absolute ecology LLP wildlife surveys

# Preliminary Roost Assessment for Bats & Birds

**Location: Garden House Farm, Buxton**

**Author: Matthew James Haydock**

**Date: 3rd December 2013**

## Notice to Readers

This report has been prepared by Absolute Ecology LLP with all reasonable skill, care and diligence, within the terms of the contract with the client. The actions of the surveyor on site and during the production of the report were undertaken in accordance with the Code of Professional Conduct for the chartered Institute of Ecology and Environmental Management (www.cieem.org.uk).

# Executive Summary

Absolute Ecology LLP was commissioned to undertake a Preliminary Roost Assessment for the bat roost potential at a site known as Garden House Farm, Tongue Lane, Buxton, SK17 7PA

The Storage barn and redundant garage was considered to have low potential to support roosting bats, due to the low roosting opportunities such as crevices and given the amount of day light and micro climate variations the two building would deem unsuitable for bats. During the inspection no evidence of bats was identified, it is therefore considered due to the described, no further bat survey is considered necessary. The building may be demolished as planned.

The farm house which will be going under a separate planning application to the above buildings, the farmhouse provided constraints such the inspection of crevices particularly between the roofing tiles and the felt, crevices within the stone work within the roof voids also the soffits showed crevices which no inspection could be conducted. Due to the constraints identified it cannot be concluded that bats are present or absence, it would therefore be required to carry out at least two activity surveys either one dusk and one dawn or a dusk emergence and dawn re-entry survey within one 24 hour period which classes as one survey visit. Within the appropriate season May to September (June to August being optimal).

No redundant nests were identified either in the Storage barn and redundant garage or farmhouse therefore no impact towards birds are envisaged.

# Contents

# 1. Introduction

## 1.1. Site Description

Absolute Ecology was commissioned to undertake a Preliminary Roost Assessment for the bat roost potential at a site known as Garden House Farm, Tongue Lane, Buxton, SK17 7PA

## 1.2. Proposed Works

It is proposed that the existing farm house and associated outbuildings will be demolished and replace with new dwellings.

## 1.3. Aims of the Survey

1.3.1 The aims of the Preliminary Roost Assessment is to provide an ecological evaluation of the following species within the proposed application area:

| Bats |
|---|
| • Probability of bats and their roost sites being present at the proposed re/development site. |
| • To assess the roost status. |
| • To assess suitable food resources and habitat requirements. |
| • If a roost site is found, to provide an impact assessment. |

**Table 1.** Aims of survey in relation to bats.

1.3.2 A bat roost is interpreted as 'any structure or place, which any wild bat uses for shelter or protection'. Bats tend to show a high fidelity to roosts. Subsequently, legal opinion regards a roost to be protected whether or not the bats are present at the time. There are many types of roost used by temperate bats during their annual cycle: Any structures found having evidence of bats will be further evaluated to assess which of the following roost categories may be present onsite (if any):

| Status | Description |
|---|---|
| **Maternity / Nursery Roost** | *used by breeding bats, where pups are born and raised to independence (Anecdotal evidence may support this prospect despite sub-optimal survey period).* |
| **Hibernation Site** | *where bats may be found during the winter. (This is assessed within the context of this report).* |
| **Daytime Summer Roost** | *used by males and/or non-breeding females (Seasonal limitations prevent robust analysis of this).* |
| **Night Roost** | *where bats rest between feeding bouts during the night but are rarely present during the day.* |

| | |
|---|---|
| **Feeding Roost** | *where bats temporarily utilize feeding perches and stations to eat an item of prey.* |
| **Transitional (or Swarming) Site** | *where bats may be present during the spring or autumn (This can not be assessed within the context of this report).* |

**Table 2.** Bat roost status definitions

| Birds |
|---|
| • Establish if birds are using the site. |
| • Locate nest sites, if present. |
| • Assess what types of activities were shown within the redevelopment site. |
| • Assess suitable food resources and habitat requirements. |
| • Provide an impact assessment, if nests are found. |

**Table 3.** Aims of survey in relation to birds.

| Barn Owl (*Tyto alba)* |
|---|
| • Establish presence onsite. |
| • Establish potential nest sites (PNS). |
| • Locate any active roost sites (ARS). |
| • Locate any temporary roost sites (TRS) |
| • Assess potential feeding and dispersal habitats (PFH) |
| • Provide an impact assessment, should barn owl(s) be present |

**Table 4.** Aims of survey in relation to Barn Owl.

1.3.2 Assessment also considers potential effects on valued ecological receptors (VERs) and zones of influence (ZoI) during pre and post development, both onsite and off- site. The term Zone of Influence is used to describe the geographic extent of potential impacts of a proposed development. Should a likely significance of negative impacts be identified, further surveys, mitigation and enhancement measures will then be determined accordingly; to prevent, offset or reduce the degree of impact that may occur should development commence.

1.3.3 Sshould bats be present or evidence of bats identified onsite or that constraints are identified during the Preliminary Roost Assessment, then further survey would be required, if bat are identified then a European Protected Species (EPS) development license issued by Natural England (NE) may be required prior to any works taking place. If required, further presence/absence survey should be undertaken and a mitigation strategy be implemented with Natural England and the Local Planning Authority. Should no further surveying effort be considered, then the PEA report will include full justification and evaluation.

# 2. Methods

## 2.1. Summary of Survey Methods

All bat species resident in the UK have been recorded using trees, buildings and built structures, e.g. bridges, at some time during the year (Bat Conservation Trust, 2007 2nd edition 2012). The buildings were inspected externally and internally, where access was available, for signs of bat activity. These typically include bat presence, droppings, feeding remains, urine stains and grease marks. Notes were made on the following in accordance with the guidelines published by the BCT (2007 2nd edition 2012) for the surveying of buildings and built structures:

- Type and age of building
- Type of construction
- Presence of potential roost features, e.g. hanging tiles, raised tiles, roof voids
- Information or evidence of work having been undertaken that could affect use of the structure by bats
- Amount and location of evidence of bats such as presence of live or dead bats, droppings, grease marks, urine stains, characteristic smell of bats.

In the absence of any evidence, trees and structures have been assigned a rating of suitability from negligible to high potential for supporting bats. The rating is based on the location of the structure in the surrounding landscape, the number and type of features suitable for use by bats and the surveyor's experience. For example, a structure with a high level of regular disturbance and few opportunities for access by bats that is in a highly urbanised area with few or no mature trees, parkland, woodland or wetland would have negligible potential. Conversely, a pre-20th-century or early 20th-century building with many features suitable for use by bats close to good foraging habitat would have high potential.

Survey methodology also utilized a number of passive monitoring techniques including an infra-red night-vision camera (XLT Bushnell Trophy CamTM: USA) to qualitatively record any evidence of bat activity inside the building during surveying periods. Further equipment included a NVMT-12x24 night vision scope (Yukon: USA), a SeeSnake 2 video endoscope, a GPS eTrex Venture HC, a hand net and a CB2 Clubman Deluxe high-power lamp with filter.

## 2.2. Pre-Survey Data Search

Ecological data searches supplied by Derbyshire Biological Record Centre (DBRC) were acquired to establish whether any notable, protected bat or bird species have been recorded within a 2 km radius of the proposed development area. Furthermore, a desktop study of the area

using online resources was undertaken independently to corroborate the current overview of the site and its importance in the landscape. A number of electronic sources were consulted, including www.magic.gov.uk, www.naturalengland.org.uk and Google Earth.

## 2.3. Surveyor Information

**Surveyor 1**

Matthew Haydock – HND, ND, MIEEM, Natural England Bat Survey Class Licence CL18, Registration Number CLS01637. Matthew is an ecologist with four years' experience of environmental consultancy work. He holds a HND in Environmental Management with distinction. Matthew is an experienced bat surveyor with competency in activity surveys, dawn and dusk bat roost assessments, daytime surveys for bat field signs, assessments of trees as potential bat roosts and the production of reports providing advice on best practice, mitigation and compensation works relating to bats as may be required. Matthew holds a Natural England and Countryside Council for Wales licence, since 1997, to disturb bats for the purposes of science and education or conservation and has held Development Licences to permit development works affecting bats. Matthew has been an active bat group worker with the Staffordshire Bat Group since 1997, conducting various surveys throughout Staffordshire and Derbyshire. He also works alongside the Bat Conservation Trust with various projects such as the National Bat Monitoring Project, and is now a corporate member of the Bat Conservation

## 2.4 Field Surveys

2.4.1. Habitat Survey

No information has been received from the client with regards to any previous ecological habitat survey work on the site.

2.4.2. Roost Surveys

Equipment used to aid the survey included low and high-powered torches, ladders, binoculars and an endoscope.

A preliminary bat and bird roost assessment of the buildings and structures was undertaken on 2nd December 2013. Such scoping exercises can be undertaken throughout the year. Other than when assessing trees, environmental factors such as the weather do not have an impact upon the overall assessment survey results (see Table 5).

**Table 5.** Annual survey optimality for bats.

| Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Inspection of hibernation roosts – semi-optimal survey period | | | Limited activity – sub-optimal for surveys | Summer roost emergence & re-entry surveys – optimal survey period | | | | | Limited activity – sub-optimal survey period | Inspection of hibernation roosts – semi-optimal survey period | |
| Internal roost surveys are possible/trees are best surveyed during winter | | | | | | | | | | | |

The survey focused predominantly on the buildings for redevelopment under the current planning application, with additional effort being given to the rear elevations of the main residential dwelling, within the zone of influence. Trees on site were assessed during a less than optimal survey period, although all trees are intended to be retained within the application area. The external inspection incorporated visual assessment with the use of binoculars, torch, endoscope and ladders in full daylight to ascertain the following:

- Condition of roof, i.e. missing or raised roof tiles.
- Condition of windows and doors, i.e. broken panes.
- Potential ingression points around ridges and apex of the buildings.
- Any anecdotal evidence of bats, i.e. droppings, grease marks, feeding remains.
- Any evidence of birds, i.e. nest material, droppings.

The external inspection incorporated visual assessment with the use of torch, endoscope and ladders to ascertain the following:

- Any potential internal roost features, i.e. non-illuminated areas, joints, crevices, beams and cavities.
- To locate potential roost/nest sites.
- To listen for any bats and birds.
- To examine floors, walls and structural elements for anecdotal evidence, i.e. droppings, urine stains, corpses and feeding remains.

In the absence of any evidence, structures have been assigned a rating of suitability from negligible to high potential for supporting bats. The rating is based on the location of the structure in the surrounding landscape, the number and type of features suitable for use by bats and the surveyor's experience. For example, a structure with a high level of regular disturbance and few opportunities for access by bats that is in a highly urbanised area with few or no mature trees, parkland, woodland or wetland would have negligible potential.

Conversely, a pre-20th-century or early 20th-century building with many features suitable for use by bats close to good foraging habitat would have high potential.

# 3. Results

## 3.1. Pre-Survey Data Search

### 3.1.1. Designated Sites

Desk-top study of the area revealed that there are no protected sites within the immediate vicinity but that there is a Site of Special Scientific Interest – the Wye Valley – approximately 500metres to the east and south-east.

### 3.1.2. Protected Species.

Seven British bat species are currently given UK BAP (2007) Priority Species Status: Eleven of the seventeen resident UK bat species occur in Derbyshire. Derbyshire Ecological Records show three UK BAP species being recorded within 2km of the proposed application area.

| UKBAP | Common name | Species | County records within 2km |
|---|---|---|---|
| ☑ | Brown long-eared bat | *Plecotus auritus* | ☒ |
| ☑ | Barbastelle bat | *Barbastella barbastellus* | ☒ |
| ☑ | Bechstein's bat | *Myotis bechsteinii* | ☒ |
| ☑ | Noctule | *Nyctalus noctula* | ☒ |
| ☑ | Greater horseshoe bat | *Rhinolophus ferrumequinum* | ☒ |
| ☑ | Lesser horseshoe bat | *Rhinolophus hipposideros* | ☒ |
| ☑ | Soprano pipistrelle | *Pipistrellus pygmaeus* | ☑ |

UKBAP Bat species recorded within Derbyshire.

A further single bat species that are not currently given UK BAP consideration are also recorded within the county.

| UKBAP | Common name | Species | Recorded within the county |
|---|---|---|---|
| ☒ | Common pipistrelle | *Pipistrellus pipistrellus* | ☑ |

Non UKBAP Bat species recorded within Derbyshire.

Derbyshire Ecological Records show no records of Barn Owl within a 2km radius of the application area.

## 3.2. Field Surveys

3.2.1. Habitat Description

The site is situated on the edge of the built-up area with houses to the west and north; industrial buildings to the north-east and a farm and limestone pasture fields divided by stone walls to the south, south-east and to the east. Four active quarries lie along the valley of Lower Carboniferous limestone and Upper Carboniferous shale, sandstone and gritstone beds. The remainder of the surrounding environment comprises mixed-use agricultural land and scattered trees. Field boundaries are generally limestone walls rather than hedgerows, which are characteristic of the Peak District. The surrounding landscape would appear to provide a range of suitable habitat for local bat populations.

3.2.2. Roost Surveys

**Building 1**

The building, which is located is the east of the site, is a two-storey high, pitched-roof, industrial style building constructed with approximately 2.5 metre high walls with concrete block and corrugated fibre sheeting walls and a corrugated sheeting roof. There are no windows in the building and there only doors (2) are on the front (south-east) side of the building

Within the building there is a small entrance hall and two large rooms on the ground floor; one of which is used as a workshop and storeroom an the other (the western) is used as a store. There is also a first floor space or “room” in the north-eastern corner of the building reached by stair from the eastern ground floor room. In the south-east of the building part of the eastern ground floor area is roofed over with thin sheets at first floor level. There are two roof lights on either side of the building which provides a good level of natural lighting inside the building.

**Farmhouse Building 2 (This will be a part of a separate planning application)**

The redundant dwelling is an original two-storey stone construction, with a gable end

aligned north to south-west. The redundant dwelling is considered to date from the 19th century. The stone construction of the building showed no crevices within the stone work which bats could utilize to gain access to the interior. The roof areas of the dwelling showed raised and dislodged slated tiles, which would provide potential egress points for bats to climb under, the soffits did provide some crevices that would be suitable for bats or birds to climb into but due to the height this could not be inspected. All windows and the door is intact, providing little potential for bats or birds to gain access.

The interior of the building provided two roof voids. The first roof void is within the main area of the house, the roof spaces appeared to be well sealed, with the exception of small gaps at the top of both gable ends these were investigated with a use of an endoscope to ascertain any evidence of bat activity the endoscope inspection found no evidence of bat activity. The tiles on the house did provide potential entry points for bats to enter and roost between the tiles and roof lining these could not be inspected. The roof void measurements were width 7meter, length 9meter and height 2meter which would be suitable for pre-flight activity from species such as Brown Long-eared.

The second roof void is on the lower level of the house this roof void mimics the main roof void with the exception of the size, the inspection found no evidence of bat activity though the constrain was between the roofing tiles and the felting which could not be fully inspected with confidence to confirm a absence.

**Other Buildings**

The smaller buildings on the site – pre-fabricated garage–.are situated in the centre of the

site which is in a poor –condition providing little opportunity for roosting bats also given the light intensity which bats find less favourable and the open doors, windows and missing panelling of the buildings, this would provide a constant changing micro-climate in which case would suggest a less favourable for roosting bats as they prefer a more stable micro-climates

# 4. Assessment

## 4.1. Constraints on Survey Information

No activity surveys were conducted due to the yearly constraint when bats are in hibernation. The farm house showed some constraints during the survey such as the roof voids such as the inspection between roofing felt an tiles also the soffits could not be fully inspected for bat activity

## 4.2. Constraints on Equipment Used

No constraints were identified during the inspection of the buildings with regards to equipment.

## 4.3. Potential Impacts of Development

4.3.1. Designated Sites

There is a Site of Special Scientific Interest – the Wye Valley which is approximately 500metres to the east and south-east. Given the physical distance and the size of the development it is considered that the works to be carried out will not have any negative impact towards the SSSI.

4.3.2. Roosts

In terms of the garden shed and agricultural building no evidence of bats or potential to support bats therefore it is considered that no potential impacts would occur towards bats or birds.

The farm house which will go under a separate application, showed potential to support bats and the inspection could not fully inspect the building therefore any impact would be unknown until relevant activity survey are conducted between May & September, June to August being optimal.

4.3.3. Foraging and Commuting Habitat

The site provides potential foraging and commuting potential due to the connecting gardens adjacent to site and hedgerows.

## 4.4. Legislation and Policy Guidance

Unlike many smaller mammals, bats have low fecundity with a long and complex life cycle, which is played out over a large spatial landscape. Bats show a strong fidelity to different types of roosts throughout their annual cycle i.e. hibernacula, maternity, bachelor, satellite roosts and feeding perches. Linear features within the landscape such as hedgerows and tree lines are often used by bats for commuting, predator avoidance and foraging. Bats are highly social animals and loss of a single habitat alone can have a serious impact on populations. The status of many bat populations is tentative, being based on relatively few

records and are highly susceptible to habitat loss and fragmentation. As such bats are given protected consideration within the following legislation and policy guidelines:

**Policy guidelines**

| | |
|---|---|
| **PAS 2010** | The published 'PAS 2010' 'Planning to halt the loss of biodiversity' which is the government's new policy aimed at all authorities and developers involved in the planning process in the UK to halt biodiversity decline by 2010 and deliver net biodiversity gains as part of the green infrastructure provisions. |
| **National Planning Policy Framework, Section 11:** | The recently published framework in 2012, replaces the previous Planning Policy Statement 9. Section 11: Conserving and enhancing the natural environment, reaffirms the Governments commitment to maintaining green belt protections and preventing urban sprawl, retains the protection of designated sites and preserves wildlife, aims to improve the quality of the natural environment, and halt declines in species and habitats, protects and enhances biodiversity and promotes wildlife corridors. |
| **Article 10 of the EC Habitats Directive:** | The published Article requires government to develop features such as 'stepping stones' on the landscape, such as clusters of ponds, tracts of rough grassland or scrubland and vegetated railway line embankments. |
| **Wildlife and Countryside Act 1981:** | All species of bat are fully protected under the Wildlife and Countryside Act 1981, the European Conservation (Natural Habitats etc.) Regulations 1994, and the Countryside and Rights of Way Act 2000. This legislation 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. |
| **Conservation of Habitats and Species Regulations (2010)** | The Conservation of Habitats and Species Regulations 2010 consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994, in respect of England and Wales. It is an offence to possess, sell or offer, or transport for sale any European species of bat or any part derived from such a species. These Regulations also remove the 'incidental result defence'. In other words, it is no longer a defence to show that the killing, capture or disturbance of a species covered by the Regulations or the destruction or damage of their breeding sites or resting places was the incidental and unavoidable result of a lawful activity. Natural England can grant European Protected Species (EPS) licences in respect of development to permit activities that would otherwise be unlawful. |
| **Natural Environment and Rural Communities Act (2006)** | Under Section 40 of the Natural Environment and Rural Communities Act (2006), public bodies, including Local and Regional Planning Authorities, have a duty to 'have regard' to the conservation of biodiversity in England when carrying out their normal functions, which includes consideration of planning applications. In compliance with Section 41 of the Act, the Secretary of State has published a list of species considered to be of principal importance for conserving biodiversity in England. This is known as The England Biodiversity List, all of which make up the UK BAP Priority Species. Regional Planning Bodies and Local Planning Authorities will use it to identify the species that should be afforded priority to maintain, restore and enhance species and habitats. |
| **Bird legislation** | Most resident nesting birds are protected under the Wildlife and Countryside Act 1981, which protects birds, nests, eggs and nestling's. Some rarer species, such as barn owls, are afforded extra protection. |

**Please note:** If bat species are present at the site, the purpose of this report will only summarize the potential requirements for a bat mitigation package or project. A separate mitigation report or project will include the necessary compensation measures to maintain the conservation status of a European Protected Species.

# 5. Recommendations and Mitigation

## 5.1. Further Surveys

No further surveys are required on the agricultural building or garage.

The farmhouse (which will be part of a separate planning application) shows potential to support bats and coupled with the various constraint were identified during the inspection, it is considered that further survey would need to be conducted in the primary timing of year when bats are active and roosts are established May to September optimal June to August the activity surveys should consist of at least two activity survey which will comprise of one dusk and one dawn or a dusk emergence and dawn re-entry survey within one 24 hour period which classes as one survey visit. If bats are identified using the building further activity surveys maybe required to obtain sufficient information for a Natural England Licence application. All surveys will be In accordance with the Bat Conservation Trust guidelines (BCT, 2012).

## 5.2. Mitigation Measures

### 5.2.1. Proposed Mitigation for Roost Sites

No mitigation is required.

Recommendations are given to enhance the site for nesting birds in future, including the provision of bird boxes.
Further details regarding birds can be found at the following websites:
http://www.rspb.org.uk/wildlife/birdguide/name/s/swallow/encouraging.aspx
http://www.rspb.org.uk/advice/helpingbirds/roofs/internal_boxes.aspx

House sparrow nest


Swallows' nest

It is recommended that the development should incorporate a number of bat boxes; where possible, developments should include small access points suitable for bat access and/or wall-mounted bat boxes (1FQ-style bat box), rendered into new buildings. Further information for

providing access to roosting bats can be found on the Bat Conservation Trust website at http://www.bats.org.uk/pages/new_build.html. It is recommended that bat boxes, such as the Schwegler 2F-DFP, are installed within trees surrounding the site.

Illustration of recommended bat 1FQ designs

Any landscaping relating to the proposed development should also take into consideration bats and other wildlife and it is recommended that only native tree and shrub species are planted. In particular, no plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 should be planted during the landscaping of this development. For further details of Schedule 9 plants, visit the Defra website: www.defra.gov.uk/wildlife-pets/non-native.

Any lighting design around the new development should be considered at an early stage. Light spill can affect the foraging and commuting strategy of many species and should be avoided onto nearby trees and hedges/shrubs, and should not exceed 200 lumens (150 watts). Any security lighting should be on a timer setting and faced down to prevent spillage onto nearby habitats. The height of any lighting columns around the development should not exceed eight metres to reduce further any ecological impact of light pollution. Low-pressure sodium lamps (SOX) fitted with hoods are recommended to direct light below the horizontal plane to minimize upward light spill.

#### 5.2.2. Proposed Mitigation for Foraging and Commuting Habitat

No loss of foraging or commuting habitat will occur as a result of the development.

## 6. Summary

The garage and associated storage building showed limiting potential due to the lack of roosting opportunities and environmental variables, from this evidence it is concluded that the two buildings can be demolished as planned.

The farmhouse will be going under a separate planning application therefore not constraining the above buildings planning application. The farmhouse could not be fully inspected and therefore cannot rule out bat activity, under the recommendations it is considered that further surveys will be required before a planning application can be made on the farmhouse.

No redundant bird nests were identified therefor no impact is envisaged.

# 7. References

Bat Conservation Trust (2007). *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust: London.

BSBI (2008). *BSBI 2007 List.* [Online]. Available at: http://www.bsbi.org.uk/html/database.html [accessed on 20th October 2010].

*The Conservation of Habitats and Species Regulations 2010*. SI 2010/490.

*The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007*. SI 2007/1843, London: HMSO.

*Countryside and Rights of Way Act 2000* (c.37). London: HMSO.

Office of the Deputy Prime Minister (2005) *Planning Policy Statement 9: Biodiversity and Geological Conservation*. The Stationery Office, Norwich.

UK Biodiversity Action Plan (2007). *UK List of Priority Species.* Joint Nature Conservation Committee. [Online]. Available at: http://www.ukbap.org.uk/NewPriorityList.aspx [accessed on 20th October 2010].

Biodiversity Action Reporting System (2010). *Biodiversity Action in Staffordshire.* BARS. [Online]. Available at: http://ukbap-reporting.org.uk/plans/map_county.asp?X=%7BD7D87E4F%2D9520%2D48D6%2D93E0%2DD2698BA05B9D%7D&CTRY=%7B7C884413%2D1AC7%2D48B6%2DADCD%2D23CBA1482CD6%7D&WES= [accessed on 20th October 2010].

Wildlife and Countryside Act 1981 (and amendments) (c.69). London: HMSO.

# Appendix 1 Pre-Survey Data Search


**Produced for**
**Absolute Ecology**
**by Derbyshire Wildlife Trust**
**6 December 2013**

Derbyshire Wildlife Trust


GENERAL KEY TO GIS MAPS
NB Not all these symbols may appear on the map supplied
otter (BAP) record
badger record (confidential)
fresh water crayfish
BAP great crested newt with 500m buffer zone
bat roost
water vole (BAP) record
BAP bird record
killarney fern
Derbyshire Red Data Book Plant Species
BAP mammal record
BAP reptiles
BAP bumblebee
BAP beetle
BAP butterfly record
BAP moth record
BAP fish record
toad record or toad crossing
swift
veteran trees
native black poplar record
species rich hedgerow
Local Wildlife Site
potential Local Wildlife Site
Semi Natural Grassland
DWT nature reserve
other recorded site of interest
SSSI
SAC
SPA
National Nature Reserve
LNR
RIGS (Regionally Important Geological Sites)
Ancient Woodland from Ancient Woodland Inventory
Ancient semi-natural broad-leaved woodland
Plantation on ancient woodland site
UK BAP Priority Habitats
Lakes in Lowland Derbyshire
Lowland heathland
Mire
Reedbed
Lowland swamp and tall herb swamp
Parkland
Purple moor grass and rush pasture
Traditional orchard (not ground truthed)
Pond (not necessarily BAP habitat)
P:\GIS\KEY\Key 01112013.wor

# Appendix 2 Photographs

**Plate 1: Internal view of agricultural storage barn.**

Plate 2; showing crevice leading into the lower ground roof void indicated by the red arrow.

Plate 3: showing soffit box with crevice suitable for bat access into main roof void within the house.

Plate 4: Showing internal view of the lower ground roof void, showing tightly fitted roofing felt which could not be fully inspected.

Plate 5: Showing main roof void of the farm house.

Plate 6: Showing potential crevices which could be utilized by bats within the main roof void of the farm house.