential need for further survey effort, the impacts of the proposed scheme of works, to establish whether a Natural England Development Licence is required along with species-specific mitigation and compensation. This is done in order to keep any protected species at a favourable conservation status on site.

2 Survey Methodology

2.1 Desktop Survey Methodology

2.1.1 A variety of resources were independently consulted to assess the known local records within the nearby area and the importance of the site within the local landscape from an ecological perspective. The resources used were the Local Records Centre, www.naturalengland.org.uk, www.ordanancesurvey.co.uk, Google Maps, Google Earth and Bing Maps. A search of other relevant nature conservation information was made through the use of the Multi-Agency Geographic Information for the Countryside (MAGIC) database.

2.1.2 The local records centre were contacted to provide data on all protected bat and bird species within 2km of the proposed development site. Staffordshire Ecological Record (SER) were the relevant local record centre for this project.

2.2 Field Survey Methodology

2.2.1 Initial Site Survey

This is done by assessing the site by visually inspecting all building/s/structures and any trees/vegetation to be impacted by the proposed works. This is done to assess the resource availability for protected species on site and in the immediate area. Particular reference is made to:

- The presence or absence of bats and birds' onsite.
- Any evidence of potential bat roosts and birds' nests onsite.
- Whether any additional survey effort will be required.

During the initial survey, an internal and external inspection of the building(s) is undertaken to look for signs of bat activity. This is done in accordance with BCT guidelines for the assessment of building(s) and built structures.

2.2.2 External Inspection

This survey method is used to locate potential ingress and egress points around the structures that both bats and birds could use to gain access into the building. It also aims to identify any areas where cracks and crevices are present to be used as roosting/nesting features. This visual inspection is carried out in full daylight using binoculars, endoscope, torches and ladders.

This will allow for the determination of the following information:

- The type of building(s) surveyed.
- The approximate age of building(s) surveyed.
- The construction type and materials used.
- The presence of potential roost features (e.g. missing roof tiles, raised ridge tiles, air vents, cracks and crevices within the mortar).
- The presence of suitable ingress and egress points (e.g. missing windows and doors, missing mortar, lifted tiles).
- The location of any annecdotal evidence for the presence of protected species (e.g. nests, droppings or food remains).

2.2.3 Internal Inspection

This survey method aims to locate and examine areas which potentially provide suitable environmental conditions for bats. This visual inspection was undertaken by using binoculars, endoscope, torches, ladders and bat detectors to inspect internal features of the building(s).

This will allow for the determination of the following information:

- The presence of warm areas, dark areas, joints, crevices, beams and cavities that could be used for roosting and nesting purposes by bats and birds.
- To locate possible bat roost and bird nest sites.
- To listen for social calling bats.
- To locate any evidence of bat and bird presence through the identification of live or dead specimens, grease marks, droppings, food remnants, urine stains and/or the characteristic smell of bats.

2.2.4 Building/Vegetation Classification

A building/vegetation classification will be assigned to each surveyed feature that is proposed to be impacted by the scheme of works. This classification is based on the features potential to support roosting bats. The rating is also influenced by the location of the structure(s) in the local landscape, along with the number of suitable alternative roosting features, the type of features present in the landscape and the surveyor's experience. For example:

A structure that has a high level of anthropogenic disturbance with limited opportunities for access by bats, that is also situated within an urbanised area with few or no mature trees, parkland, woodland or wetland would generally equate to having negligible/low potential.

Conversely, an older structure (e.g. pre 20th century or early 20th century) with multiple features suitable for use by bats that is close to optimal foraging habitat would equate to having high potential.

The amount of additional survey effort required for each feature will depend on its rating:

- Negligible – No further survey effort is required
- Low – One further activity survey is required (structures only).
- Moderate – Two further activity surveys are required.
- High – Three further activity surveys are required.

2.2.5 Roost Categories

Any structures with evidence of bats will be further evaluated to assess which of the following roost categories may be present onsite:

- **Day Roost:**
  A place where individual bats or small groups of males, rest or shelter during the daytime. These bats are rarely found at night at these sites.

- **Feeding Roost:**
  A place where individual bats rest or feed during the night, but are rarely present in the day.

- **Hibernation Roost:**
  A place where bats may be found either individually or together during the winter months. These roosts often have a constant cool temperature and high humidity.

- **Maternity Roost:**
  A place where female bats give birth and raise their young to independence.

- **Mating Roost:**
  A place where mating/copulation takes place between male and female bats. These can continue through the winter months.

- **Night Roost:**
  A place where bats rest and/or shelter during the night, but will rarely be found here during the day. These can be used colonially or individually by the bats.

- **Satellite Roost:**
  These are alternative roosting sites that are found within close proximity to the main nursery colony within the maternity roost. These are used throughout the breeding season by individual or small groups of female bats.

- **Swarming Site:**
  A place where large numbers of bats come together during the latter summer months through until Autumn. These sites are classed as being important mating areas.

- **Transitional/Occasional Roost:**
  A place that is used by individuals or small groups of bats for a small period of time. These are used by the bats prior to hibernation and/or shortly after hibernation.

2.2.6 Bat Detector Survey (presence/absence survey)

If required, the object for this survey method is to detect any bats leaving or returning to their roost sites within the surveyed features. This is achieved by undertaking dusk and dawn activity surveys under the following protocol:

- Commencing the survey 15 minutes before sunset (dusk survey) and 2 hours before sunrise (dawn survey).
- Listening for any social calls at potential roost sites using bat detectors.
- Standing at different survey points around the building(s) and/or vegetation using bat detectors to hear the bat echolocation.
- The survey will attempt to witness the first bats emerging (dusk) and the bats returning (dawn) to their roosts.
- Standing at different transect points at foraging/commuting areas around the site.
- Carrying out this survey methodology for up to two hours after sunset (dusk) and up to 15 minutes after sunrise (dawn). This will cover the emergence and re-entry of the bats at the potential roost site, for some bat species.

2.2.7 In order to comply with the required legislation, the results from the surveys will be collated to establish whether a European Protected Species (EPS) development licence will be required. If required, project appropriate species-specific compensation and mitigation measures will be devised to ensure the species remains at a favourable conservation status at the impacted site.

2.3 Surveyors Information

2.3.1 The survey was undertaken by licensed bat ecologist/s and members of the Chartered Institute of Ecology & Environmental Management (CIEEM) and Elite Ecology staff members:

Mr. Richard Millington BSc (Hons), ACIEEM, Senior Ecologist, Natural England Bat Survey Licence Number: 2016-26861-CLS-CLS Bat Survey Level 2.

Mr. Adam Harper BSc, Ecologist.

2.4 Field surveys

2.4.1 Site Surveys

Elite Ecology were not made aware of any previous site surveys.

2.4.2 Roost Surveys

The steel barn at Townhead Farm, Foxt was externally and internally inspected for the presence of bats and birds with the use of various types of equipment (including binoculars, torches, endoscope and ladders) in full daylight. Subsequent activity surveys use a variety of bat detectors that include Bat Box Duet, SSF Bat2 and the EcoObs Batcorder. The following table outlines the environmental variables from the survey visits:

Environmental variables	PRA Survey of the Building – 18th January 2019. Daytime
Temp Start:	2°C
Temp Finish:	2°C
Humidity Start:	84%
Humidity Finish:	86%
Cloud Cover Start:	100%
Cloud Cover Finish:	100%
Wind Speed Average:	Low
Precipitation:	Snow flurries

3 Results

3.1 Desktop Survey Results

The ecological data search provided by SER revealed few protected bat and bird species within the 2km search radius of Townhead Farm, Foxt.

3.1.1 Bats:

The ecological data search revealed several bat records within the 2km search radius. The UKBAP species recorded in the search were brown long-eared (*Plecotus auritus*) and noctule (*Nyctalus noctula*) bats. The non-BAP species recorded in the search were Brandt's (*Myotis brandtii*), common pipistrelle (*Pipistrellus pipistrellus*), Daubenton's (*Myotis daubentonii*) and Natterer's (*Myotis nattereri*) bats. In addition to this, a few records of unidentified bats and unidentified pipistrelle (*Pipisterellus* sp.) individuals were revealed in the search.

The closest record to the site was of a colony of pipistrelle (*Pipistrellus* sp.) bats identified approximately 540m to the north of the site.

3.1.2 Birds:

Multiple protected bird species have been identified within the 2km search radius. These birds can be split into three categories of conservation importance (red, amber and green – please see RSPB for more information). The bird species revealed within the 2km search radius are listed within the table below.

Common Name	Latin Name
Barn Owl	*Tyto alba*
Brambling	*Fringilla montifringilla*
Common Crossbill	*Loxia curvirostra*
Common Kingfisher	*Alcedo atthis*
Common Quail	*Coturnix coturnix*
Eurasian Hobby	*Falco subbuteo*
European Nightjar	*Caprimulgus europaeus*
Fieldfare	*Turdus pilaris*
Greylag Goose	*Anser anser*
Hen Harrier	*Circus cyaneus*
Hoopoe	*Upupa epops*
Little Plover	*Charadrius dubius*
Merlin	*Falco columbarius*
Montagu's Harrier	*Circus pygargus*
Peregrine Falcon	*Falco peregrinus*
Red Kite	*Milvus milvus*
Redwing	*Turdus iliacus*

Short-eared Owl	*Asio flammeus*
Whimbrel	*Numenius phaeopus*

Please note: Any records may not truly represent the current species on site. The maps provided by SER showing the locations of the records obtained through the ecological data search can be found in Appendix B.

3.1.3 Designated sites

As the current proposals remain within the site boundary, it was not necessary to obtain any further information regarding both Statutory and Non-Statutory Nature Conservation Designations. This is due to the proposed works not altering any of the landscape surrounding the site.

3.2 Field surveys

3.2.1 Habitat description

The site itself is situated within a rural setting due to it being located in the Staffordshire village of Foxt. On site, there are buildings, hard standing ground and pastureland. Within the wider landscape, further habitats are present. These come in the form of residential dwellings (and their associated gardens), agricultural buildings (farmhouses and barns), scattered trees, woodland, hedgerows, arable land and pastureland. Therefore, the habitats that are present in and around the site contains all of the elements that are considered to be critical in both bat and bird life cycles.

Figure 2: An aerial photograph of the surveyed site (yellow star) and some of the nearby habitats to Townhead Farm, Foxt.



3.2.2 Building survey

External Inspection:

The surveyed structure is a corrugated steel agricultural barn, with walls consisting of a combination of corrugated steel, wooden slats and breeze block. The structure has three walls, with the south elevation remaining open. The roof is of pitched corrugated steel construction. No cracks or crevices that could be used by crevice dwelling bats for roosting purposes are present externally. No evidence of nesting birds or bat presence was identified externally.

Internal Inspection:

Internally, the structure is constructed of a steel frame, with dividing internal walls made of concrete blocks in the lower half. No bird nests or evidence of bird presence were identified and the building is deemed unsuitable for bats to roost.

3.2.3 Summary of the building inspection

Due to the amount of potential ingress/egress points and suitable roosting features, the buildings were deemed as having **'negligible'** potential for bats to roost and **'low'** potential for birds to nest.

Therefore, no further activity surveys are necessary for the surveyed structure.

Table 1: Low/Moderate/High potential building(s) survey recommendations. The full guidance can be found in the Bat Conservation Trust Good Practice Survey Guidelines. These guidelines are what all local authorities abide by.

Bat Conservation Trust

Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey[a] (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey.[b]	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn.[b]

[a] Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis (see Section 5.2.9). If there is a possibility that quiet calling, late-emerging species are present then a dawn survey may be more appropriate, providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in this category.
[b] Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk one is considered only one visit.

3.2.4 DNA Results

No DNA Results were obtained for the site as no droppings were identified from the survey visit.

3.2.5 Activity surveys

No activity surveys were undertaken on the garages at Albertina Road, Treowen as the Preliminary Roost Assessment (PRA) was undertaken in January 2019, which falls outside of the bat emergence survey season. Additionally, the structures were deemed to be of negligible potential to support roosting bats, with no further surveys necessary.

4 Impact Assessment

4.1 Constraints

Constraints on:	Survey Information	Equipment Used
Constraint (Yes or No):	No	No
Explanation of Constraints:	N/A	N/A
Action Taken:	N/A	N/A

4.2 Potential Impacts of the re-development

The current planning proposal whereby the surveyed structure will be converted for residential purposes, the potential impacts have been identified as follows:

4.2.1 Designated sites

As the proposed works are due to remain within the site boundary, the presence of any designated sites nearby is not applicable to this project. This, therefore, means that any building works would be of no detriment to the surrounding habitats and landscape.

4.2.2 Bat Roosts

Impact	Short-term Impacts: Disturbance	Long-term Impacts: Roost Modification	Long-term Impacts: Roost Loss
Classification:	Negligible	Negligible	Negligible
Justification:	The structures were deemed to be of 'negligible' potential to support roosting bats. Therefore, their absence on site can be assumed.	The structures were deemed to be of 'negligible' potential to support roosting bats. Therefore, their absence on site can be assumed.	The structures were deemed to be of 'negligible' potential to support roosting bats. Therefore, their absence on site can be assumed.
Any further action:	No further action required.	No further action required.	No further action required.

4.2.3 Bird Nests

Due to the absence of bird nests in relation to the surveyed structures, the proposed scheme of works will be of a **'negligible'** effect to the local bird populations.

4.2.4 Foraging and commuting habitat

It is considered that the re-development of the site would have a **'negligible'** effect on potential foraging and commuting habitat. The site itself offers little foraging habitat, with the adjacent land containing better opportunities for bats and birds to use. Post development, all foraging and commuting habitats will be maintained, thus not negatively affecting the local landscape.

5 Recommendations

From the site survey, it has been established that the no bat roost is present within the surveyed structure. Therefore, there are no compulsory recommendations for this project.

However, it is recommended that site enhancement measures could be included into the scheme of works. This could include the inclusion of Eco Bat Boxes on the eastern, southern or western elevations. These boxes should avoid any artificial lighting around the site. A soft landscaping plan should incorporate some wildlife attracting species. The table located in Appendix G indicates some species that are considered 'bat friendly.'

In addition to this, a variety of other bird boxes can be installed around the site to enhance the nesting opportunities for a variety of species within the local landscape.

6 Summary

6.1 Bat presence/absence

From the survey visit undertaken on the site, it can be concluded that the surveyed structure contains no bat roost. However, foraging and commuting bats are anticipated within the local landscape, and their presence can be assumed.

6.2 Bird presence/absence

From the survey visit undertaken on the site, it can be concluded that the surveyed structure contains no birds nests. However, the surrounding landscape provides all of the necessary habitat elements that birds require, and their presence can be assumed.

6.3 Ecological value of building units

The ecological value of the buildings has been deemed as ‘negligible’ to bats, with no suitability for the structure to support roosting specimens. The ecological value of the buildings to birds has been deemed ‘low’ due to the absence of nests, but the clear access to nest during the forthcoming breeding season.

6.4 Recommendations

Based on the results from the survey visit undertaken on the site, there are no compulsory recommendations for ‘Townhead Farm’. However, enhancements are recommended for the local bat and bird populations (please see section 5 and Appendix G for more information).

7 References

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8 Appendices

Appendix A: Site Plans

Appendix B: Eco Data Map

Appendix C: Artificial Light and Bats

Appendix D: Photographic Records

Appendix E: The Annual Bat Year (BCT)

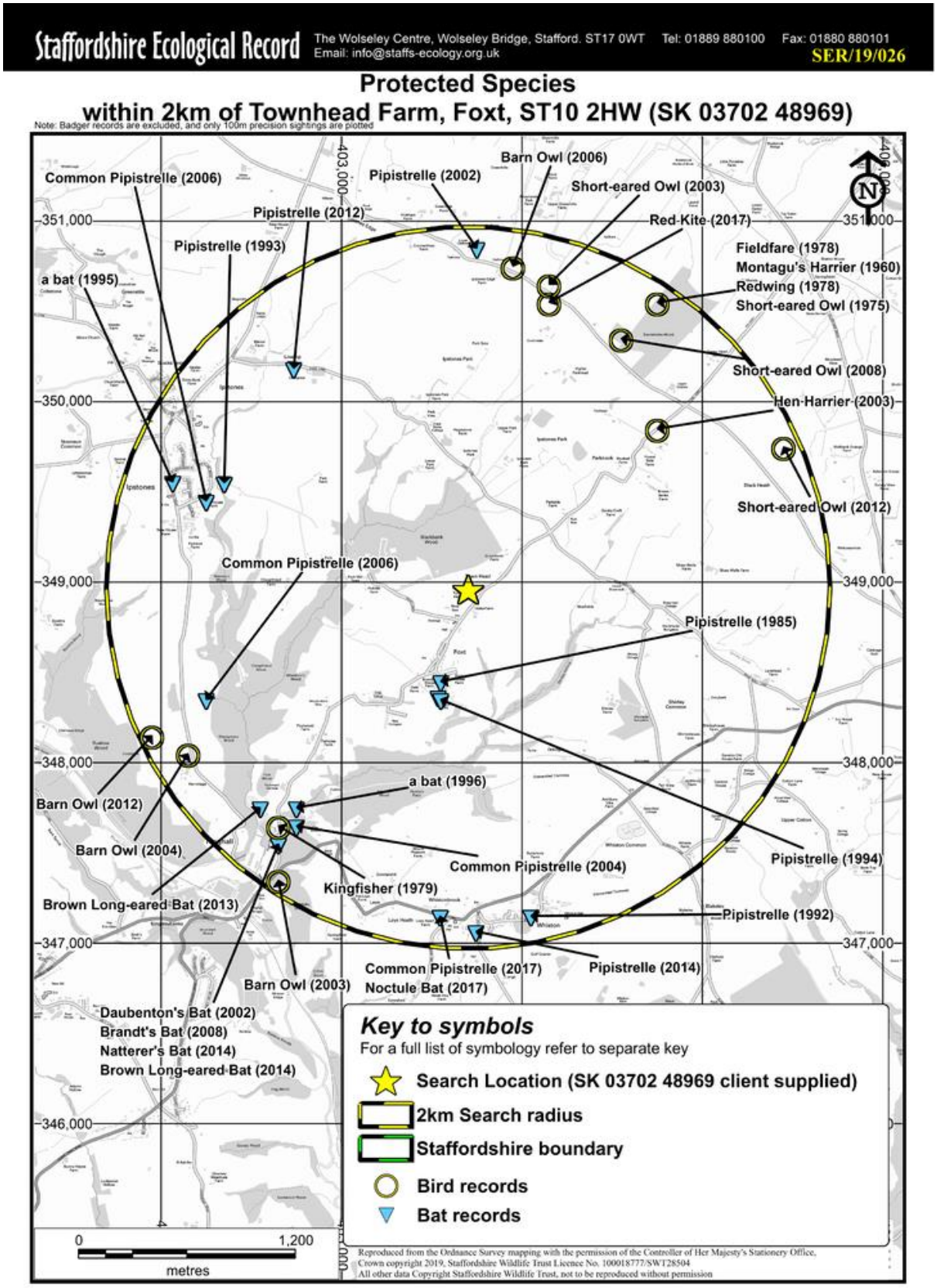
Appendix F: Legislation

Appendix G: Bat and Bird Compensation Recommendations

Appendix A: Site Plans

No site plans have been made available to Elite Ecology.

Appendix B: The Ecological Data Search Maps



Appendix C: Artificial Lighting and Bats

Artificial lighting is known to affect bat's roosting and foraging behaviour, with lighting resulting in a range of impacts that includes roost desertion (BCT, 2009), delayed emergence of roosting bats (Downs et al., 2003), increased activity of some bat species and decreased activity by others (Stone et al., 2012).

An experimental approach using LED units, demonstrated that relatively fast-flying bat species, including the common pipistrelle, showed no significant impacts as a result of new artificial lighting, even when lighting was set at relatively high levels close to 50 lux.

In contrast, slow flying bats such as the myotid bats (Myotis spp.) showed sharp reductions in presence, even at low light levels of 3.6 lux (Stone et al., 2012).

Current recommendations for all bat species specifies that no bat roost should be directly illuminated.

Due to the impacts of lighting, mitigation and sensitive lighting design schemes are required for projects where bats are present. These should include bat friendly lighting plans that should aim to avoid lighting wherever possible. If this is not possible, then the minimisation of any lighting impacts is required by adopting the following measures:

- To introduce lighting curfews or use of PIR sensors.

  Lighting curfews can be an effective way of avoiding impacts on bats. These curfews may involve either turning off lighting or dimming light units at specific times of the night, dimming units at key times of the year, providing the luminaire allows for this option via a control unit. Lighting to be triggered by PIR sensors can be expected to be illuminated only when required and for a low proportion of time.

- To consider no lighting solutions where possible.

  Options such as white lining, good signage and LED cats eyes should be considered as preferable. Reflective fittings may help make use of headlights to provide any necessary illumination in some areas.

- To use only high pressure sodium or warm white LED lamps where possible.

  High pressure sodium and warm white LED lamps emit lower proportions of insect attracting UV light than mercury, metal halide lamps and white LED lighting. Generally, lamps should have a lower proportion of white or blue wavelengths, with a colour temperature <4200 kelvin recommended (BCT, 2014).

- To minimise the spread of light.

  The light spread should be kept at or near horizontal to ensure that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Baffles, hoods, louvres and shields should be used where necessary to reduce light spill.

- To consider the height of the lighting column.

  While downward facing bollard lighting is often preferable, it should be noted that a lower mounting height does not automatically reduce impacts to bats as bollard lighting can often be designed to provide up-lighting. Where bollard lighting is considered to be the most appropriate system, bollard spacing or unit density should be kept to a minimum and units should be fitted with the appropriate hoods/deflectors to reduce any up-lighting.

- To avoid reflective surfaces below lights.

  The polarisation of light by shiny surfaces attracts insects increasing bat activity (BCT, 2012). Consequently, surface materials around lighting require consideration.

Appendix D: Photographic Records

Plate 1: A photograph of the eastern and southern elevations of the barn.



Plate 2: An image of the northern elevation of the barn.



Plate 3: A photograph showing the internal portion of the barn.



Appendix E: The Annual Bat Year (BCT)

A Year in the Life of a Bat		
	**January**	Hibernating; using up fat reserves.
	**February**	Still hibernating; few fat reserves left.
	**March**	Some activity; occasional bat seen feeding.
	**April**	Awake and feeding at night.
	**May**	Females looking for nursery sites.
	**June**	Young born, usually only one.

	**July**	Young still suckling.
	**August**	Young start catching insects; females leave nursery to find males.
	**September**	Mating season begins; start building fat reserves for hibernation.
	**October**	Search for suitable hibernation site.
	**November**	Hibernation begins although still some activity in warm weather.
	**December**	Hibernating.

Appendix F: Legislation and Policy

All species of bat are fully protected under a variety of domestic, European and international legislation and conventions. These include:

- Bern Convention (Appendix II)
- Bonn Convention (Appendix II)
- Conservation Regulations (Northern Ireland) 1995
- Conservation of Habitats and Species Regulations 2010
- Countryside Rights of Way Act 2000
- Eurobats Agreement
- Habitats Directive (Annexes IV and II)
- Habitats Regulations 1994 (as amended) Scotland
- NERC Act 2006
- Wildlife and Countryside Act 1981 (as amended)
- Wild Mammals Protection Act

In addition to this, some species have additional protection by being listed on the UK Biodiversity Action Plan (UKBAP).

The legislation afforded to bats makes it illegal to possess or control any live or dead specimens, to damage, destroy or obstruct access to any structure or place used for shelter, protection or breeding, and to intentionally disturb a bat while it is occupying a structure or place which it uses for that purpose.

All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), which protects birds, nests, eggs and nestlings from harm. In addition to this, some rarer species, such as barn owls are afforded extra protection.

National Planning Policy Framework, Section 11:

The published framework in 2012 replaces the previous Planning Policy Statement 9.

Section 11: Conserving and enhancing the natural environment reaffirms the government's commitment to maintaining green belt protections and preventing urban sprawl, retains the protection of designated sites and preserves wildlife. It also aims to improve the quality of the natural environment and halt declines in species and habitats, protects and enhances biodiversity and promotes wildlife corridors.

Biodiversity 2020:

This sets out to halt overall biodiversity loss and support healthy well-functioning ecosystems by establishing coherent ecological networks, with more and better places for nature, to the benefit of wildlife and people. The government's policy is aimed at individuals, communities, local authorities, charities, business and government, which all have a role to play in delivering Biodiversity 2020.

Appendix G: Bat and Bird Compensation Recommendations

Table: Floral species that could be used in a soft landscaping scheme that are considered bat attracting.

Flowers for borders
Aubretia
Candytuft
Cherry pie
Corncockle
Corn marigold
Corn poppy
Echniacea
English bluebell
Evening primrose
Field poppies
Honesty
Ice plant ‘pink lady’
Knapweed
Mallow
Mexican aster
Michaelmas daisy
Night-scented stock
Ox-eye daisy
Phacelia
Poached egg plant
Primrose
Red campion
Red valerian
Scabious
St. John’s Wort
Sweet William
Tobacco plant
Verbena
Wallflowers
Wood forget-me-not
Yarrow
Herbs
Angelica
Bergamot
Borage
Coriander
English marigolds
Fennel
Feverfew
Hyssop
Lavenders
Lemon balm
Marjoram
Rosemary
Sweet Cicely
Thyme
Trees, shrubs & climbers
Bramble

Buddleia
Common alder
Dogrose
Elder
English oak
Gorse
Guelder rose
Hawthorn
Hazel
Honeysuckle (native)
Hornbeam
Ivy
Jasmine
Pussy willow
Rowan
Silver birch
Wild flowers for pond edges & marshy areas
Bog bean
Bugle
Creeping Jenny
Flag Iris
Hemp agrimony
Lady's smock
Marsh mallow
Marsh marigold
Marsh woundwort
Meadowsweet
Purple loosestrife
Water avens
Wood forge-me-not
Water mint

Eco Bat Box:



The Eco Bat Box combines a sealed weatherproof shell made from 100% recycled plastic, with a wooden internal roost chamber. The bat boxes outer shell is constructed from recycled plastic made from bale wrap (collected from UK farms) and other plastic waste. The UV stabilised recycled plastic is welded together to create a robust, long-lasting box. Within the outer shell is a wooden roost chamber to provide an attractive roost space for bats. The internal roost chamber is constructed from FSC Certified oriented strand board (OSB). OSB is made from compressed waste wood chips and flakes and as a result has a roughened surface which provides plenty of grip for bats to move around, hang and roost from.

In the UK, different bat species have different roost requirements. To accommodate as wide a range of bats as possible, the Eco Bat Box is available in two types, crevice and cavity. Externally the two types are identical but differ internally. The crevice box features two internal crevices 22mm wide, ideal for pipistrelle bats. The cavity box is designed for cavity roosting bats such as Brown Long-Eared bats and Noctules with a single internal cavity 60mm wide with rough walls and roof for bats to hang from.

The box requires no maintenance or cleaning as its designed with angled baffles which mean droppings simply fall out of the entrance slot. At the base of the box, the protected landing ladder makes access to the box easy for the bats.

Bat boxes can be mounted on both buildings and trees. Try to position your box as high as possible in a sheltered sunny place. Ideally, several boxes should be put up facing in different directions to provide a range of conditions. Bats need time to find and explore new homes, and it may be several years before boxes have residents – be patient! Droppings on the landing area and chittering noises from inside on warm afternoons and evenings are signs of occupation.

Please note: All bats and roosts are protected by law and you should only open a bat box to check it if you hold an appropriate licence.

The plastic (LDPE) has a UV stabiliser rated at 700 kiloLangleys (kLy). This measure means that if left exposed to unshaded sunlight all day long, which in the UK is taken to deliver 70 kLy of UV per year, the plastic will be expected lose about 50% of its strength after 10 years.

This product is available from Elite Ecology at a price of £29 (excluding V.A.T).

9 Notice to Readers: Conditions of this Report

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The survey results purport the current status of the site and its potential for protected species utilisation at the time of surveying. It should not be viewed as a complete list of the possible flora and fauna species that could be using the site at different times of the year.

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No reliance should be made on any such comments in relation to the structural integrity of the features located on the surveyed site. All information within the report is based solely on evidence that has been found on site during the service provided. No individual opinion or inference will be made other than that of the suitably qualified ecologist appointed to the project.