



The Chapel, Orleton Common Herefordshire SY8 4JG

Fauna Forest Ecology Ltd
Preliminary Bat Risk Assessment & Bat Activity Surveys

Issued 5th September 2017

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



Contents

1. Executive Summary	3
2. Introduction.....	5
3. Legislation	8
4. Methodology	10
4.1 Bat Scoping Survey.....	10
4.2 Building Daytime Assessment.....	10
4.3 Common Nesting Bird Methodology	12
5. Site Description	13
6. Results	14
6.1 Desk Study	14
6.1.1 Environmental Records Data Search.....	14
6.1.2 Statutory Site Search	14
6.1.3 Non-Statutory Site Search	17
6.2 Site Assessment and Survey Findings	19
7. Evaluation.....	26
8. Site Images	28
9. References.....	37

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



1. Executive Summary

A detached single storey former chapel at Orleton Common nr. Ludlow, Herefordshire, SY8 4JG (National Grid Reference: SO 47356 68348) is the subject of proposed development. Proposed works include significant roof modifications and structural enhancements with a view to convert the building into a two storey residential dwelling. Fauna Forest Ecology Ltd. were commissioned to undertake a preliminary bat roost assessment at the building in order to evaluate its ecological potential. A desktop study and high-level scoping survey was conducted using a series of survey techniques, to determine if bats occur within the building. Consultant David Nixon who holds a bat licence with Natural England (bat licence number: 2015-18322-CLS-CLS) conducted the daytime assessment on Sunday 2nd July 2017. Following the completion of the scoping survey, a dusk emergence survey was undertaken on Wednesday 19th July 2017 and a dawn re-entry survey was carried out on Monday 7th August 2017 in order to identify any bat roosting activity and determine the level of bat activity within the surrounding area.

DESKTOP STUDY

Using freely available resources, a desktop study was conducted to ascertain publicly available data in relation to local habitats.

PROTECTED SPECIES SURVEYED FOR

Bats were surveyed for using an artificial light source, visual inspections and endoscopic camera equipment. Potential roost features were documented and photographed.

An inspection was undertaken to look for evidence of common nesting birds within the building's confines and surrounding habitat.

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



SURVEY RESULTS

Bats: No evidence of bats was found within the building. During the dusk emergence survey, no bats emerged or entered the building. Additionally, no bats entered or emerged from the building during the dawn re-entry survey.

Birds: As the building holds potential value for nesting birds, although there were no signs of any previous nesting, works should be undertaken outside of the bird-nesting season which generally runs from late February to late August. If works are planned within this period, they should only be conducted following an ecologist's assessment to confirm the absence of nesting birds.

ACTIONS

No further bat surveys are required.

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



2. Introduction

- 2.1 A detached single storey former chapel at Orleton Common nr. Ludlow, Herefordshire, SY8 4JG (National Grid Reference: SO 47356 68348) is the subject of proposed development. Proposed works include significant roof modifications and structural enhancements with a view to convert the building into a two storey residential dwelling. Fauna Forest Ecology Ltd. were commissioned to undertake a preliminary bat roost assessment at the building in order to evaluate its ecological potential. A desktop study and high-level scoping survey was conducted using a series of survey techniques, to determine if bats occur within the building.
- 2.2 Consultant David Nixon who holds a bat licence with Natural England (bat licence number: 2015-18322-CLS-CLS) conducted the scoping survey on Sunday 2nd July 2017. David Nixon, Will White and Christopher Nixon performed a bat emergence survey on Wednesday 19th July 2017. Harry Sims, Will White and Chris Morgan carried out a dawn re-entry survey on Monday 7th August 2017.
- 2.3 The purpose of the bat surveys were to:
- Assess the ecological value of the building
 - Identify if bats are or have been present at the building
 - Identify any potential negative impact such development might have on bats
 - Determine the level of compensation or mitigation measures required, in order for development to lawfully proceed
 - Identify if nesting birds utilise the building and surrounding vegetation
 - Consider the impact such development might have on nesting birds
- 2.4 The surveyed building is situated in a rural setting approximately 7.5km south-west of central Ludlow and 9.5km north-west of Leominster. Figure 1 shows the surrounding landscape and figure 2 shows the site boundary.

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



Figure 1. Red marker points to the approximate location of the development site. Map shows surrounding habitat and landscape (satellite imagery).

(Image taken from Google Earth Pro: ©2017).

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



Figure 2. Approximate location of surveyed building is shown by yellow line. (satellite imagery). (Image taken from Google Earth Pro: ©2017)

2.5 Fauna Forest Ecology Ltd. were advised by the client that the proposed work entails: the conversion of a former chapel to a residential dwelling.

2.6 Survey Caveats:

- Local biological records were not obtained
- Bat droppings deposited in or around the exterior degrade fairly quickly due to weather. The presence of bats or their roost must not be disregarded in the absence of droppings
- Not all of the external roof area was closely inspected for Health & Safety purposes
- The loft void was not accessed for Health & Safety purposes

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



3. Legislation

3.1 The following EC Directives and international conventions are relevant to the ecological assessment:

- EC Directive on the Conservation of Habitats and Species Regulations 2010;
- EC Directive on the Conservation of Wild Birds (Birds Directive 1979) as amended (79/409/EEC);
- Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979) and;
- Convention on Biological Diversity (1992).

3.2 The key UK legislation is the Wildlife and Countryside Act 1981 (as amended by the Countryside Rights of Way Act 2000) which consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive) in Great Britain. It is complemented by the Conservation of Habitats and Species Regulations 2010, which implements Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive). The Regulations provide for the designation and protection of 'European sites', and the protection of 'European protected species' i.e. otters, bats and great crested newts.

3.3 Bats

All British bat species are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are therefore afforded protection under Section 9 of this Act. In addition, all bat species are listed in Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 1994 (SI 1994 No. 2716) (as amended) (known as the Habitats Regulations) and are therefore protected under Regulation 39 of the Regulations. These Regulations make provision for the purpose of implementing European Union Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora 1992, under which bats are included on Annex IV. The Act and Regulations makes it an offence, inter alia, to:

- Intentionally kill, injure, take (handle) or capture a bat;

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



- Intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (this is taken to mean all bat roosts whether bats are present or not) - under the Habitats Regulations it is an offence to damage or destroy a breeding site or resting place of any bat; or
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection - under the Habitats Regulations it is an offence to deliberately disturb a bat (this applies anywhere, not just at its roost) in such a way as to be likely to affect:
- Its ability to survive, breed, reproduce, rear or nurture their young or hibernate; or to significantly affect:

Further details of the above legislation, and of the roles and responsibilities of developers and planners in relation to bats, can be found in Natural England's Bat Mitigation Guidelines, which can be downloaded from the NE website:

<http://naturalengland.communities.com/naturalenglandshop/docs/IN13.6.pdf>

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



4. Methodology

4.1 Bat Scoping Survey and Emergence Survey

The Bat Scoping Survey comprised two parts; a desktop study and a site visit. The desktop search collates all available public information regarding the biodiversity of the area, the habitat structure of the surrounding area and statutory designations. Other tools used as part of the desktop assessment included the Magic mapping database and the Natural England protected site search engine. The bat activity surveys comprised one emergence survey on Wednesday 19th July 2017 and one dawn re-entry survey on Monday 7th August 2017. All surveys were completed in optimal conditions at a time of year when bats are active. Survey work was completed by David Nixon, Will White, Christopher Nixon, Harry Sims and Chris Morgan, who are all experienced in bat survey work.

Biological records, including local bat records and non-statutory local site records were not obtained. The proposed development is unlikely have a negative impact on local sites or protected species. The development site is relatively small and localised. During the high-level scoping survey, potential bat movement corridors and potential movement barriers would be assessed and noted. These activities were not limited solely to the site and the surrounding area was also investigated. An initial assessment of any trees immediately surrounding the site would be completed.

4.2 Building Daytime Assessment and Emergence Survey

During the site visit, where possible, all areas of the building were internally and externally examined for evidence of bat activity. The building survey included an internal and external assessment as follows: The surveyor used a powerful artificial light source and hand-held endoscopic equipment (Ridgid CA-300) was used to inspect small gaps and crevices.

Internal survey: The internal room was fully assessed for bat droppings, potential entrance points, cobweb free areas and feeding signs. The construction of the building was assessed internally, notably

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



to identify roosting and access points. A powerful torch beam was used to scan the walls and flat surfaces of the building for droppings and other signs of bat activity. Feeding remains such as moth and butterfly wing concentrations were also surveyed for. Where possible, all holes and crevices considered by the surveyor as likely to be used as a bat roost were examined to ascertain presence or absence of bats.

External survey: Visual ground inspections were undertaken of all elevations using binoculars. Photographs were taken to inspect for likely features of ecological value to bats and birds i.e. missing tiles, damaged or missing mortar, exposed gable ends, gaps within soffit board and other potential entry points.

Evening emergence survey: The equipment used for survey and call analysis included: a Batbox Duet, Magenta bat detectors, an Echo Meter Touch Pro, an Anabat Express and notepads. Surveyors took up separate positions surrounding the building for 15 minutes prior to and for 1.5 hours after dusk for the dusk emergence survey and 1.5 hours prior to and 15 minutes after sunrise. At any one time between the surveyors, all areas of the roof and external area of the building deemed to hold risk were being observed. Visual observation of bat activity was noted and bat species were identified using bat detectors. The information recorded included weather, timings, whether bats emerged from or entered the building, direction of travel, species and activity: foraging or commuting. The surveys were carried out under suitable conditions (mild, no rain or strong wind) in which bats would be active.

Other external aspects of the building were surveyed, including windows, window sills, external doors and the ground within close proximity of the dwelling was thoroughly inspected for bat droppings and feeding remains. Ladders were not used to access roof tiles for close inspection (due to Health and Safety concerns).

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



Methodology used was in line with standard guidance from Bat Conservation Trust¹.

4.3 Common Nesting Bird Methodology

Where accessible, the building was surveyed for evidence of common nesting birds. Artificial light was used to search for birds, dead birds, dead chicks, nesting material and eggs. Endoscopic equipment was used to survey small cracks within mortar, damaged bricks, gaps and holes. Binoculars were used to scan across the external building aspects for evidence of nesting material and nesting birds.

¹ Hundt L. (2016) Bat Survey Good Practice Guidelines 3rd Edition Bat Conservation Trust

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



5. Site Description

The surveyed building is a detached single storey former chapel located in a rural setting. The site can be accessed via a hard standing driveway surrounded by an understory of dense vegetation and mature trees. In addition, a narrow garden path surrounded by thick native shrubs leads directly to the north-east facing aspect from the adjacent access road. The surveyed building is used for domestic storage.

Local stone was used to construct the building and the roof is pitched, timber-framed and covered with Welsh slate. Access to the building is via a door located on the north-east aspect and Internally, the walls are plastered leaving a smooth finish. There is a small loft hatch however flaking plaster on the ceiling has exposed horizontal wooden laths, highlighting some Health & Safety concerns, therefore the loft was not entered by the surveyor.

Adjacent to the south-west elevation is a Portakabin-type storage unit, covered with a corrugated tin roof. Located less than 15m south of the surveyed building is a small residential timber-built dwelling and approximately 20m to the south west of the surveyed building, lies a large modern open-fronted agricultural barn, used to store agricultural machinery and equipment.

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



6. Results

6.1 Desk Study

6.1.1 Environmental Records Data Search

The desktop study looked at current publicly available data relating to protected species within the area.

6.1.2 Designated Statutory Site Search

There are no internationally designated statutory sites within 10km of site and there are five nationally designated statutory site within 5km of Site.

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



Table 1 Designated Statutory Sites within 2km of the site

Site Name	Designation	Distance (metres)	Direction	Description/Relevant Information
Fishpool Valley	SSSI	2,900m	SW	A secluded and well wooded stream valley which contains a series of pools created by damming the stream several centuries ago. The area is of considerable ornithological importance with woodland species such as pied flycatcher <i>Ficedula hypoleuca</i> , treecreeper <i>Certha familiaris</i> and greater spotted woodpecker <i>Dendrocopos major</i> breeding here. The pools and stream attract other birds such as mallard <i>Anas platyrhynchos</i> , teal <i>Anas crecca</i> , moorhen <i>Gallinula chloropus</i> and coot <i>Fulica atra</i> .
Mortimer Forest	SSSI	3,700m	N	Mortimer Forest is exceptionally important for displaying sections through Wenlock and Ludlow Series rocks. The site includes many type sections and has yielded a rich and diverse fossil fauna.
Burrington Meadow	SSSI	4,200m	NW	Burrington Meadow consists of an area of damp marshy permanent pasture bounded by scrub and drier neutral grassland. It represents a good example of a species rich, sedge dominated grassland, a type which is becoming increasingly rare in Britain because of changes in agricultural practices.
Elton Lane Cutting	SSSI	2,200m	NW	This is a classic section in the Ludlow Series of the Silurian, well known for the early studies carried out here on its graptolite faunas. The section includes the Lower, Middle and Upper Elton Formations. This is the standard section for the <i>Neodiversograptus nilssoni</i> and <i>Pristiograptus tumescens</i> biozones. This site is key one for studies of late Silurian rocks and

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



				biostratigraphy.
River Teme	SSSI	4,500m	NE	<p>The River Teme is the second largest tributary of the River Severn, draining a hilly, predominantly rural catchment of Silurian and Devonian rocks. The notified channel is of special interest as a representative, near-natural and biologically-rich river type associated</p> <p>with sandstone and mudstones. This type has a mainly northern and western distribution in Britain but is especially c</p> <p>Mammals The otter <i>Lutra lutra</i> has well established populations on the Teme, the stronghold being between Ludlow and Knighton, but they are found all along the river from Cwm Gwyn to Powick. Mink <i>Mustela vison</i> are also reported to be widespread in the catchment.</p> <p>Invertebrates The Teme has a good population of Atlantic stream crayfish <i>Austropotomobius pallipes</i>, a globally threatened and seriously declining species. The extensive shingle shoals hold a particularly interesting and rare riffle beetle community, with some 17 species being recorded. Of these, <i>Normandia nitens</i> is classed as Vulnerable, with <i>Macronychus quadrituberculatus</i> being nationally rare. The nationally scarce beetles <i>Riolus subviolaceus</i> and <i>R. cupreus</i> are found in the channel, with the nationally scarce carabid beetle <i>Bembidium semipunctatum</i> occurring on the banks. The SSSI also holds a population of the freshwater pearl mussel <i>Margaritifera margaritifera</i>, a rare and specially protected species.</p>

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



				<p>Fish The River Teme has long been recognised as a quality salmonid and coarse fishery. The fish communities strongly reflect the ecological changes in the river as it descends the catchment.</p> <p>haracteristic of the Welsh Marches.</p> <p>Breeding Birds The bird community is typical of that found along medium to fast flowing rivers. The dipper <i>Cinclus cinclus</i> is to be found in almost all the rocky sections together with the grey wagtail <i>Motacilla cinerea</i>, though the latter species is equally at home on the silt banks of the lower reaches. Both kingfishers <i>Alcedo atthis</i> and sand martins <i>Riparia riparia</i> readily utilise the eroding earth banks which the river produces as it meanders, and common sandpipers <i>Tringa hypoleucos</i> occur on the shingle bars above Ludlow. There are also records of goosander <i>Mergus merganser</i>.</p>
--	--	--	--	--

SSSI – Site of Special Scientific Interest

LNR – Local Nature Reserve

It is not considered that any of the protected sites within the surrounding area have any significant habitat or species interaction with the development site or habitats in the immediate vicinity. In addition, the small scale of the development will bear no impact on the surrounding protected areas.

6.1.3 Designated Non-Statutory Site Search

Non-designated sites: only those considered potentially relevant to the nature of the development and of ecological importance in relation to this report, are presented in Table 2.

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



Table 2 Non-statutory designations within 2km of site

Site Name	Designation	Distance (metres)	Direction	Description/Relevant Information
None found via MAGIC website	N/A	N/A	N/A	N/A

6.1.4 Habitats and Species Search

MAGIC website suggests that adjacent to the southern site boundary, lies a block of deciduous woodland. In addition to this, patches of deciduous woodland dominate a large proportion of the surrounding area; these are coupled with traditional orchards. Approximately 1,900m to the south-west is a patch of Woodpasture & Parkland.

Relevant habitats are presented in Table 3.

Table 3 Habitat and Species within 2km of site

Habitat Type	Closest Distance (metres)	Direction	Description/relevant information
Woodpasture & Parkland (BAP) Priority Habitat	1,900	SW	Wood-pasture and parkland

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



National Forest Inventory	52m	NE	Woodland – broad-leaved
Priority Habitat Inventory – Deciduous Woodlands	20m	S	Deciduous woodland
Forestry Commission Legal Boundary	375m	SW	317 – West England
Traditional Orchards	141m	E	Young trees in gaps
Ancient Woodland	20m	S	Ancient and semi-natural woodland

Application Site

Surrounding Habitats

Largely, surrounding habitats include blocks of dense ancient and semi-natural woodland coupled with fields comprising improved & semi-improved grassland, grazing pasture and some arable agricultural land. A network of nearby hedgerows and tree lineage extends into the wider landscape.

6.2 Site Assessment and Survey Findings

The internal and external survey was carried out on Sunday 2nd July 2017, by experienced ecological consultant David Nixon (Natural England Class Licence Level 2 (bat) – 2015-18322-CLS-CLS following

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



the desktop survey which used satellite images and data resources. The owner gave full access to site and buildings. Weather conditions during the site visit were acceptable (sunny, 17°C).

External Assessment

Many of the roof slates appeared to be raised, damaged and slipped, offering potential roosting opportunity or access to the internal loft void which was not deemed safe to access. Gaps large enough for bats to enter were documented at the north-east and south-west facing apex regions and along the ridge capping. Substantial gaps were noted at eaves level below the guttering on the north-west and south-east elevations. Further to this, broken and missing mortar and damaged bricks on all aspects could offer potential to roosting bats.

Internal Assessment

Internally, both birds and bats could gain access via a broken window pane located above the front door, situated on the north-east facing aspect, however there is little in the way of suitable roosting perches or crevices in the main ground floor room. The roof structure is timber-framed; there is likely some potential ecological value to support roosting void-dwelling species such as brown long-eared bats, *Plecotus auritus*. It should be noted that due to Health & Safety concerns, the loft void was not entered for inspection.

Bat Scoping Survey Results

During the preliminary daytime scoping survey, no evidence was discovered to suggest that bats are or have been present within the survey building.

Bat Activity Survey Results

No bats were seen to emerge from the building during the bat emergence survey on Wednesday 19th July 2017 and in addition to this, little bat activity was detected nearby. During the dawn swarm re-

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



entry survey that was carried out on Monday 7th August 2017, no bats were seen entering the building.

Breeding Bird Survey Results

There is potential for birds to access the building via the broken window pane located on the north-west facing elevation above the door, however the internal ground level room does not appear suitable for breeding birds. Birds could enter the loft void via gaps located at eaves level and additionally, small birds could potentially nest-build and breed between some gaps caused by missing and damaged mortar on all side aspects.

Table 4 Bat activity raw data collated on Wednesday 19th July 2017 during bat emergence survey

DATE:	19/07/2017		WEATHER CONDITIONS:	Mild/still/dry		
SURVEY START:	21:00		CLOUD COVER (Oktas):	100%	TEMPERATURE:	
SURVEY END:	22:45		WIND (Beaufort scale):	4kph	18°C	
TIME	SURVEYOR	SPECIES	ACTIVITY	PASSES²	HEIGHT³	NOTES / MAP REF.
21:20	David Nixon	Soprano Pipistrelle	Commuting (distant)	1	Unknown	Sounded distant – not seen
21:23	Chris Nixon	Soprano Pipistrelle	Commuting	12Plus	Unknown	Not seen
21:43	David Nixon	Noctule	Commuting	2	Unknown	Not seen
21:50	Will White	Soprano Pipistrelle	Foraging	1	20ft	Seen and heard foraging over woodland to south-west of building
22:10	Will White	Soprano Pipistrelle	Foraging	4	15ft-25ft	Seen foraging, passed by several times, appeared to spend most of its time over woodland to south-west of building

² Number of passes by bat

³ **H:** Head height; **B:** Building height; **R:** Roof height; **>R:** Above roof height

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk

Table 5 Bat activity raw data collated on Monday 7th August 2017 during bat emergence survey

DATE:	07/08/2017		WEATHER CONDITIONS:	Mild/still/dry		
SURVEY START:	03:20		CLOUD COVER (Oktas):	80%	TEMPERATURE:	
SURVEY END:	05:45		WIND (Beaufort scale):	2kph	14°C	
TIME	SURVEYOR	SPECIES	ACTIVITY	PASSES ⁴	HEIGHT ⁵	NOTES / MAP REF.
05:00	Will White	Soprano Pipistrelle	Foraging (distant)	3	Unknown	Sounded distant – not seen

⁴ Number of passes by bat

⁵ **H:** Head height; **B:** Building height; **R:** Roof height; **>R:** Above roof height

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk

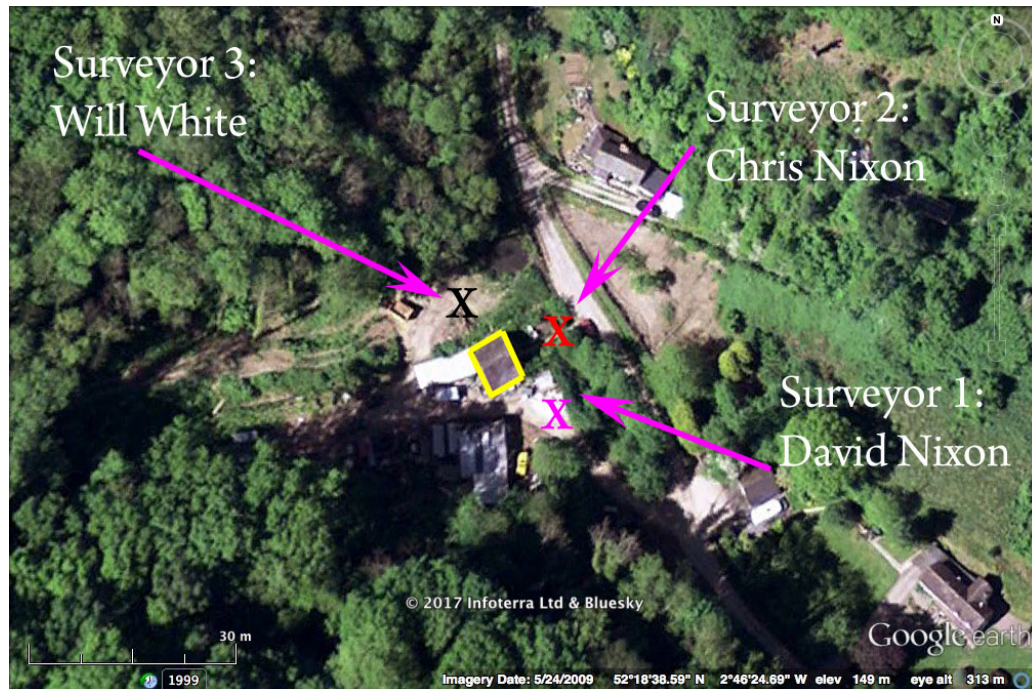


Figure 3. Pink arrows point to approximate position of surveyors during emergence survey on Wednesday 19th July 2017.

Pink 'X' marks position of surveyor 1,

Red 'X' marks position of surveyor 2

black 'X' marks position of surveyor3

Approximate location of the surveyed building area shown by yellow line.

(satellite imagery). (Image taken from Google Earth Pro: ©2017)

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk

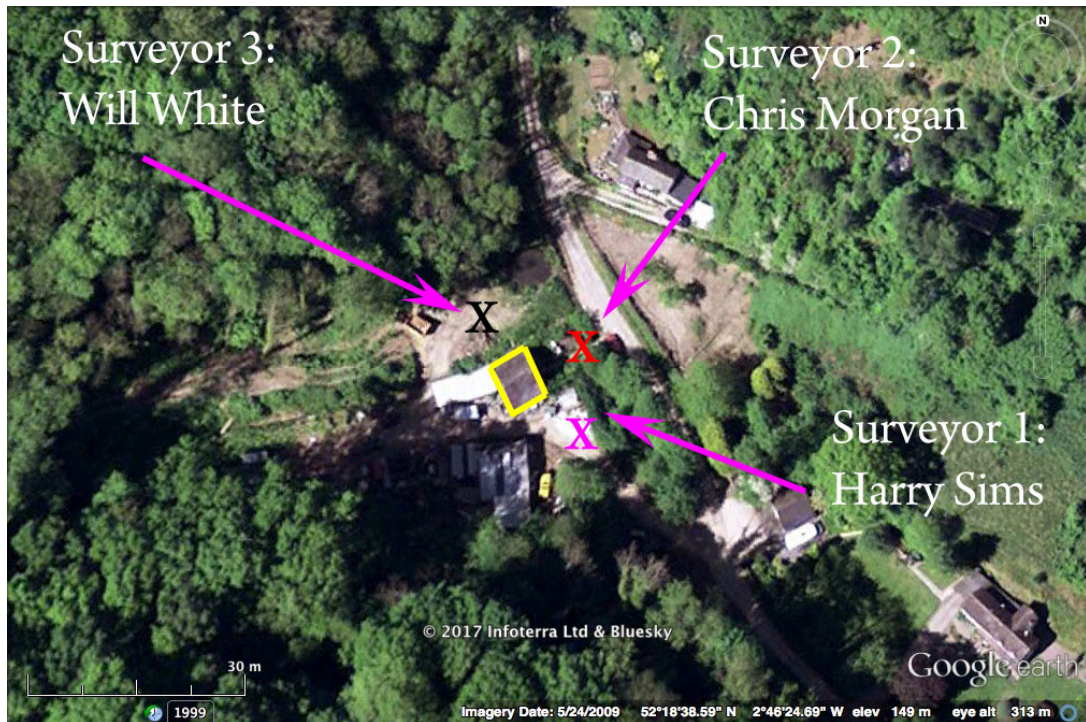


Figure 4. Pink arrows point to approximate position of surveyors during emergence survey on Monday 7th August 2017.

Pink 'X' marks position of surveyor 1,

Red 'X' marks position of surveyor 2

black 'X' marks position of surveyor3

Approximate location of the surveyed building area shown by yellow line.

(satellite imagery). (Image taken from Google Earth Pro: ©2017)

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



Survey Summary

No evidence was discovered during the daytime preliminary high-level scoping survey to suggest that bats are using or have used the surveyed building for roosting purposes. Given the time of year (optimal period when bats are most likely to be active), both activity surveys revealed little in the way of bat activity. Potential access points and roosting locations between the roof slate, ridge capping, missing & broken mortar and areas at eaves level, do offer some ecological potential to crevice-dwelling bats. The internal roof structure could offer suitable roosting conditions for void-dwelling bats, however the roof space is likely to be draughty as a result of the numerous gaps and damaged/slipped tiles and consequently, is likely to deter maternity bat colonies. Furthermore, likely inconsistent temperature fluctuations (too hot in summer and too cold in winter) are potentially unsuitable for roosting bats.

There is some potential for birds to access the loft void and gaps in the external stone walls, however no evidence to suggest that birds do use the building for breeding purposes was documented during any of the surveys.

Fauna Forest Ecology Ltd recommends no further survey effort at this building.

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



7. Evaluation

- 7.1 Following the scoping and bat emergence survey, Fauna Forest Ecology Ltd. are confident that the surveyed building does not support roosting bats, therefore no further bat surveys are recommended.
- 7.2 Based on Fauna Forest Ecology Ltd's understanding of the proposed development, the building works will cause some minor destruction and structural enhancements to the building (and roof), therefore it is good practice for workers to be mindful of bats and take extra caution when demolishing or removing building components. Any roof components, including ridge capping, tiles, flashing etc... are to be removed by hand. Only chemical timber treatments that appear on the list of approved treatments that are not harmful to bats may be used. Breathable membrane should not be used.
- 7.3 If a bat is discovered while the proposed development is being undertaken, work should stop immediately. Licenced bat ecologist David Nixon should be contacted on: 07917 765464. If you are not able to reach David, contact The Bat Conservation Trust: 0845 1300 228. Further work cannot lawfully proceed without confirmation from Natural England. Do not handle bats for legal and Health & Safety reasons.
- 7.4 As the building holds a potential value for nesting birds although there were no signs of any previous nesting, building works should be undertaken outside of the bird-nesting season, which generally runs from late February to late August. If works are planned within this period, they should only be conducted following an ecologist's assessment to confirm the absence of nesting birds.

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



- 7.5 Fauna Forest Ecology Ltd recommend that if an artificial light source is required during build works, a low-level lighting system is adopted. Nearby habitats that are of ecological value to nocturnal species should be protected from artificial lighting.
- 7.6 Providing the method stated above is carried out, the development works will not incur an impact to roosting bats or nesting birds.

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



8. Site Images

Plate 1: shows south-east facing aspect



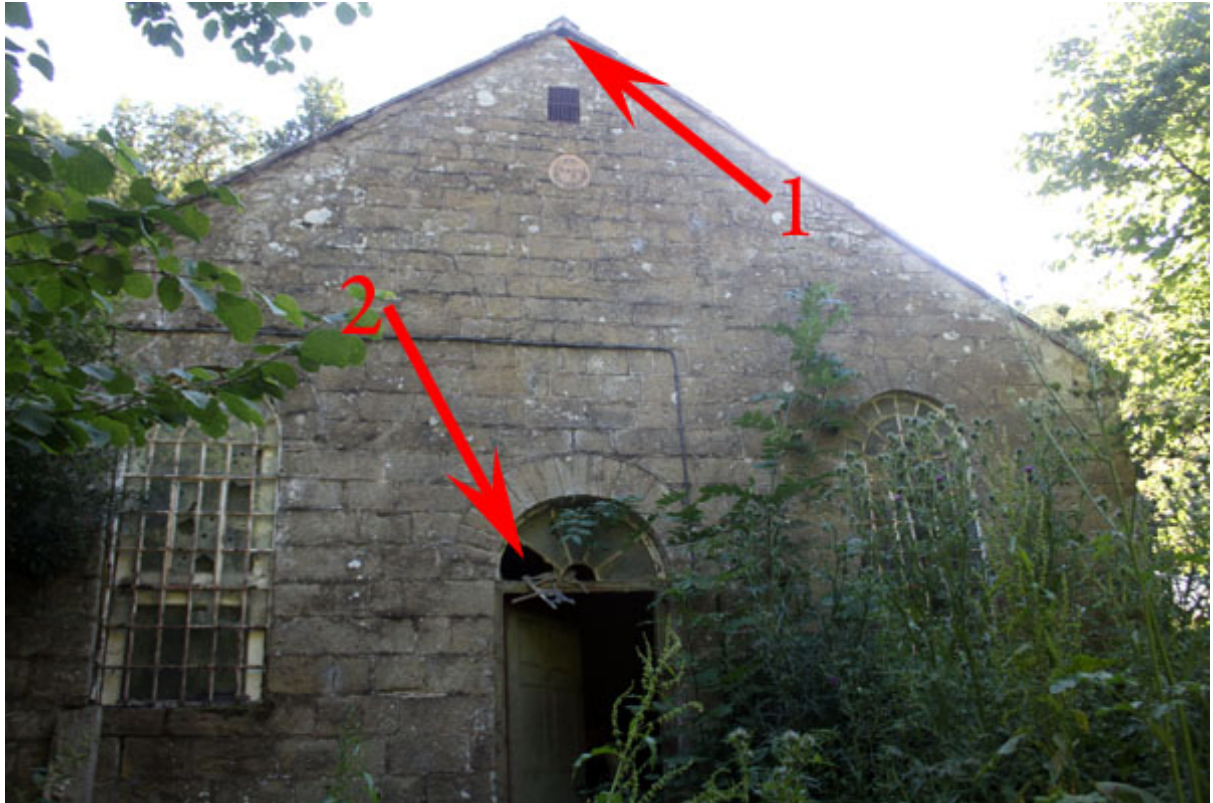
Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk

Plate 2: shows rear north-east facing aspect. Arrow 1 points to a gap potentially large enough for bats to enter. Arrow 2 points to the broken window pane large enough for bats and birds to enter



Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



Plate 3: shows rear north-west facing aspect and side south-west facing aspect of the surveyed building. Additionally, the image shows surrounding habitat, including large mature trees. Note the Portakabin-type storage unit adjacent to the south-west elevation of the surveyed building



Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



Plate 4: shows north-west facing aspect of the surveyed building



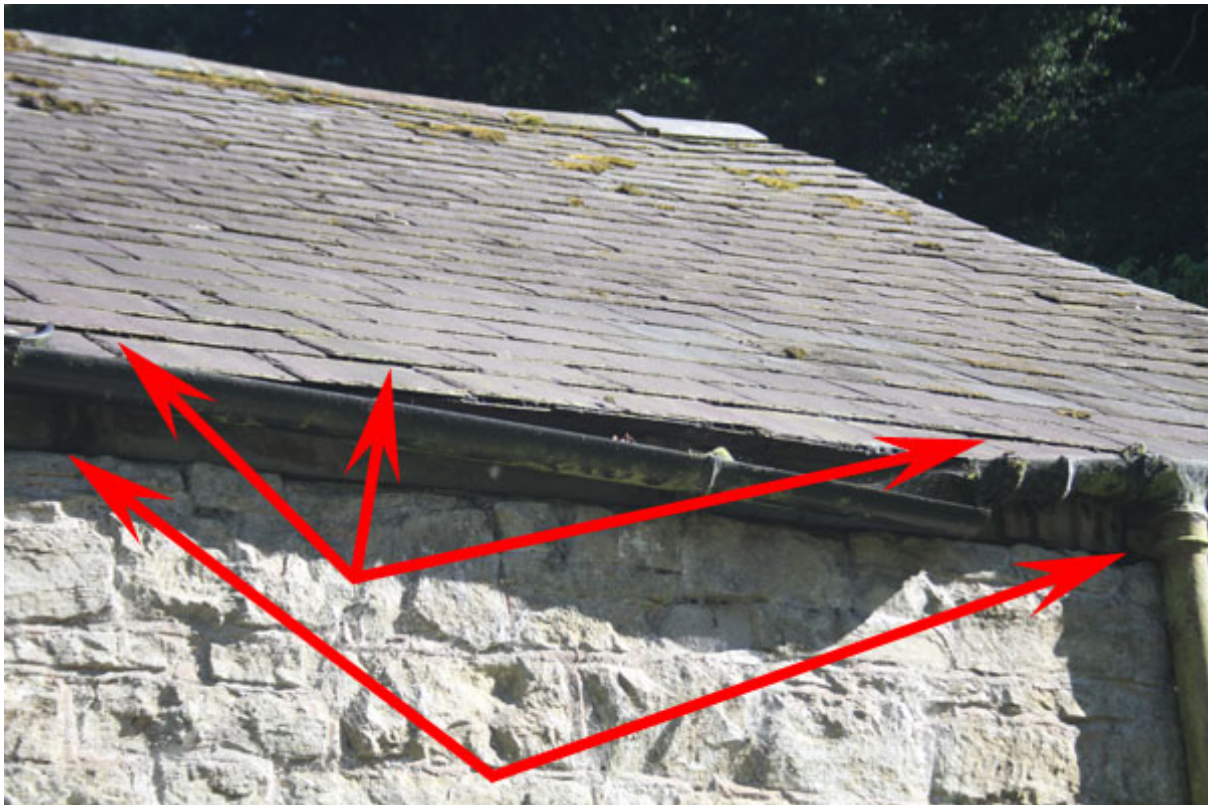
Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk

Plate 5: shows some of the gaps caused by raised slate and potential access points at eaves/guttering level



Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk

Plate 6: shows the internal main ground floor room (used for domestic storage)



Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk

Plate 7: shows the ceiling of the main internal room, including exposed wooden laths



Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



Plate 8: shows adjacent woodland surrounding site boundary, looking in a north-easterly direction



Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464

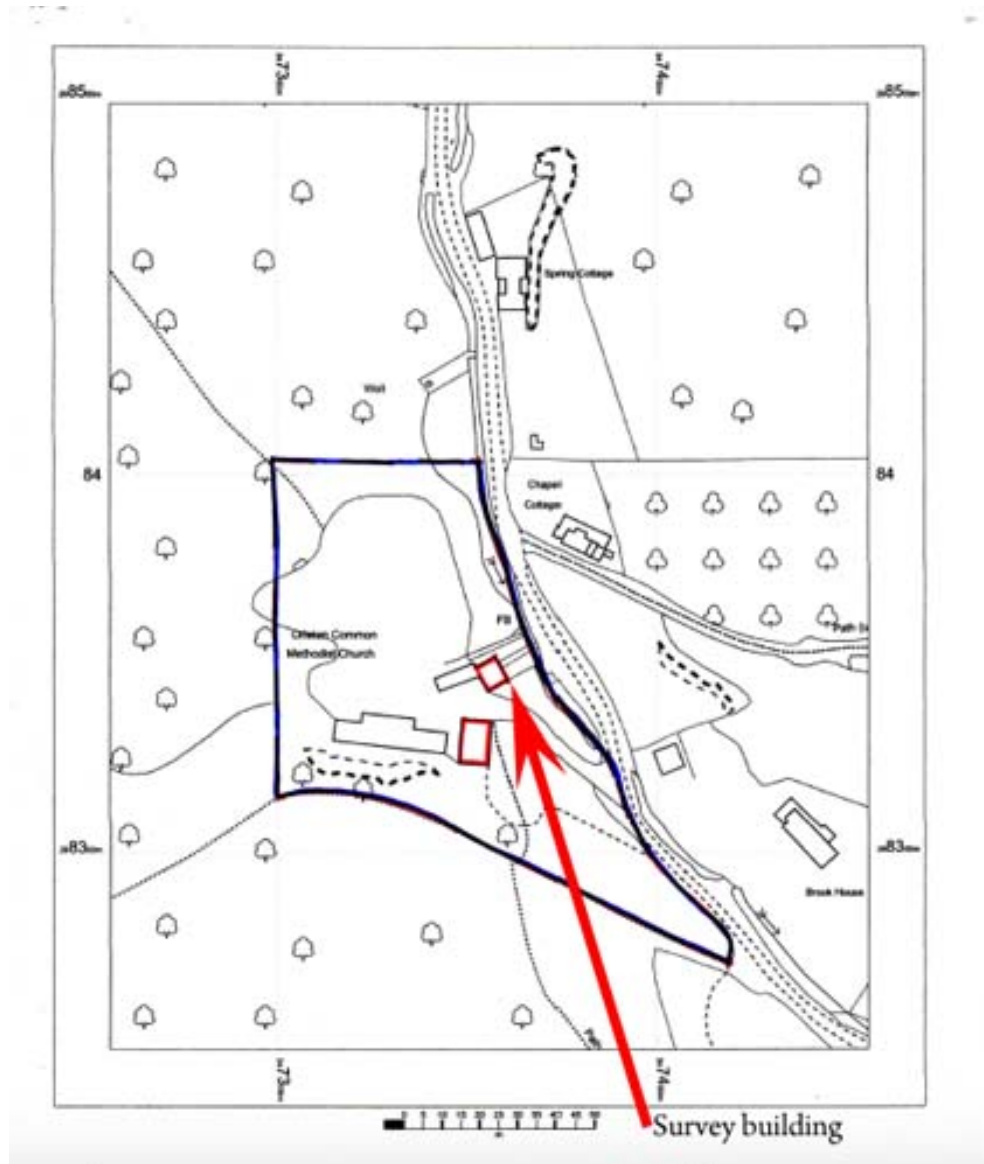


info@faunaforest.co.uk
www.faunaforest.co.uk



fauna forest ecology ltd

Plate 9: shows map of local area including survey building



Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk



9. References

Hundt L. (2016) Bat Survey Good Practice Guidelines 3rd Edition Bat Conservation Trust

Harris S and Yalden DW (Eds) (2008) Mammals of the British Isles: Handbook, 4th Edition Mammal Society

National Biodiversity Network website: <http://www.nbn.org.uk/>

Magic Information: <http://magic.defra.gov.uk/>

.

Fauna Forest Ecology Limited
Registered office: 20 Linacre Way, Park Hall, Stoke-on-Trent, Staffordshire, ST3 5SY
Company number, registered in England: 1018420

Tel: 01782 326859 Mob: 07917765464



info@faunaforest.co.uk
www.faunaforest.co.uk