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**Bat Emergence/Re-entry Survey at  
Manor House Farm, Troutdale**

**May/June 2016**

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MRT Ecology,  
Wayside,  
Castleton,  
Whitby,  
North Yorkshire,  
YO21 2DA



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**Survey of Farm Buildings  
at Manor House Farm, Troutsdale.**

**May/June 2016**



This report was compiled on behalf of:

**Peter Rudsdale – Architectural services**

**20 Church Street, Castleton**

**Whitby N. Yorks.**

By:

**MRT Ecology Ltd**

Surveyors:

**Dave Thew, Mark Tarrant**

**Christine Tarrant and Ben Adamson**

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*The information contained within this document is based upon MRT Ecology Ltd applying skill and diligence in conjunction with current legislation and good survey practice; however no site investigation can ensure complete assessment or prediction of wild animal behaviour in the absence of unequivocal evidence.*



## Contents

- 1 Introduction**
  - Background
  - Stable Block
  - Adjoining Building
  - Pre-existing Data on bats in the Area
- 2 Survey Methodology**
  - Emergence/Re-entry Surveys
  - Survey Limitations
- 3 Desk Study Results and Evaluation**
  - Building Assessment
  - Stable Block
  - Adjoining Building
- 4 Evaluation**
  - Legislation
  - Planning Policy
  - Impact Assessment
- 5 Required Actions**
  - Timing of Works
  - Avoidance/Retention
  - Mitigation and Enhancement
  - Soft Strip Protocol
- 6 Summary**

### Appendices

- Appendix 1: Location Plan
- Appendix 2: Site Plan
- Appendix 3: Stable Plan and Elevations as Existing
- Appendix 4: Site Photos
- Appendix 5: Bat Activity and Survey Results
- Appendix 6: Bat Access Tiles





## 1 Introduction

### Background

MRT Ecology Ltd was commissioned by Peter Rudsdale Architectural Services of Castleton, Whitby, to conduct a preliminary bat survey of a dis-used stable block/cow byre at Manor House Farm, Snainton Lane, Troutdale. The building is to be converted into a residential unit/holiday let.

The preliminary bat survey found evidence of bats using the adjoining storerooms and the area immediately outside the building. Following current published guidelines by the Bat Conservation Trust (2016) and informed by the preliminary survey and subsequent comments by the Yorkshire Wildlife trust planning officer, it was determined that emergence/re-entry surveys would be required to determine the likely roost status and the potential impacts before suitable mitigation could be recommended.

This report details bat record data obtained from a desk study and the results of emergence/re-entry surveys and provides an impact assessment for the development on bats, defines necessary mitigation and assess' the requirement for a Protected Species Licence.

### Survey Site Description

The survey site consists of a dis-used stable block/cow byre (Appendix 4, Photo 1) and adjoining stores (Appendix 4, Photo 2). The buildings are located within Manor House Farm complex, on Snainton Lane, Troutdale as shown in appendix 1. A number of buildings within the farm complex have already been converted in to holiday accommodation, with the remaining buildings being a mixture of agricultural buildings of varying construction.

Appendix 2 shows the location of the building within the complex. The building sits on the south eastern side of the farm complex, adjacent to an unclassified road. There are modern cattle sheds to the north and west, with an Atcost cattle shed adjoining the rear wall of the building. The main farm house, split into holiday lets, sits to the south, with rough grassland to the east. The surrounding farmland is used mostly for grazing of



cattle and production of silage. Field boundaries are predominately Hawthorn hedges and stock fencing. There are occasional rows of mature trees on the field boundaries.

There are several small wooded areas within close proximity of the site and a large conifer plantation within 200m of the west of the site. Troutsdale Beck is within 550m of the east of the site. Hedgerows containing mature trees provided connectivity with offsite habitats.

### **Disused Stable Block/Cow Byre.**

The building is constructed of dressed sandstone with a felt lined, close fitting, clay pantile roof that is in generally good repair however there are some gaps caused by raised and broken tiles (Appendix 4, photos 3 and 4). The ridge tiles are well fitted and the mortar is intact for the length of the ridge. The current condition of the roof suggests it has been reroofed at some point in the past.

The south east aspect of the building is in a good state of repair, with very little damage to the mortar. There are 4 doorways into the building, each of which has a poorly fitting door and doorframe, with some large gaps between the wood and stone work (Appendix 4, photo 5). There is also a number of ventilation pipes (Appendix 4, Photo 6) just below the eaves and a six pane window, two of the panes are missing.

The gable end wall is in much poorer condition, with some large cracks developing (Appendix 4, photos 7 and 8); the northern corner of the building has the largest cracks with some areas of the wall failing as shown in appendix 4, photos 9 and 10. The rear wall of the building is generally in good condition, however there are some places where the mortar has failed and stones have collapsed (Appendix 4, photo 11).

The interior of the stable block/cow byre has been split in to three different rooms. The first room has been used as a kennel in the recent past. The walls are painted white and there is a concrete floor. There is a window aperture with a close fitting grill in the apex wall (Appendix 4, photo 12) and an aperture through the internal wall the adjacent room (Appendix 4, photo 13). There are some large cracks and gaps at the joints between the external and internal walls (Appendix 4, photo 14 and 15). The room is open to the sarking, with some holes through to the tiles (Appendix 4, photo 16)



The second room is similar to the first, with painted white walls, apertures through to the adjacent rooms and cracks between the internal and external walls (Appendix 4, photo 17). The floor is concrete however it is covered in leaked effluent from the adjacent cow shed. There are also some holes in the sarking in this room (Appendix 4, photo 18).

The third area is the largest space within the structure. It is very similar in nature to the other two rooms, with white painted walls and a concrete floor, however the lower area of the walls has been rendered in the past (Appendix 4, Photo 19). This room has one window with two missing panes and also contains a window aperture on the gable end that is fitted with a close gapped grill.

### **Adjoining Store Rooms**

Adjoining the stable block/cow byre is a series of three store rooms (Appendix 4, Photo 2). These rooms were also given a full inspection. The building is of a similar construction to the main building; dressed sandstone, with a clay pantile roof.

The roof is in generally good condition; however there are some occasional lifted and broken tiles (Appendix 4, Photo 20). The stone work is in good repair the pointing is all sound (Appendix 4, photo 21). The rear of the building is in slightly poorer condition, with some degradation to the mortar and the lower three rows of tiles on the roof being displaced (Appendix 4, photo 22).

The first of the store rooms contains garden machinery and tools. The walls are whitewashed and in generally good repair. There are some close gaps formed by rafters and the gable end wall (Appendix 4, photo 23).

The second store room is disused and mostly contains old furniture and accumulated debris (Appendix 4, photo 24).

The final store room is used for the storage of game bird feeders, but is currently mostly empty (Appendix 4, photo 25).

### **Pre-existing Data on bats in the area**

The North Yorkshire Bat Group was asked to provide data regarding existing records of bats in the area. There were few records of relevance to the site or the local area. The closest is a record dating to 1978 of a Pipistrelle species at Manor House Farm. The



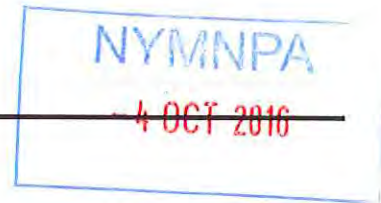
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nearest recorded bat roost was a Pipistrelle species summer roost, 1200m north east of the site, there was also an associated record of Brown Long-eared Bat (*Plectotus auritus*) at the same site.

18 bat species are known to occur in the UK, 17 of which breed here. 10 species of bat are currently known to occur in the North York Moors National Park, and all are covered by the North York Moors National Park Authority Bat Species Action Plan (2013-2017). The 10 species known to occur locally are the: Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Nathusius' Pipistrelle (*Pipistrellus nathusii*), Noctule (*Nyctalus noctula*), Daubentons (*Myotis daubentonii*) and Brown Long-eared (*Plectotus auritus*). A further four species are known to occur in the National Park; Whiskered (*Myotis mystacinus*), Brandts (*Myotis brandtii*), Natterers (*Myotis nattereri*) and, a recent addition to the UK bat list, the Alcathe bat (*Myotis alcathoe*).

Levels of knowledge concerning bats vary widely across the country, but it is thought that bat numbers have declined over the past century; anecdotal evidence has suggested that bats are not as common as they once were, and some research projects have helped confirmed losses. Also of relevance is the fact that the only information about bats is comparatively recent, with bats only having been surveyed for since 1981. Much of what is known about bats in the area stems from the work of the North Yorkshire Bat Group and enquiries regarding bats in and around their properties are an important source of information. It is therefore likely that species that do not use built structures, such as Daubentons, may be under recorded.





## 2 Survey Methodology

### Emergence Surveys

The bat emergence survey method is based on survey guidelines published in Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> edition) by the Bat Conservation Trust (2016).

Two dusk emergence surveys and one dawn re-entry survey were conducted using three surveyors deployed at strategic locations within the site. The evaluation of the buildings during the preliminary bat survey identified those features offering most potential for use by bats, and surveyor locations were chosen to provide full coverage of those features. Surveyor locations can be seen in appendix 5.

All three surveys were conducted by Dave Thew, an experienced, licenced bat surveyor (Class licence WML CL18 CLS01207) and Mark Tarrant an ecologist experienced in conducting bat surveys. The first dusk emergence and dawn re-entry were also attended by an assistant ecologist, Ben Adamson. The second dusk emergence survey was attended by Christine Tarrant an ecologist experienced in conducting bat surveys. Surveyors used ultrasound detectors, Batbox Duet II, to listen for bat calls whilst maintaining visual observations for emergences. In addition an Olympus Digital Recorder VN-741PC was used by the assistant ecologist to record bat calls for analysis in the office through BatScan 9.

The initial emergence survey was conducted on the 24<sup>th</sup> of May 2016 in the following conditions:

<b>Sunset</b>	21.15	<b>Time in position</b>	20.45
<b>Insect abundance</b>	Low	<b>Finish time</b>	22:45
<b>Temp at start</b>	10°C	<b>Temp at end</b>	9.5°C
<b>Precipitation</b>	Nil	<b>Wind (direction &amp; speed)</b>	N. 3
<b>Cloud cover %</b>	100		





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The dawn return survey was conducted on the 10<sup>th</sup> of June 2016 in the following conditions:

<b>Sunrise</b>	04:28	<b>Time in position</b>	02:50
<b>Insect abundance</b>	Moderate	<b>Finish time</b>	04:38
<b>Temp at start</b>	17°C	<b>Temp at end</b>	15.5°C
<b>Precipitation</b>	Nil	<b>Wind (direction &amp; speed)</b>	N. 1
<b>Cloud cover %</b>	100		

The second emergence survey was conducted on the 24<sup>th</sup> of June 2016 in the following conditions:

<b>Sunset</b>	21.39	<b>Time in position</b>	21.20
<b>Insect abundance</b>	Moderate	<b>Finish time</b>	23.10
<b>Temp at start</b>	13.5°C	<b>Temp at end</b>	11°C
<b>Precipitation</b>	Nil	<b>Wind (direction &amp; speed)</b>	W. 2
<b>Cloud cover %</b>	20		

### Survey Limitations

The results of the survey and assessment work undertaken by MRT Ecology Ltd are representative at the time of surveying. Ecological surveys are limited by factors affecting the presence/absence of plants and animals such as time of year, migration patterns, behaviour etc. Therefore the absence of evidence of any particular species should not be taken as conclusive evidence the species is not present, or will not be present in the future.

MRT Ecology Ltd cannot accept responsibility for data collected from third parties; the data held by consultees may not be exhaustive; the absence of records does not necessarily indicate absence of a species/habitat from an area but rather that these have not been recorded or are under-recorded for the search area.



- *Proposed development on land within or outside a Site of Special Scientific Interest (SSSI) likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the sites notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSI;*
- *Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;*
- *Opportunities to incorporate biodiversity in and around developments should be encouraged;*
- *Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodlands and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development clearly outweigh the loss."*

### Impact Assessment

The conversion of the building and adjoining stores to a residential unit/holiday let will necessitate the removal and replacement of the roof structure, reusing materials were possible, and the repair of the external walls in places. The removal of the roof and the repairs to the walls have the potential to remove two recorded roost sites, it will also result in bats, and birds, being excluded from the interior of the building.

The dusk emergence/dawn re-entry surveys did not identify bats using the interior of the building, however Swallow nests were identified in the adjoining stores. Swallows normally nest inside a building, attaching an open nest cup to a beam or ledge. Swallows return to the same nest site each year and valuable nesting sites will be lost through the course of the development of the building.

A large amount of foraging activity was recorded on site in two main areas, one to the south of the building in the garden of the main farmhouse and one to the north over the farmyard. There will be no impact on the foraging habitat (garden) to the south of the building. The Atcost building behind the target building is to be removed and the area



### 3 Emergence Survey Results

Full records of bat activity are provided in appendix 5, the following outlines records of emergence/re-entry and general activity across the site during survey.

#### Survey 1, Dusk Emergence Survey, 24<sup>th</sup> May 2016

Four species of bats were recorded during the survey; Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared Bat and Myotis spp.

Common Pipistrelle commuting and foraging activity accounted for approximately 90% of activity across the site, with only 1 Myotis, 2 Soprano Pipistrelle and 2 Brown Long-eared records. Appendix 5, figure 1, shows bat activity during the survey. Foraging activity is concentrated to the south of the building, in the garden behind the main farmhouse and to the north west of the building, over tall ruderals, with commuting occurring through the Atcost building adjoining to the north and, to a lesser extent, across the gravel parking area to the south.

A total of 8 Common Pipistrelle were recorded emerging from the targeted building; 1 from the eaves above the window at the northern end of the disused stable block/cow byre (Appendix 4, photo 26) and 7 from the gable wall end of the adjoining store room from beneath the 2 pan tiles on the stone buttress (Appendix 4, Photos 27 and 28).

3 common pipistrelle were also recorded emerging from the two storey stone barn on the northern edge of the gravelled parking area.

#### Survey 2, Dawn Re-entry Survey, 10<sup>th</sup> June 2016

Two species of bat were recorded during the survey; Common Pipistrelle and Myotis spp. There were also a number of bats seen that were not echo locating and could therefore not be identified.

The majority of bat activity consisted of Common Pipistrelle foraging to the north and south of the building, with one Myotis spp recorded commuting across the site, as shown in appendix 5, figure 2.

1 Common Pipistrelle was recorded returning to the eaves above the window at the northern end of the disused stable block/cow byre. No bats were recorded returning to



the adjoining store gable wall end. 6 bats were recorded returning to the gable end wall of the adjacent two storey stone barn in 5 different locations (Appendix 4, Photo 29).

### **Survey 3, Dusk Emergence Survey, 24<sup>th</sup> June 2016**

Two species of bat were recorded during the survey; Common Pipistrelle and Myotis spp.

The majority of bat activity consisted of Common Pipistrelle foraging to the north and south of the building, with one Myotis spp recorded commuting across the site as shown in appendix 5, figure 3.

One Common Pipistrelle was recorded emerging from beneath eaves above the window at the northern end of the disused stable block/cow byre. Two Common Pipistrelle were recorded emerging from the gable end wall of the adjacent two storey stone barn.

No bats were recorded emerging from the gable end wall of the adjoining stores.



## 4 Evaluation

A thorough inspection of the building during the preliminary bat survey, conducted in good conditions, resulted in evidence of occasional use by bats being found in the adjoining store rooms and the area in front of the stable block/cow byre.

Subsequent dusk emergence/dawn re-entry surveys have recorded bats making use of both the disused stables/cow byre and the adjoining store to roost and the immediately surrounding area for foraging/commuting. There was a peak count of 7 Common Pipistrelle emerging from the gable end wall of the adjoining store room on the first dusk survey on the 24<sup>th</sup> of May 2016, with no records from subsequent emergence/re-entry surveys, and a peak count of one Common Pipistrelle emerging from the main stable block on each survey visit, a single male/non breeding female roost.

In addition to the Common Pipistrelle emerging/re-entering the targeted building, records were also noted of Common Pipistrelle roosting in the adjacent two storey stone barn, with a peak count of 6 individuals returning during the dawn re-entry survey on the 10<sup>th</sup> June 2016.

The initial peak count of 7 Common Pipistrelle recorded emerging from the gable end wall of the adjoining store room and the subsequent lack of emergence/re-entry suggest that this could have been a small maternity colony that has moved on to an alternative site, or a small group of males that has since dispersed to alternative roosts. This roost was at low level next on the edge of an outside seating area for the main farmhouse. Given the lack of any subsequent emergence/re-entry behaviour at this roost and the increased number of individuals roosting in the gable end wall of the two storey stone barn, in conjunction with the potential disturbance from recreational usage of the seating area/garden by residents of the farmhouse it is most likely to have been a male roost that has since moved location to the two storey stone barn.

Feeding and commuting behaviour was observed throughout the area immediately surrounding the building; however the highest frequency of foraging behaviour was observed over the garden to the south of the building, behind the main house, and in the area immediately to the north of the building.



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The majority of activity surrounding the target building was by Common Pipistrelle, however there were also records of Soprano Pipistrelle, Brown Long-eared bat and Myotis spp., although these were predominately brief registers or commuting behaviour suggesting that these species may only be transiting through the site between roosts and foraging sites.

### Legislation

All species of bat are listed on Schedule 5 of the Wildlife and Countryside Act 1981 and as such, receive protection under section 9 of this act. This act has been amended several times, but most recently by the Countryside and Rights of Way Act (CROW) 2000, which adds an extra offence, makes species offences arrestable and increases the penalties and time limits for some prosecutions.

With respect to this act it is a criminal offence to:

- Intentionally kill, injure or take a wild bat;
- Possess or control any live or dead bat or parts derived there from;
- Transport for, or offer for sale or exchange, any live or dead bat or parts derived there from ;
- Deliberately or recklessly disturb, destroy, or obstruct access to, any place that a wild bat uses for shelter or protection.

All species of bat are also included under Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations, known as the Habitat Regulations, and as such receive protection under regulation 39.

These regulations make it an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat;
- Damage or destroy a breeding or resting site;
- Keep, transport, sell or exchange any live or dead bat

EPS licences can be granted to allow development works that would otherwise be deemed unlawful under these acts and legislations.



## Planning Policy

Planning Policy Statement (PPS) 9 – Biodiversity and Geological Conservation is the Government's policy on reconciling the potential conflicts of development and nature conservation. The principal aims of PPS 9 are as follows:

- To avoid placing damaging development on, or close to, sensitive sites;
- The protection of rare and protected species and habitats;
- Using the least sensitive areas for any necessary development; and
- Seeking to enhance nature conservation interests.

PPS 9 sets out the legislative framework for the defence of legally protected species by making protected species a material consideration for local planning authorities when considering any development proposal.

In March 2012 the National Planning Policy Framework (NPPF) replaced PPS 9 as the relevant national planning guidance in relation to ecological issues.

Paragraph 109 of NPPF states that the planning system should: *“contribute to, and enhance, the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.”*

Paragraph 117 of the National Planning Policy Framework states the planning system should: *“promote the preservation, restoration and recreation of priority habitats, ecological networks and the protection and recovery of priority species, populations, linked to national and local targets.”*

Paragraph 118 of the National Planning Policy Framework states that: *“When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:*

- *If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated or, as a last resort, compensated for, then planning permission should be refused;*



immediately surrounding the building to be landscaped as gardens, as such there will be no negative impact on the foraging habitat to the north of the building and an overall net gain in the foraging habitat as a whole.

## 5 Required Actions

No further surveys are required on the target building. Sufficient dusk emergence/dawn re-entry surveys have been conducted to identify those features being used by bats. A European Protected Species (EPS) licence will not be required as the following measures will be implemented to retain existing roosts, enhance the building for further use by bats and ensure against accidental harm/disturbance occurring to bats.

### Timing of works

Work will commence during late September/early October. Timed carefully to fall between those times of year when bats may be present in maternity roosts or beginning to seek hibernation sites, and outside the bird nesting period.

The roof will be reinstated, including provision for bats, by early March, at which point bats will begin feeding on warmer nights before females start moving into maternity roosts in April. Birds will also be excluded from the majority of the interior of the building by this point.

Any repairs to the interior of the gable end wall will also be conducted during this time to ensure that no disturbance to the roost will occur during the period that females may be using maternity roosts.

### Avoidance/Retention

The roost identified in the stone buttress on the gable end wall of the adjoining store will not be disturbed during the course of renovations. Common Pipistrelle may use a number of roost sites through the summer, with maternity colonies sometimes shifting roosts for a number of reasons, including fluctuations in temperature, stage of life cycle and levels of disturbance, however they are often loyal to the same sites for many years.

No works will be conducted on the adjacent two storey stone barn. Multiple bats were recorded emerging from the building during the course of the survey. As this building





was not the main target of the survey it is likely that those individuals recorded emerging were a small proportion of those using the structure.

Lighting will be kept at low level during the course of the construction and angled away from those areas identified as supporting bat roosts, i.e. the gable end wall on the adjoining store and the gable end wall on the two storey stone barn, to avoid disturbance of, or deterrence from, bats using the areas. Any post development outdoor lighting to remain once the building works are completed will be kept to a minimum and be at low level so as to avoid disrupting commuting and foraging behaviour across the site.

The end store room, currently host to the majority of Swallow nesting activity on site, shall not be incorporated in to the living space of the property. This area will be retained as a store room, with gaps provided above the door to allow continued access for Swallows to preferred nest sites.

### **Mitigation and Enhancement**

The repairs to the roof structure will impact upon a roost of a singular male or non-breeding female Common Pipistrelle. During the replacement of the roof a dedicated bat access point will be provided to allow continued access to the roost site. In addition a further 4 access points will be spaced along the south easterly roof slope, enhancing the building for use by bats.

The bat access points will be constructed along the design of a standard ventilation tile, without the mesh to exclude flying animals. A commercially available design is shown in appendix 6. The access points shall be placed on the second or third row of tiles up from the eaves and spaced equidistantly along the front of the main building, providing continued access to the inter tile/membrane gap.

### **Soft Strip Protocol**

During the removal of the roof a suitably experienced ecologist will be present on site to supervise the soft stripping of the structure of the roof ridge tiles, and all key features. The soft strip will be conducted under the following controls

- All contractors to be briefed prior to works in best practice methods and protocol in the event a bat is located;



- A full inspection of all features prior to works;
- Initial works on the roof to be conducted with great care. Tiles will be lifted and removed by hand. The tiles will be lifted clear using two hands, rather than lifting the front and rolling the tile backwards, which may inadvertently crush any bats sheltering beneath;
- Tiles will subsequently be checked on the underside prior to stacking as bats sometimes cling to the underside of tiles.

In the event a bat is found during the initial inspection, all works will cease until a suitable development licence can be obtained from Natural England. If a bat is found during the softstrip of the structure, the bat will be caught by hand by the ecologist, and placed in a bat box, with the entrance loosely blocked by a soft cloth to prevent it escaping. The box will then be hung in a suitable tree and the cloth will be removed at dusk allowing the bat to move off over night. All works will also cease until a suitable development licence can be obtained from Natural England.

## 6. Summary

In summary; emergence surveys have recorded bats roosting at two locations on the building to be developed and also in a number of locations on an adjacent building on site. Survey has also identified the presence of nesting swallows on site. Works can commence without an EPS licence as the following conditions will be met.

- Bat roosts will be retained on site;
- Swallow nesting sites will be retained on site
- Building will be enhanced through roost creation to encourage further use by bats;
- 'Soft strip protocol' during works on roof structure;
- Works timed to as to avoid times of year when bats may be active on site;

### Validity

This survey will remain valid for one year, however if works do not commence within this time frame (by the 7<sup>th</sup> July 2017) then further ecological surveys will be required to check for new colonization of site by protected species.



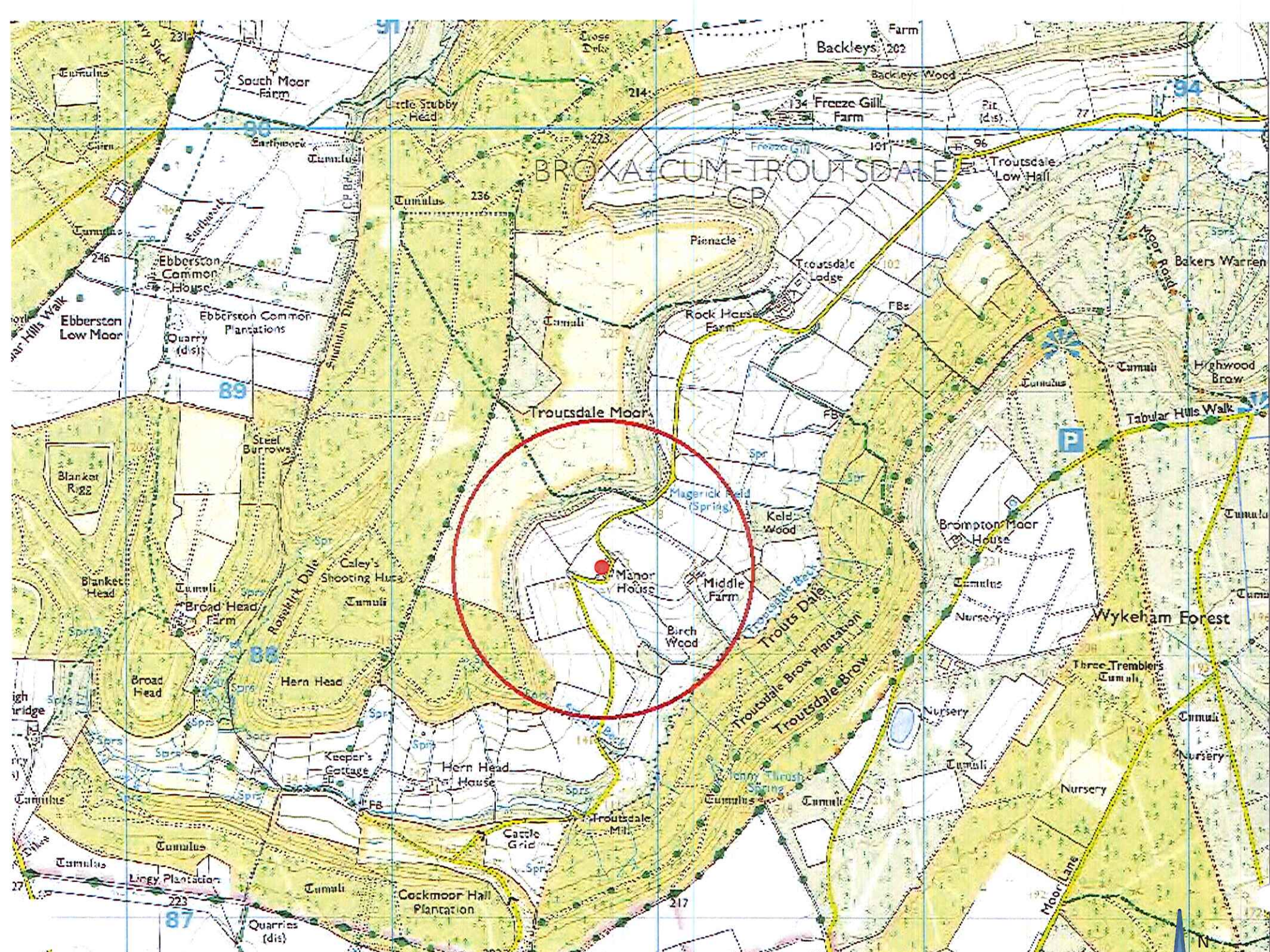
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Appendix 1

Location Plan





Site

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Title:  
Site location

Drawing Number:  
Figure 1.1



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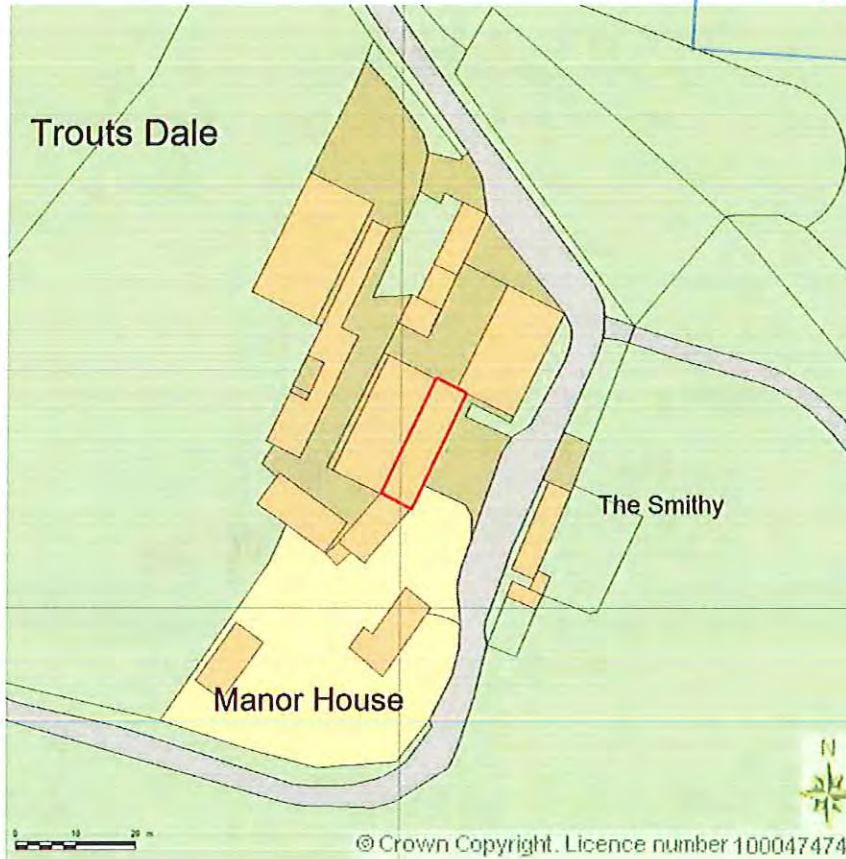
Appendix 2

Site plan

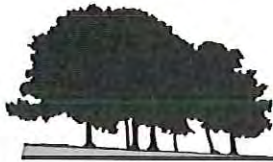


MANOR FARM, SNAINTON LANE, TROUTSDALE  
LOCATION PLAN  
SCALE 1:1250 on A4  
CENTRE COORDINATES: 491805, 488329

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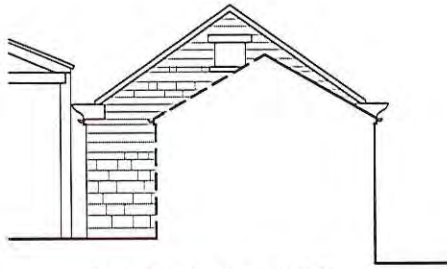
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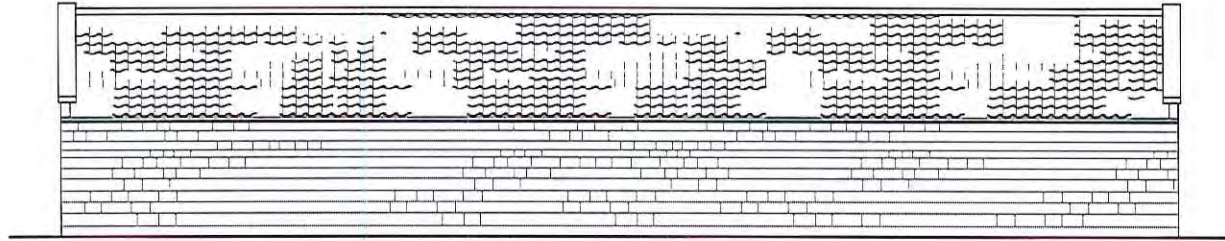
**Appendix 3**

**Stable Plan and Elevations, as Existing**

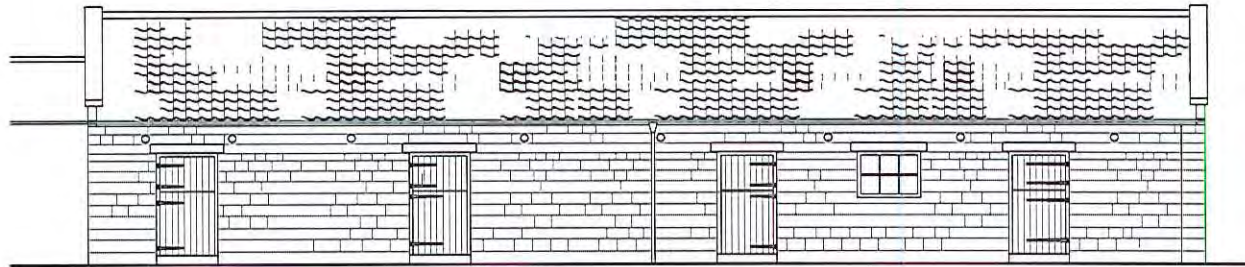




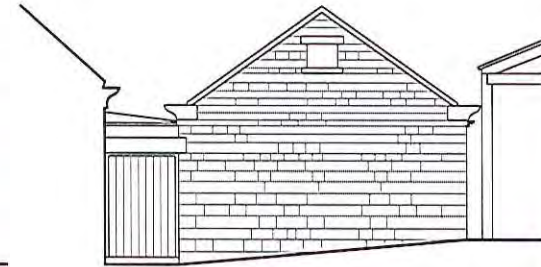
EXISTING SOUTH ELEVATION



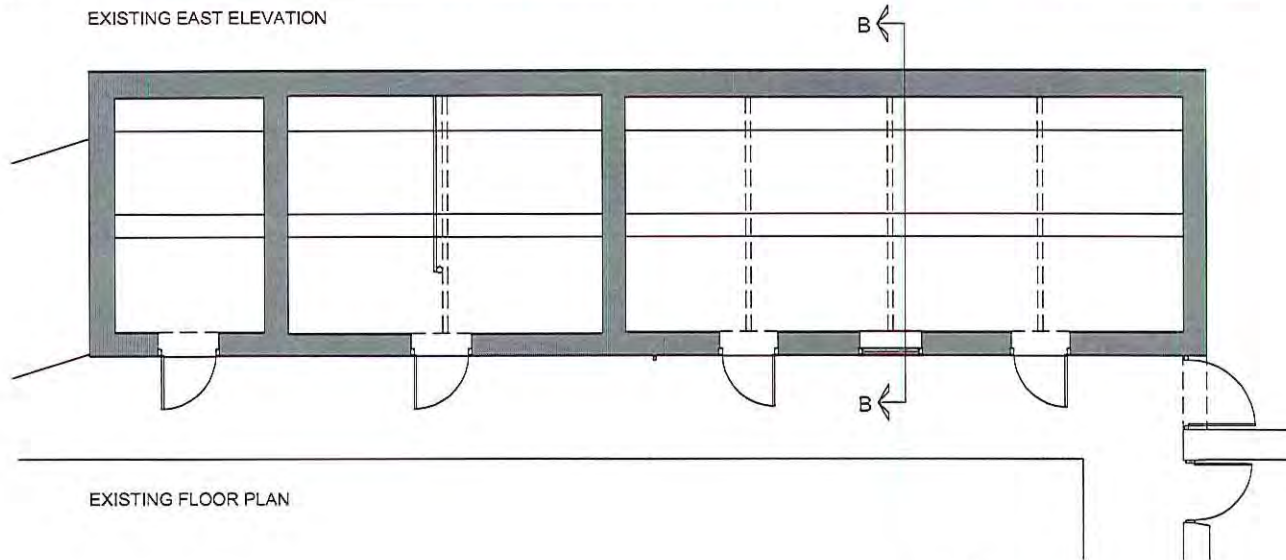
EXISTING WEST ELEVATION



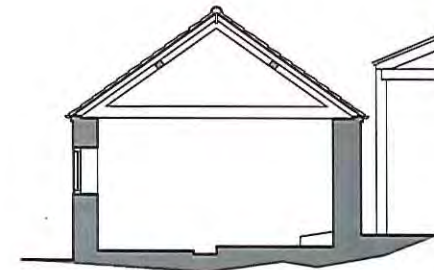
EXISTING EAST ELEVATION



EXISTING NORTH ELEVATION



EXISTING FLOOR PLAN



SECTION BB

HYMNPA  
 OCT 2016

0 1 2 3 4 5m  
 Scale 1:100 @ A3

Client Mr J Guthrie		Peter Rudsdale - Architectural Services 20 Church Street, Castleton, Whitby, North Yorkshire, YO21 2EQ
Project MANOR HOUSE FARM - Stable Conversion		
Drawing PLAN, ELEVATIONS AND SECTION AS EXISTING		
Scale 1:100 @ A3	Date 18 Dec14	Drawing No. 1424-03





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Appendix 4

Site Photos

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Photo 1: Disused Stable Block/Cow Byre



Photo 2: Adjoining Stores



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Photos 3 and 4: Photos of roof showing some raised and broken tiles, but intact ridge tiles and pointing.



Photo 5: Gaps above doorframe

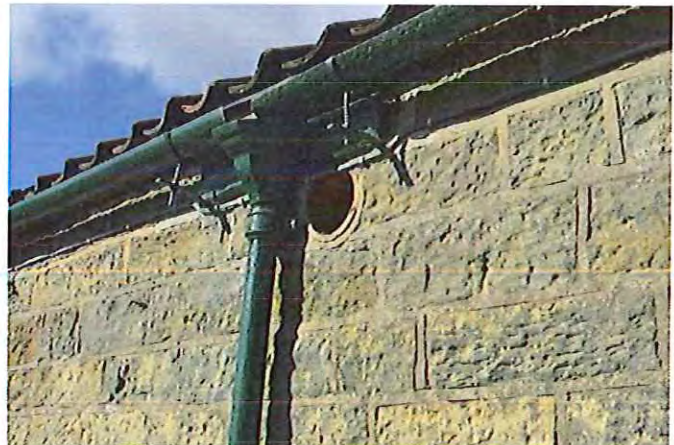


Photo 6: Ventilation holes



Photo 7 and 8: Cracks and holes in gable end wall.



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Photo 9: Poor condition of gable end wall



Photo 10: Collapsed area of wall



Photo 11: Rear wall of stable block.



Photo 12: Aperture in gable ed wall with close gapped grill.



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Photo 13: Opening through internal wall



Photo 14 and 15 Cracks between internal and external walls.



Photo 16: Hole in sarking



Photo 17: Interior of second room



Photo 18: Hole in sarking and aperture through to adjacent room.

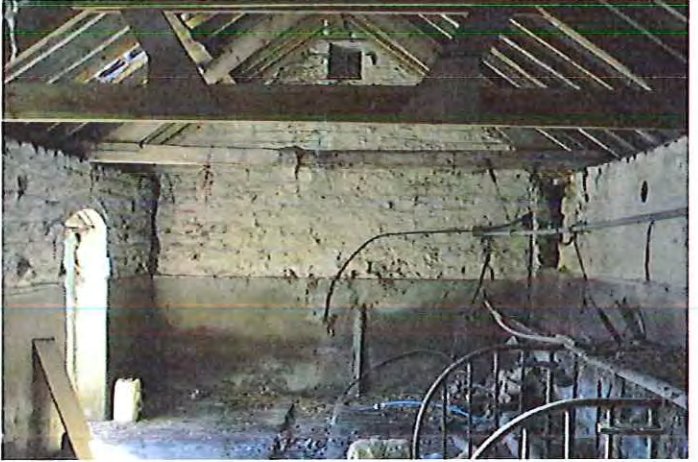


Photo 19: Interior of main area.



Photo 20: Roof of adjoining stores



Photo 21: Walls and guttering



Photo 22: Rear Wall of adjoining stores.



Photo 23: Gaps between rafter and gable end wall.



Photo 24: Workbench.

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Photo 25: 3<sup>d</sup> store room.



Photo 26: Emergence point form above window.



Photo 27: Gable end wall showing buttress topped with two pan tiles



Photo 28: Emergence point for 7 common pipistrelle.



Photo 29: Points at which bats returned during dawn survey





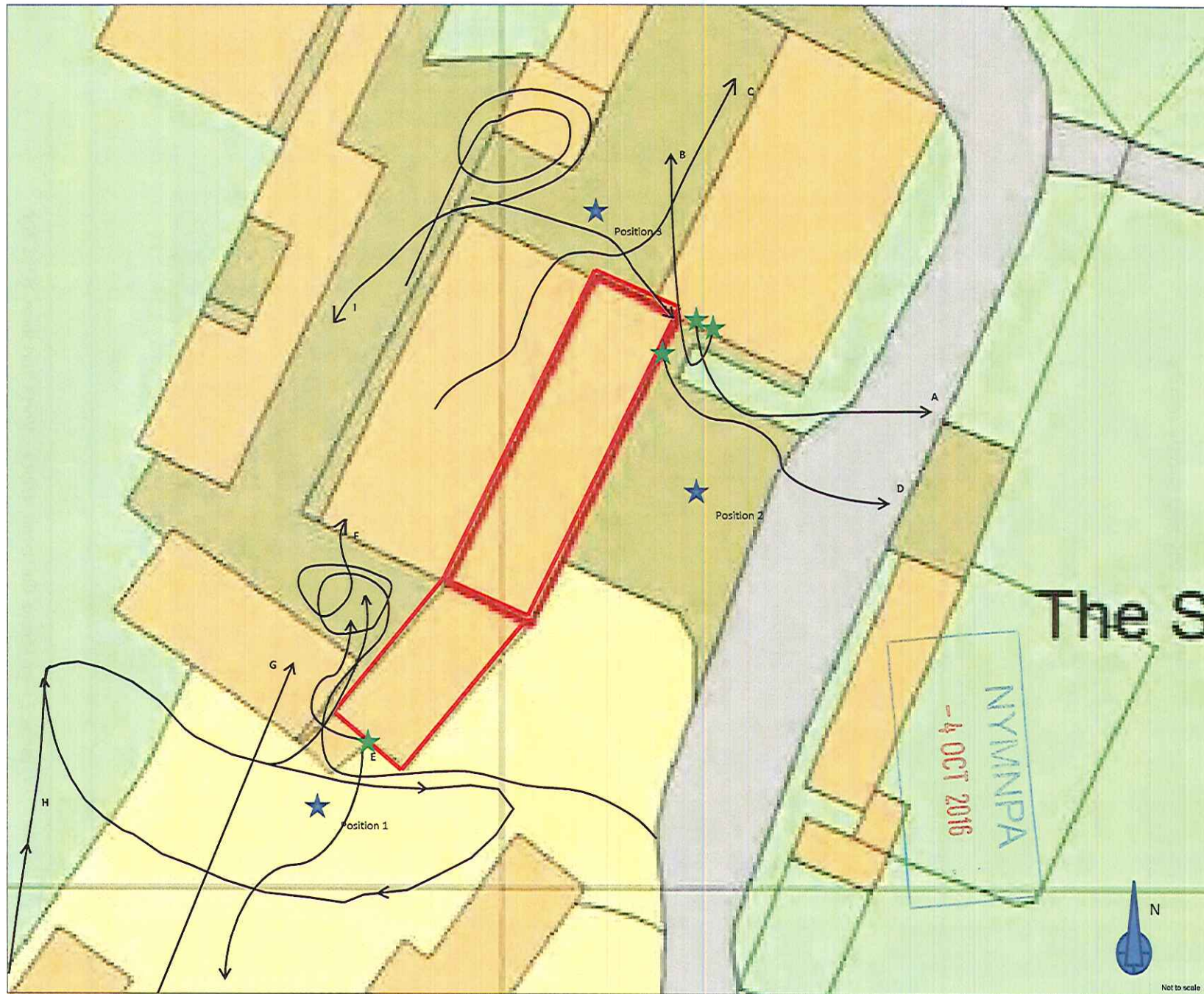
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## Appendix 5

Bat Activity and survey results



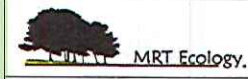


Notes:

- Target building
- ★ Surveyor Location
- ★ Emergence Location
- Bat Activity

Title  
Bat Activity, Survey 1

Drawing Number: Figure 2	Status: Final
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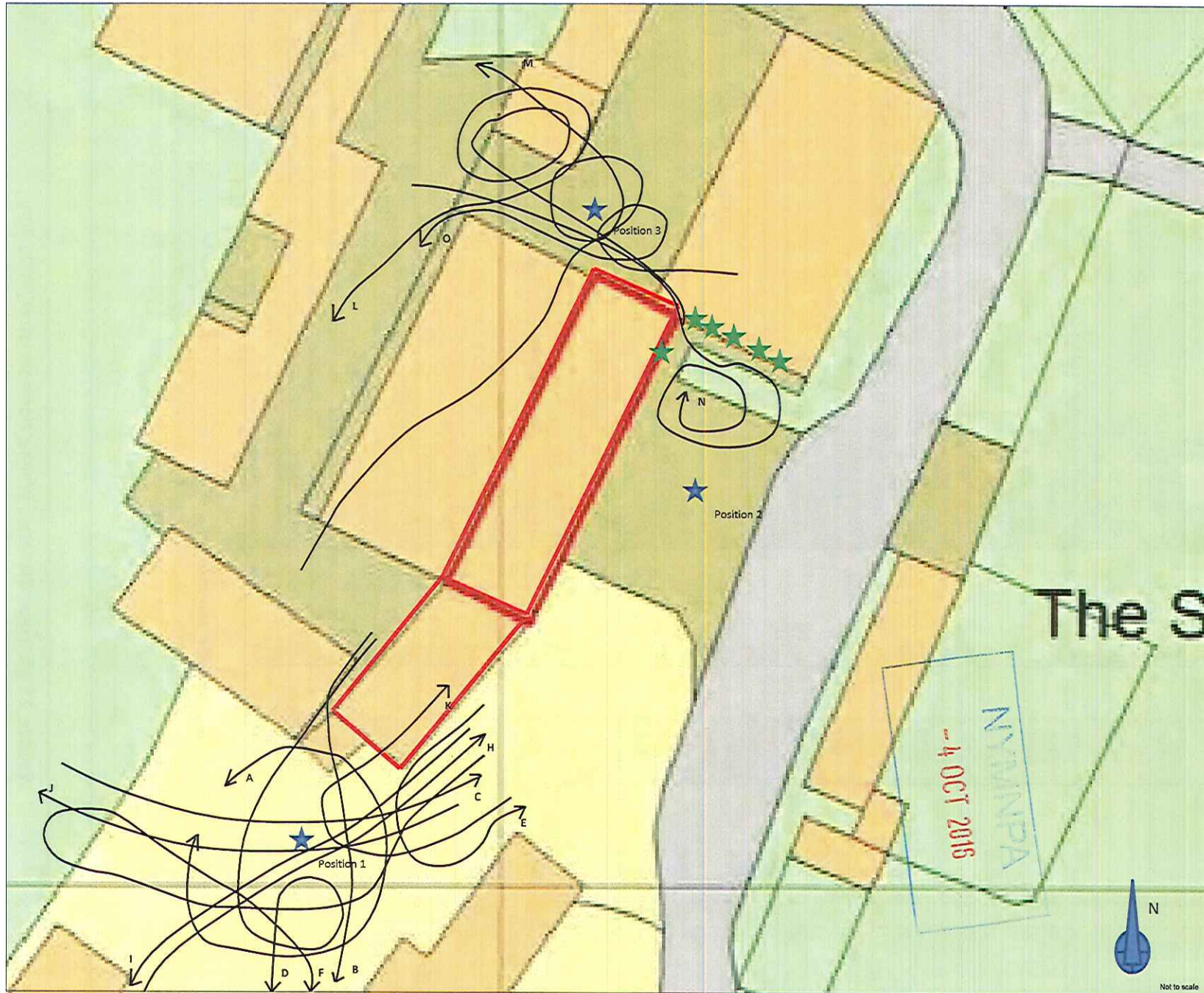
Not to scale



Time	Activity Location	Surveyor location	Surveyor	Bat species & activity
21:16	E	Position 1	MT	Emergence. 45 pip.
21:22	A	Position 2	DT	Emergence. 45 Pipistrelle from corner of the two-storey building.
21:26	E	Position 1	MT	Emergence. 3 x 45 pip
21:27	B	Position 2	DT	Emergence. Bat. Not echolocating from doorway of two-storied building.
21:27	B	Position 3	BA	Commuting. Pip 45
21:28	F	Position 1	MT	Foraging 2 x 45 pip
21:29	Unseen	Position 2	DT	45 Pipistrelle. Commuting. Short call.
21:33	C	Position 3	BA	Commuting. Pip 45
21:35	E	Position 1	MT	Emergence. 45 pip
21:37	G	Position 1	MT	Commuting. Pip 45
21:37	Unseen	Position 3	BA	Pip 45
21:39	C	Position 3	BA	Commuting. Pip 45
21:46	C	Position 2	DT	45 Pipistrelle. Commuting.
21:48	E	Position 1	MT	Emergence. 1 x Pip 45.
21:52	Unseen	Position 1	MT	Unk. Short Call
21:56	D	Position 2	DT	Emergence. 45 Pipistrelle from eaves above window of stable block.
21:57-22:04	H	Position 1	MT	Foraging 3 x pip 45
21:58	Unseen	Position 2	DT	Bat. Commuting. V short call.
21:59	I	Position 3	BA	Foraging. Pip 45
22:01	E	Position 1	MT	Emergence. 1 x Pip 45.
22:01	Unseen	Position 3	BA	Pip 45
22:02	Unseen	Position 3	BA	Pip 45
22:03	Unseen	Position 3	BA	Pip 45
22:04	Unseen	Position 3	BA	Pip 45
22:05	Unseen	Position 3	BA	Pip 45
22:06-22:15	H	Position 1	MT	Foraging 1 x pip 45
22:06	Unseen	Position 3	BA	Pip 45
22:07	Unseen	Position 3	BA	Pip 45
22:10	J	Position 3	BA	Pip 45. Circling from over gate.
22:12	Unseen	Position 2	DT	BLE. Short call. Repeated.
22:15	From 2 storey bar	Position 3	BA	Pip 45. Possible emergence
22:19	Unseen	Position 2	DT	55 Pipistrelle. Foraging/feeding.
22:19-22:21	H	Position 1	MT	Foraging 1 x pip 55
22:20	From 2 storey bar	Position 3	BA	Pip 45. Possible emergence
22:21	Unseen	Position 1	MT	BLE. Short Call.
22:21	C	Position 3	BA	Commuting. Pip 45
22:24-22:37	H	Position 1	MT	Foraging Pip x 3
22:26	Unseen	Position 2	DT	45 Pipistrelle. Commuting.
22:29-22:32	I	Position 3	BA	Pip 45. Foraging
22:31	Unseen	Position 2	DT	45 Pipistrelle. Commuting.
22:34	Unseen	Position 2	DT	Myotis. Foraging/feeding.
22:36-22:38	I	Position 3	BA	Pip 45. Foraging
22:40	Unseen	Position 1	MT	Unk. Short Call
22:40-22:42	H	Position 1	MT	Foraging. Pip x 2
22:42-end	H	Position 1	MT	Foraging. Pip x 1

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- 4 OCT 2016

Table 1: Bat Activity Records; Emergence Survey 24<sup>th</sup> May 2016



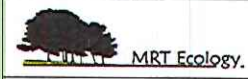
Notes:

- Target building
- ★ Surveyor Location
- ★ Re-entry Location
- Bat Activity

Title:  
Bat Activity, Survey 2

Drawing Number:  
Figure 3

Status:  
Final



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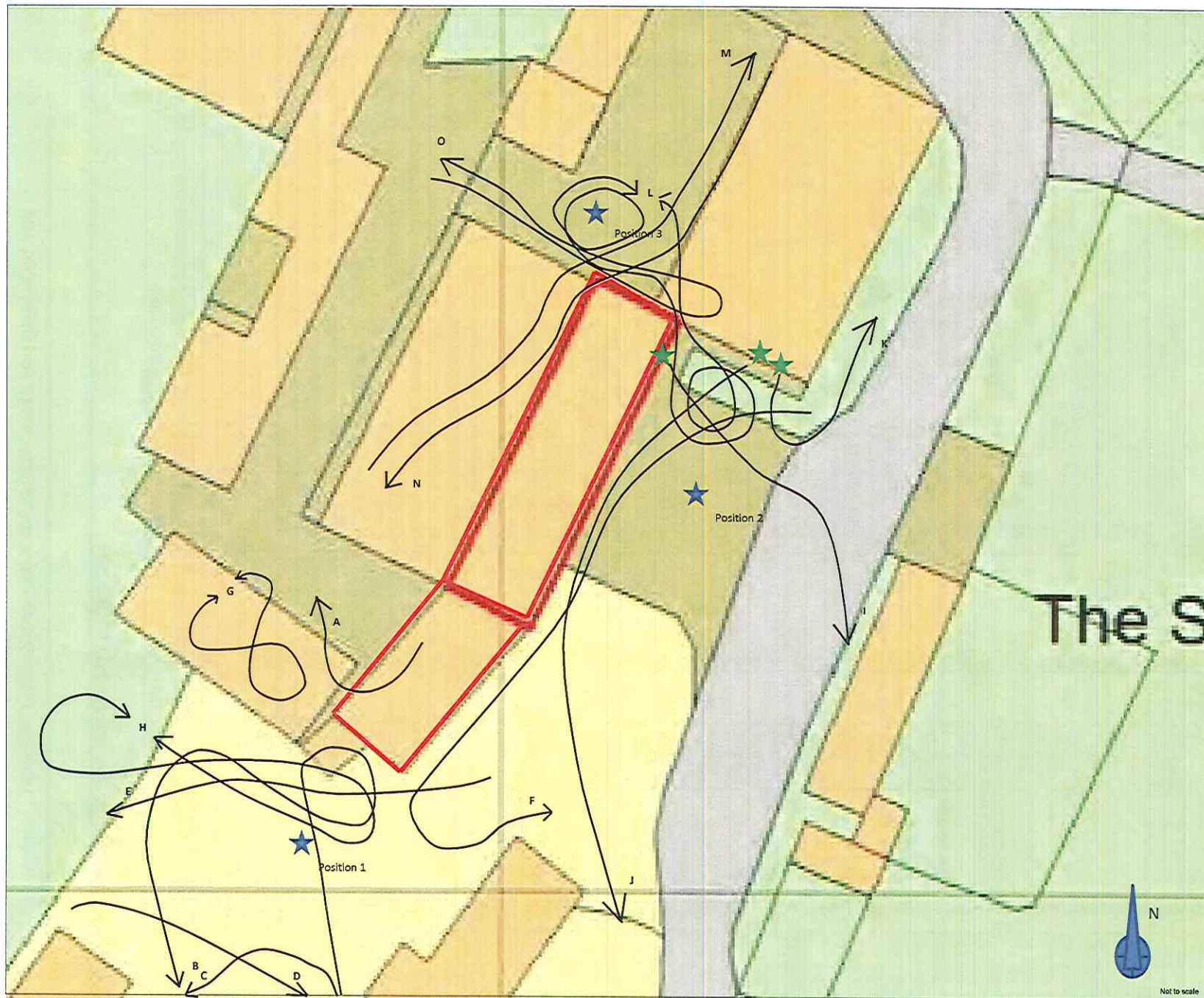
# MRT Ecology

Time	Activity Location	Surveyor location	Surveyor	Bat species & activity
2.50	Circling over byre	Position 2	BA	Circling. Pip 45 x 1
2.54	A	Position 1	DT	45 Pipistrelle. Foraging/feeding.
2.58	Unseen	Position 3	MT	Pip 45
2.59	Unseen	Position 2	BA	Unk.
3.00	Unseen	Position 1	DT	45 Pipistrelle. Foraging.
3.01	B	Position 1	DT	Bat. Not echolocating. Commuting.
3.04	A	Position 1	DT	45 Pipistrelle. Foraging/feeding.
3.04	O	Position 3	MT	Foraging. Pip 45
3.05	Circling over byre	Position 2	BA	Circling. Pip 45 x 1
03.05-03.06	A	Position 1	DT	Two 45 Pipistrelles. Foraging/feeding.
3.06	A	Position 1	DT	45 Pipistrelle. Foraging/feeding.
3.08	C	Position 1	DT	45 Pipistrelle. Commuting.
3.08	D	Position 1	DT	45 Pipistrelle. Foraging/feeding.
3.08	O	Position 3	MT	Foraging. Pip 45
3.08	Circling over byre	Position 2	BA	Circling. Pip 45 x 2
3.11	Circling over byre	Position 2	BA	Circling. Pip 45 x 3
3.14	O	Position 3	MT	Foraging. Pip 45
3.14	Circling over byre	Position 2	BA	Circling. Pip 45 x 4
3.16	Unseen	Position 3	MT	High level pass
3.17	Circling over byre	Position 2	BA	Circling. Pip 45 x 5
3.19	By Light on Stone	Position 2	BA	Re-entry. Pip 45 x 1
3.20		Position 1	DT	Barn owl flew west, between stable block and cottage.
3.22	Unseen	Position 1	DT	45 Pipistrelle. Commuting.
3.24	Unseen	Position 3	MT	Pip 45 Commute
3.27	Unseen	Position 1	DT	45 Pipistrelle. Foraging.
03.27-03.30	L	Position 3	MT	Foraging. Pip 45 x 2
3.29	N	Position 2	BA	Swarming. Pip 45 x 1.
3.30	N	Position 2	BA	Swarming. Pip 45 x 1.
3.32	O	Position 3	MT	Foraging. Pip 45
3.33	Unseen	Position 1	DT	45 Pipistrelle. Commuting.
3.35	E	Position 1	DT	Bat. Not echolocating.
3.35	M	Position 3	MT	Foraging. Pip 45
3.36	E	Position 1	DT	Bat. Not echolocating.
3.36	Under tiles above	Position 2	BA	Re-entry. Pip 45 x 1
3.37	Unseen	Position 3	MT	Pip 45
3.43	F	Position 1	DT	Bat. Not echolocating. Commuting.
3.44	F	Position 1	DT	Bat. Not echolocating. Commuting.
3.45	O	Position 3	MT	Foraging. Pip 45
3.46	G	Position 1	DT	Bat. Not echolocating. Commuting.
3.47	F	Position 1	DT	Bat. Not echolocating. Commuting.
3.47	N	Position 3	MT	Commute. Pip 45 x 3
3.47	N	Position 2	BA	Swarming. Pip 45 x 1
3.49	H	Position 1	DT	Bat. Not echolocating. Commuting.
3.49	I	Position 1	DT	Bat. Not echolocating. Commuting.
3.50	H	Position 1	DT	Bat. Not echolocating. Commuting.
3.51	H	Position 1	DT	Bat. Not echolocating. Commuting.
3.52	M	Position 3	MT	Commute. Pip 45 x 2
3.52	Crevice on stone	Position 2	BA	Re-entry. Pip 45 x 1
3.53	H	Position 1	DT	Bat. Not echolocating. Commuting.
3.53	J	Position 1	DT	Myotis. Commuting.
3.54	Unseen	Position 3	MT	Commute.
3.56	N	Position 2	BA	Swarming. Pip 45 x 4
3.57	N	Position 3	MT	Commute.
3.57	Eaves of stone ba	Position 2	BA	Re-entry. Pip 45 x 1
3.59	E	Position 3	MT	Commute. Pip 45 x 3.
4.01	Gable end wall st	Position 2	BA	Re-entry. Pip 45 x 1
4.02	Unseen	Position 3	MT	Brief register
4.02	Gable end wall st	Position 2	BA	Re-entry. Pip 45 x 1
4.02	Gable end wall st	Position 2	BA	Re-entry. Pip 45 x 1
4.06	K	Position 1	DT	Two bats. Not echolocating. Commuting.

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-4 OCT 2016

Table 2: Bat Activity Records; Dawn re-entry survey 10<sup>th</sup> June 2016



Notes:

- Target building
- ★ Surveyor Location
- ★ Emergence Location
- Bat Activity

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Title:

Bat Activity, Survey 3

Drawing Number:

Figure 4

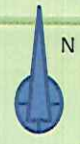
Status:

Final



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Time	Activity Location	Surveyor location	Surveyor	Bat species & activity
21:39	F	Position 2	MT	Commute. Pip 45 x1
21:42	I	Position 2	MT	Emergence. Pip 45 x 1
21:58-21:59	O	Position 3	CT	Foraging. Pip 45 x 1
22:00	M	Position 3	CT	Commute. Pip 45 x1
22:02	J	Position 2	MT	Emergence. Pip 45 x 1
22:05	K	Position 2	MT	Emergence. Pip 45 x 1
22:08	Unseen	Position 2	MT	Commute. Pip 45 x1
22:09	A	Position 1	DT	45 Pipistrelle. Commuting.
22:14	M	Position 3	CT	Foraging. Pip 45 x 1
22:16	Unseen	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:17	Unseen	Position 2	MT	Brief Register
22:17	M	Position 3	CT	Commute. Pip 45 x1
22:19	B	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:20	N	Position 3	CT	Commute. Pip 45 x1
22:21	O	Position 3	CT	Commute. Pip 45 x1
22:26	Unseen	Position 2	MT	Brief Register
22:26	Unseen	Position 3	CT	Unk.
22:27	Unseen	Position 1	DT	Myotis. Commuting.
22:28	C	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:29	C	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:30	C	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:33-22:39	D	Position 1	DT	45 Pipistrelle. Commuting.
22:34	E	Position 1	DT	Two 45 Pipistrelles. Commuting.
22:34	L	Position 2	MT	Foraging. Pip 45 x 1
22:35-22:36	C	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:35	L	Position 2	MT	Foraging. Pip 45 x 1
22:35	L	Position 3	CT	Commute. Pip 45 x1
22:39-22:41	C	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:40	Unseen	Position 2	MT	Brief Register
22:40	L	Position 3	CT	Commute. Pip 45 x2
22:41-22:44	L	Position 2	MT	Foraging. Pip 45 x 1
22:43	F	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:43	O	Position 3	CT	Foraging. Pip 45 x 1
22:44	Unseen	Position 1	DT	45 Pipistrelle. Social calls.
22:44	Unseen	Position 2	MT	Commute. Pip 45 x1
22:47	C	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:47	A	Position 1	DT	45 Pipistrelle. Commuting.
22:48-22:50	G	Position 1	DT	Two 45 Pipistrelles. Foraging/feeding.
22:51	H	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:52	G	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:52	Unseen	Position 2	MT	Commute. Pip 45 x1
22:52-22:53	C	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:53	Unseen	Position 3	CT	Commuting. Pip 45 x 1
22:53-22:54	G	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:54	Unseen	Position 2	MT	Commute. Pip 45 x1
22:54	Unseen	Position 3	CT	Commuting. Pip 45 x 1
22:54	Unseen	Position 3	CT	Commuting. Pip 45 x 1
22:54-22:56	H	Position 1	DT	45 Pipistrelle. Foraging/feeding.
22:55	Unseen	Position 2	MT	Commute. Pip 45 x1
22:55	Unseen	Position 3	CT	Commuting. Pip 45 x 1
22:55	N	Position 3	CT	Commuting. Pip 45 x 1
22:56	M	Position 3	CT	Commuting. Pip 45 x 1
22:57-EOS	H	Position 1	DT	45 Pipistrelle. Foraging/feeding. Social calls.
23:00	Unseen	Position 3	CT	Commuting. Pip 45 x 1
23:01	Unseen	Position 2	MT	Commute. Pip 45 x1
23:01	Unseen	Position 3	CT	Commuting. Pip 45 x 1
23:04	Unseen	Position 2	MT	Commute. Pip 45 x1
23:06	Unseen	Position 2	MT	Commute. Pip 45 x1
23:06	Unseen	Position 3	CT	Commuting. Pip 45 x 1
23:07	Unseen	Position 3	CT	Commuting. Pip 45 x 1
23:08	Unseen	Position 3	CT	Commuting. Pip 45 x 1
23:09	Unseen	Position 3	CT	Commuting. Pip 45 x 1
23:02-2305	O	Position 3	CT	Foraging. Pip 45 x 1

Table 3: Bat Activity Records: Emergence Survey 24<sup>th</sup> June 2016



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**Appendix 6**

Bat Access Tiles





## Roof Ventilation

Repco roof vent tiles and air vent ridge terminals provide a simple but effective way of providing a steady air flow into the roof space, or can alternatively be connected to a mechanical extractor.

We can convert most types of tile in our factory allowing a roof space to be ventilated in an aesthetically pleasing and cost effective way.

Modified versions of our tile vent products can be used as bat access tiles or cable outlet tiles for use with solar panels.



### Vent Ridge & Tiles - For tiled roofs

1.



Segmental  
air vent ridge

2.



Modern angle  
air vent ridge

3.



Half round  
air vent ridge

4.



Tile vent  
conversion

5.



Plain tile air vent  
10½x6½ or 11x7

Virtually any tile, new or reclaimed, can be cut and converted into an air vent.

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-4 OCT 2016

### Vent Ridge & Tiles - For slate roofs

6.



Collared angle air vent

7.



Plain angle air vent

Collared & Plain angle air vent ridge terminals are available in 90° Or 110° base

### Gas Vents

Repco gas vents have been tested to BS 5440

8.



Half round gas vent ridge

9.



Modern angle gas vent ridge

10.



Segmental gas vent ridge

**Gloworm gas outlet ridge terminals also available upon request**