BAT SURVEY & REPORT
at
St Christopher Trust
Redcourt/Hollin Cross Lane
Glossop
Derbyshire
SK13 8JH

Client:
Savills

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Client Contact:
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JCA Ref:
10626/B/CS

Contents

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1. Introduction

1.1 Purpose of the Report

1.1.1 A report is required at **St Christopher Trust, Redcourt/Hollin Cross Lane,** to assess the sites potential for supporting bat species in the form of roosting sites, foraging habitat and/or commuting routes.

1.1.2 The aim of this report is to investigate the potential impact that any proposed development may have on the local/ national bat population.

1.2 Terms of Reference

1.2.1 I am instructed by **Natasha Rowland** of **Savills** to visit the site and prepare my findings in a report. For this purpose I have been supplied with a site map, (drawing **12517-105_2DT**).

1.3 Scope of the Report

1.3.1 This report is compiled in accordance with the Bat Conservation Trusts (BCT) '*Bat Surveys - Good Practice Guidelines*' (2nd Edition), the Joint Nature Conservation Committee (JNCC) '*Bat Workers Manual*' (3rd Edition) and Natural England's '*Bat Mitigation Guidelines*'.

1.4 Site Description

1.4.1 **St Christopher Trust, Redcourt/Hollin Cross Lane,** is situated approximately 750m southwest of Glossop town centre, at grid reference SK030935.

1.4.2 The site is located within a residential setting, characterised by a mix of terrace and semi-detached housing with moderately sized garden plots (please see **Appendix 3**). The surrounding gardens and streets support a large number of mature broadleaved trees, often forming strong linear features. A linear band of woodland extends from the site in a south-easterly direction for approximately 1.5km. The woodland ends at the western boundary of the Pennines, potentially acting as a green corridor from the survey site to this habitat. In the wider landscape, Glossop is surrounded by a mosaic of agricultural land, woodland patches, residential land, moorland and reservoirs.

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2. Desktop Study

2.1 Methodology

2.1.1 A desktop study has been undertaken in order to obtain any relevant records of bats within a 2km radius of the site. For this the Derbyshire Wildlife Trust (DWT) and Derbyshire Bat Conservation Group (DBCG) were contacted and the National Biodiversity Network (NBN) Gateway website utilised.

2.1.2 The National Biodiversity Network (NBN) Gateway website was used to obtain any bat records that were recorded within the last 10 years, relating to this site. The NBN gateway website holds ecological records collected across the UK from a variety of sources and is available for public use. The website operates by dividing the country into a series of 10 km square grids, and so the records held for the 10 km grid containing the survey site (Grid SK09) has been reviewed.

2.1.3 In addition to this, the head of grounds maintenance was asked whether any bat activity was known at the site. He confirmed that no bat roosts were known within any of the buildings; however we were informed that a single grounded bat was found on site within the last 10 years. This bat had flown into the far northern building and become grounded. The bat was not identified and was successfully released on site.

2.2 Results

2.2.1 Derbyshire Bat Conservation Group records: A summary of the DBCG records obtained for St Christopher Trust can be seen in the table below. A full copy of the data search will accompany this report (please see **DBCG/2012/JCA1**).

Table 1: Summary of DBCG data search results for St Christopher Trust.

Common Name	Latin Name	No. of records	Most recent record
Brown Long-eared	*Plecotus auritus*	4	2006
Common Pipistrelle	*Pipistrellus pipistrellus*	7	2008
Daubenton's	*Myotis daubentonii*	1	1997
Unknown bat species	*Chiroptera sp.*	12	2011
Unknown Pipistrelle species	*Pipistrellus sp.*	4	2003

A total of 28 bat records were uncovered for search area of up to 2km around the site, ranging from 1993 to 2011. A large number of these records related to sites very close to the survey site. The majority of these were records of 'No evidence of bat activity', however 2 related to possible bat droppings in bird boxes and 4 related to possible Brown Long-eared (BLE) and Pipistrelle (Pip) droppings. This indicates that BLE and Pip roosts may be present very close to the site.

2.2.2 Derbyshire Wildlife Trust records: A summary of the DWT records obtained for St Christopher Trust can be seen in the table below. A full copy of the data search will accompany this report.

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Table 2: Summary of DWT data search results for St Christopher Trust.

Common Name	Species Name	No. of Records	Most Recent Record
Bat	*Chiroptera*	2	2008
Pipistrelle bat	*Pipistrellus sp.*	6	2004
Common Pipistrelle bat	*Pipistrellus pipistrellus*	2	2003
Brown Long-eared bat	*Brown Long-eared Bat*	2	2004

A total of 12 bat records were uncovered for a 2km radius around the site, ranging from 1999 to 2008. None of these records related to the survey site.

2.2.3 National Biodiversity Network Gateway records: The NBN Gateway records obtained for this site can be seen in the table below.

Table 3: Summary of NBN Gateway data search results for St Christopher Trust.

Common Name	Species Name	No. of Records	Most Recent Record
Bat	*Chiroptera*	6	2008
Common Pipistrelle bat	*Pipistrellus pipistrellus*	6	2008
Daubenton's bat	*Myotis daubentonii*	6	2008
Noctule bat	*Nyctalus noctula*	1	2005
Nyctalus/Eptesicus bat	*Nyctalus/Eptesicus* sp	1	2006
Pipistrelle bat	*Pipistrellus sp*	3	2007

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3. Scoping Survey

3.1 Survey Conditions

3.1.1 The site was surveyed on 6th July 2012 by Christopher Shaw, BSc Biology (Hons), GradIEEM.

3.1.2 The weather conditions during this survey were as follows: Temperature: 15°C, Wind: 5mph, Cloud cover: 100%, Precipitation: rain.

3.1.3 Limitations: There were no perceived limitations to this survey.

3.2 Methodology

3.2.1 A detailed search of the buildings exterior structure was conducted during daylight hours in order to identify potential bat roosting sites and look for any evidence of bat activity. Potential roost sites and features deemed to be of value to bats were documented on the site map (please refer to **Appendix 1**) and photographic evidence was taken (please refer to **Appendix 2**).

3.2.2 All surveys are conducted by experienced surveyors using the following equipment to ensure an accurate assessment; a printed site map, camera, 1 million candlelight torch, binoculars, ladders and a duet heterodyne bat detector.

3.2.3 Signs that bats have previously or are currently using a potential roost site include:

- Scratch marks, urine and oils stains around holes in building or trees.
- Droppings, carcasses and/or food remains found around the site.
- Bats observed flying in/out of a hole in a building or tree.
- Bats heard ‘chattering’ within a potential roost site, especially on warm summer days.

3.2.4 It must be highlighted that the absence of any of these signs is not proof that the site is not being used by bats. Weathering and other factors will often remove any signs of bat activity, especially when present on the exterior of a building or a tree. As previously explained, many bat species will have several roost sites which they regularly move between and therefore an absence during a survey visit does not exclude their presence at a later date.

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3.3 Results

3.3.1 Building Assessment/ Built Structure Assessment

The site contains six buildings, two sheds and a number of small greenhouses. For ease of reference, each building has been labelled from 1-6 on **Appendix 1**.

Building 1: This appears to be the oldest building on site. It is a two storey red brick building, with a pitched slate tile roof. A conservatory is attached to the south-western corner and a large two storey brick extension, with a flat roof, is attached to the north-western corner. Overall the external walls are in an excellent state of repair, however, a small amount of damage was noted on a section of the west facing wall (Target note 8). Here, large areas of mortar had fallen away from between the brickwork, creating a series of shallow gaps. After closer inspection, all of this damage appeared to be superficial, with none of the gaps seeming to lead into the cavity wall space. The buildings roof extended over the eaves by around 30cm and had wooden boarding fixed along the ends. Gaps were present under most of the eaves, however it was unclear whether these gaps lead into the loft space or cavity walls. The mortar running along the apex of the gable end walls were all in an excellent state of repair with no gaps being noted. The roof was similarly in a good state of repair, with no missing, lifted or slipping tiles, or missing mortar being noted. The roof was also sparely covered in moss. A small wooden porch was located along the southern wall. Where this porch connected to the building, a gap was present (roughly 5cm wide) which extended vertically up into the roof (Target note 9). It is possible that this gaps leads to a small space between the roof and ceiling of the porch. The ground directly underneath this gap is shelter from the weather and is left largely undisturbed. The entire porch was carefully searched for signs of bat activity but none were found.

The building has a single large loft space and both the floor and ceiling are insulated. The loft appeared unused and was therefore in a very dirty condition, with large amounts of cobwebs covering the ceiling and rafters. The roof was supported by a mix of small rafters and large steel beams. A series of brick walls were present throughout the loft, which were around half the height of the loft. Around 4 chimney stacks were noted within the loft. These had all been partially dismantled, meaning the chimneys had been removed from the roof and the roof sealed over, but the open chimney stack was still present within the loft. Two windows were present towards the southern end of the loft, one of which had a small gap (roughly 3cm) running along the lintel (Target note 4). There is therefore the potential for bats to enter the loft via this gap. The windows and surfaces surrounding this gap were carefully searched but no signs of bat activity were found. A large wasp nest was present to the northeast (Target note 5). A small number of old bat droppings were found to the north of the loft under a gap in the roof insulation (Target note 6). This suggests that a single or small number of bats could have roosted in this part of the oft in the recent past.

Overall this building has been deemed to have a **moderate** bat roost potential.

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Building 2: This building could be divided into two distinct halves. The western half was a single storey brick building, with a flat felted roof. The bottom half of the external walls are constructed of brick and the top half fitted with windows. Wooden boarding is present along the eaves and is fitted tight to the wall leaving no gap. The eastern half of the building appeared to be much older. This was again single story and constructed of brick. The roof was pitched and covered in large slate tiles. Wooden boarding ran under the eaves and again fixed tight to the walls. The gable end wall was completely rendered and overall the external structure was in a good state of repair. We were informed that this building had no loft space.

Overall this building has been deemed to have a **low** to **very low** bat roost potential.

Building 3: Building 3 and 4 were connected by two walkways. This building was two stories high with a pitched slate tile roof. The roof and external walls appeared to be in an excellent state of repair, with no obvious defects noted. White wooden soffit boxing was present under the eaves and was in a similarly good state of repair. This boxing was not fixed tight to the wall, meaning a small gap (around 1-2cm) was present between the soffits and wall. This gap was present around the entire building. No signs of bat activity were noted around any of these gaps.

The loft had previously been one single large space. However within the recent past, a series of plaster board walls hade been erected, effectively dividing the loft into 7 individual loft spaces with a small walkway running along the centre. The 7 lofts were of differing sizes and could be accessed via the walkway by small hatches in the walls. The loft spaces appeared to be completely separate, with no potential access for bats between them. The roof and floors were all insulated and the lofts were in a clean condition. What looked like a small pile of old disintegrated bat droppings were found within the far southern loft (Target note 1). A single bat dropping was found in one of the lofts to the east (Target note 2). A large number of fresh droppings were found on the floor, along the western wall of one of the lofts (Target note 3). This indicated that up to 3 bat roosts may be present within this building.

Overall this building has been deemed to have a **high** bat roost potential.

Building 4: This building was of similar age and design to building 3. The building was again two stories with a pitched slate tile roof. The roof and external walls were in an excellent state of repair, with no obvious defects noted. Red wooden soffit boxing was present under the eaves, and was in a similarly good state of repair. Again the boxing was not fixed tight to the wall, meaning a small gap (around 1-2cm) was present between the soffits and wall. This gap was present around the entire building. No signs of bat activity were noted around any of these gaps. We were informed that this building had no loft space. A single storey brick extension, with a flat felted roof, was present around the northern half of this building. No gaps were noted under the eaves. A glass conservatory was present along the southern half of the west facing wall.

Overall this building has been deemed to have a **low** bat roost potential.

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Building 5: This was a single storey brick building of similar age to buildings 3 & 4. The building had a pitched tile roof, densely covered in moss. A small pitched roof extension was present along the eastern wall. The roof and external walls were in an excellent state of repair. White wooden boarding was present under the eaves and a gap was present between this boarding and the walls. The building is currently used as a gymnasium and we were informed that it contains no loft space.

Overall this building has been deemed to have a **low** bat roost potential.

Building 6: This building was of similar age and design to building 5. The building had a pitched tile roof, which was sparsely covered in moss. The roof and external walls were again in an excellent state of repair. White wooden soffit boxing is present under the eaves and a small gap is present between this boxing and the walls. The building has a single large loft space which is only occasionally used for storage. The roof and floor is insulated and the centre of the loft had been boxed off with plaster board. The roof is supported by a series of small wooden beams and rafters. The loft was carefully searched, but no sings of current or historic roosting found.

Overall this building has been deemed to have a **low** to **moderate** bat roost potential.

3.3.2 Tree Assessment

A large number of mature broadleaved and coniferous trees scattered are scattered throughout the site and a relatively large amount of broadleaved woodland is present to the south and west. All of the trees within the site are under management and many of the trees had pruning wounds. A small number of these trees contained features which have the potential to support roosting bats. An early mature Beech tree to the north of the site had 2 woodpecker holes and a small cavity around an old pruning wound at around 5m (Target note 7). These holes were east facing and at the time of the survey showed no signs of bat activity. Similarly, a hole was noted around an old pruning wound in a tree located within the centre of the site (Target note 10). This hole was roughly 3m above ground level and east facing. Again no signs of bat activity were noted during the survey. Finally, a significant cavity was present in the stem of another tree located within the centre of the site (Target note 11). The eternal wound was south facing, around 1.5m from ground level, 15cm wide and 30cm high. Within the tree, the cavity extended vertically up for around 40cm. No signs of current or historic roosting were noted within this cavity. Many of the trees on site were covered in dense Ivy. Bats will occasionally roost within dense Ivy, as night or feeding roosts.

3.3.3 Habitats and features present

The site contained a mix of amenity and improved grassland, introduced shrubs, scattered mixed trees, tall ruderal, dense scrub and broadleaved woodland. A small stream also passed by the site, situated on adjacent land, bordering the south-western boundary. This stream had steep rocky banks, supporting a mix of tall ruderal and scrub vegetation. The banks also supported a large number of mature broadleaved trees.

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The mix of habitats on site is likely to support a wide range of insect species throughout the year, and thus attract foraging bats. Bats will especially be attracted to the tree lines, woodland edges and running water, as these features often support the greatest insect numbers. The woodland and stream also form part of a strong linear feature (green corridor), which has the potential to be used by commuting bats.

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4. Conclusions

4.1 A bat scoping survey was conducted at **St Christopher Trust,** on the 6th July 2012 by Christopher Shaw, BSc (Hons.), Grad IEEM.

4.2 The site contained six buildings and a mix of formal grounds and informal woodland/improved grassland.

4.3 Overall, the buildings external structures were in a good state of repair. However, some of the buildings contained features which have the potential to support roosting bat, such as gaps under eaves, boarding and soffit boxing (please see **Section 3.3**).

4.4 Three of these buildings have loft spaces and bat droppings were found in two of these buildings (Building 1 and 3 on **Appendix 1**). The presence of bat droppings within these lofts strongly indicates the presence of bat roosts.

4.5 The site also contains a large number of trees, three of which were identified as having features suitable for roosting bats (Target notes 7, 10 & 11 on **Appendix 1**). However, at the time of the survey no evidence of bat activity was found around any of these features. It is therefore deemed unlikely that these features are being used by roosting bats.

4.6 The mix of habitats on site is likely to support a wide range of invertebrate species throughout the year, and thus attract foraging bats. Bats will especially be attracted to the tree lines, woodland edges and running water, as these features often support the greatest insect numbers. The woodland and stream also form part of a strong linear feature (green corridor), which has the potential to be used by commuting bats.

4.7 A data search was conducted, using the following resources; Derbyshire Bat Conservation Group (DBCG), Derbyshire Wildlife Trust (DWT) and the National Biodiversity Gateway Website (please see **Section 2** and accompanying data search reports).

From these data searches the following species are known to be present in the surrounding area; Brown Long-eared, Common Pipistrelle, Daubenton's, Unknown Chiroptera, Pipistrelle sp., Nyctalus/Eptesicus sp. and Noctule. A large number of the DBCG records related to sites very close to the survey site. The majority of these were records of 'No evidence of bat activity', however 2 related to possible bat droppings in bird boxes and 4 related to possible Brown Long-eared (BLE) and Pipistrelle (Pip) droppings. This indicates that BLE and Pip roosts may be present very close to the site.

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5. Recommendations & Mitigation

5.1 Building 1 and 3 have been deemed to have a **moderate** and **high** bat roost potential, respectively. Bat droppings were noted within the lofts of both of these building. Due to building 6's close proximity to the woodland edge and stream and its current condition, this building has been deemed to have a **low to moderate** potential for roosting bats, even though no evidence of bat activity were found. It is therefore recommended that further bat surveys are undertaken on Buildings 1, 3 and 6.

5.2 It is recommended that an appropriate number of bat emergence and/or re-entry surveys are conducted at the site in order to determine whether bats are roosting within any of the building on site.

5.3 If bat roosts are discovered within any buildings that will be impacted upon by the proposed development, then a European Protected Species Licence will be required from Natural England in order for the work to proceed.

5.4 National Planning Policy Framework (NPPF): The government objectives for planning are to; promote sustainable development; conserve, enhance and restore the diversity of England's wildlife and geology.

The following recommendations are therefore given in order to enhance the sites value for bats following development, an so work in line with the goals set out by NPPF.

- Planting scheme: Following development, the grounds could be enhanced for bats through planting a wide range of native tree, shrub and flowering plant species, which have a known benefit to bats (i.e. those recommended by the Bat Conservation Trust or Natural England).

- Incorporating new roosting opportunities: New bat roosting opportunities should be incorporated into each new build. A wide range of internal and external designs are available, a number of which can be seen on the BCT website (http://www.bats.org.uk/pages/new_build.html). Designs include standard wood or woodcrete external boxes, bat bricks and bat access slates (please see Appendix 4).

Please contact JCA Limited for further advice or information on how to enhance the sites value for bats.

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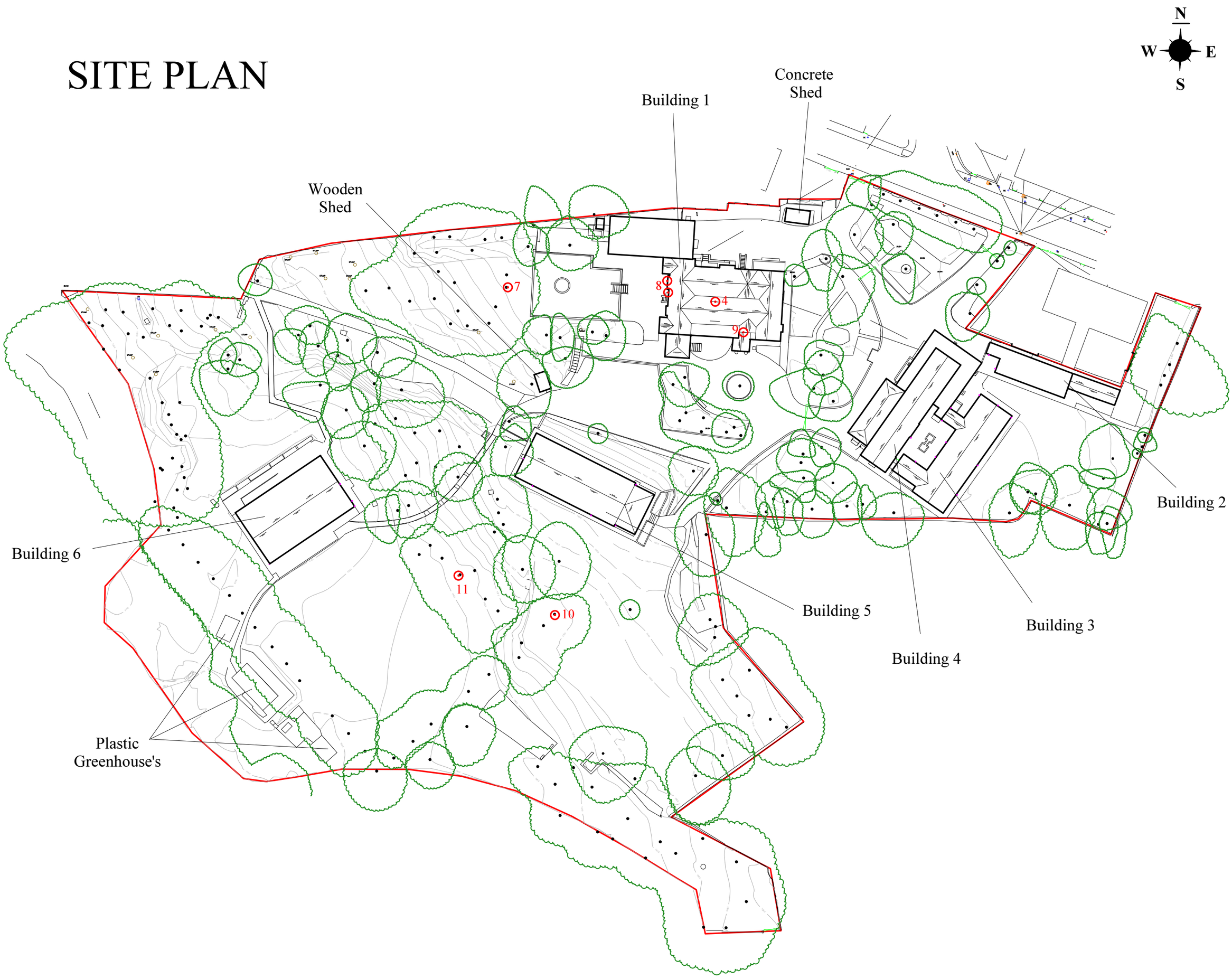
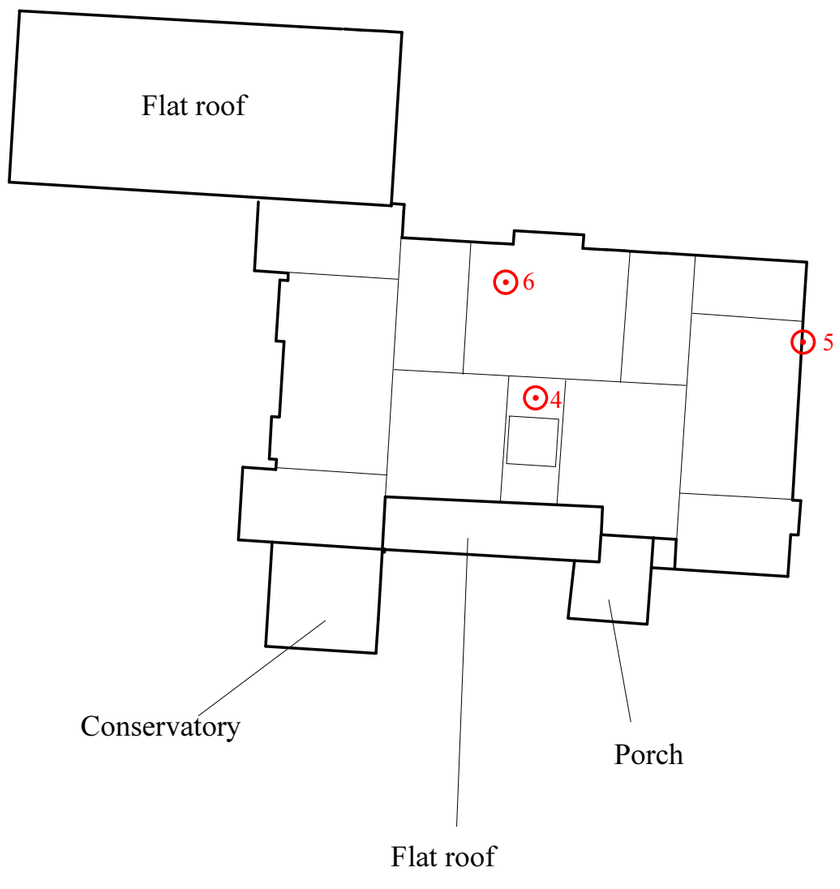
Appendices

SITE PLAN

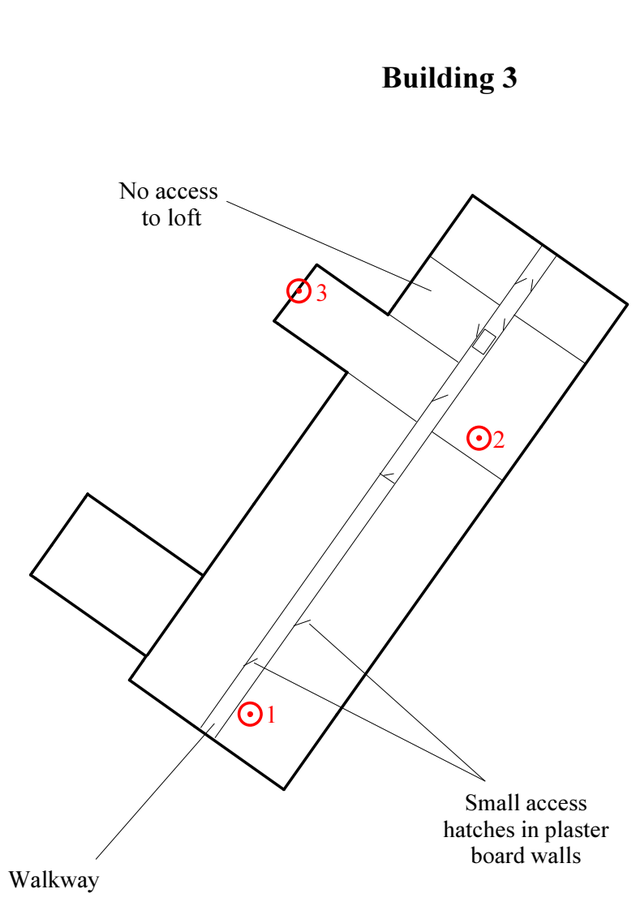


LOFT PLAN

Building 1



Building 3



Appendix 1: Site Plan

TITLE: St Christopher Trust, Redcourt, Hollin Cross Lane, Glossop, Derbyshire, SK13 8JH.
JCA Ref: 10626/B/CS

NOT TO SCALE	PAPER SIZE : A2

KEY

- Existing vegetation
- Site boundary
- Target note

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Appendix 2: Photographic Evidence

Photo 1: A view of building 1 from the west.

Photo 2: A view of building 2 from the southeast.

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Photo 3: A view of building 3 form the east.

Photo 4: A view of building 4 from the west.

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Photo 5: A view of building 5 from the east.

Photo 6: A view of building 6 from the east.

Photo 8: A view of the improved grassland and woodland present within the south-western half of the site.

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Appendix 3: Map of Surrounding Landscape

Figure 1: Google Maps image showing the survey site in relation to the surrounding landscape and habitats.

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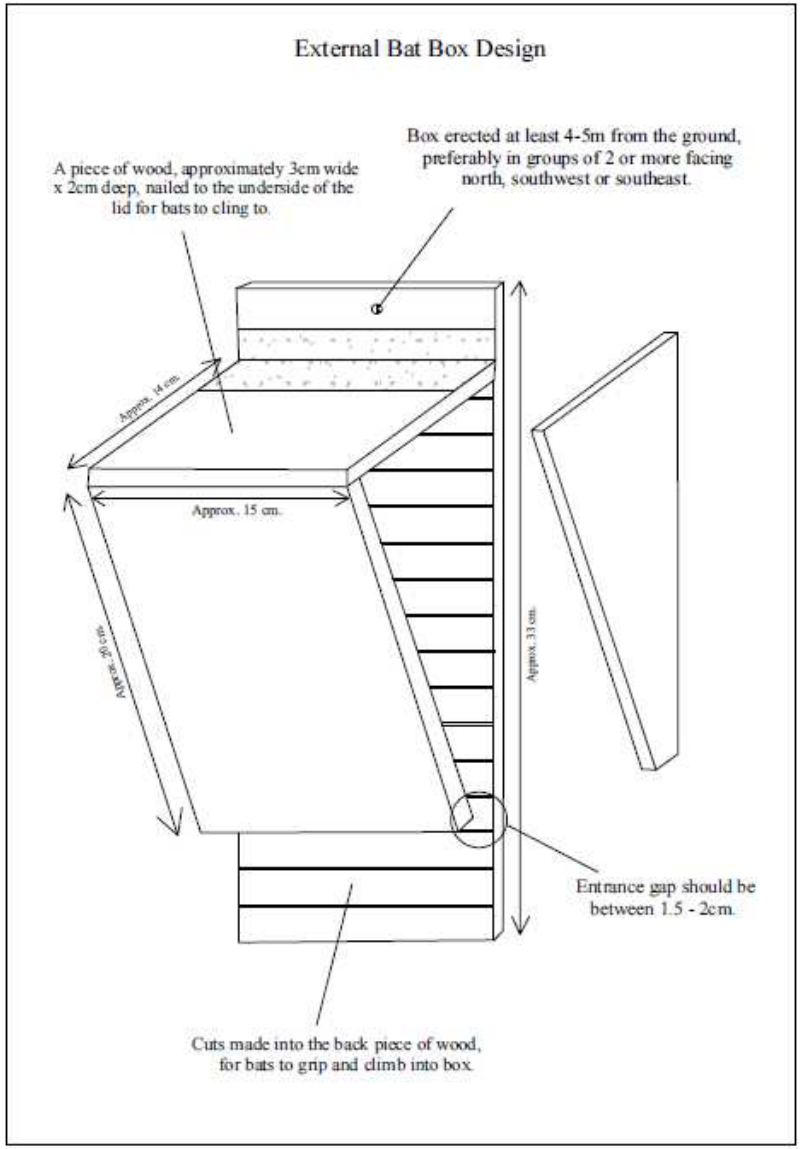
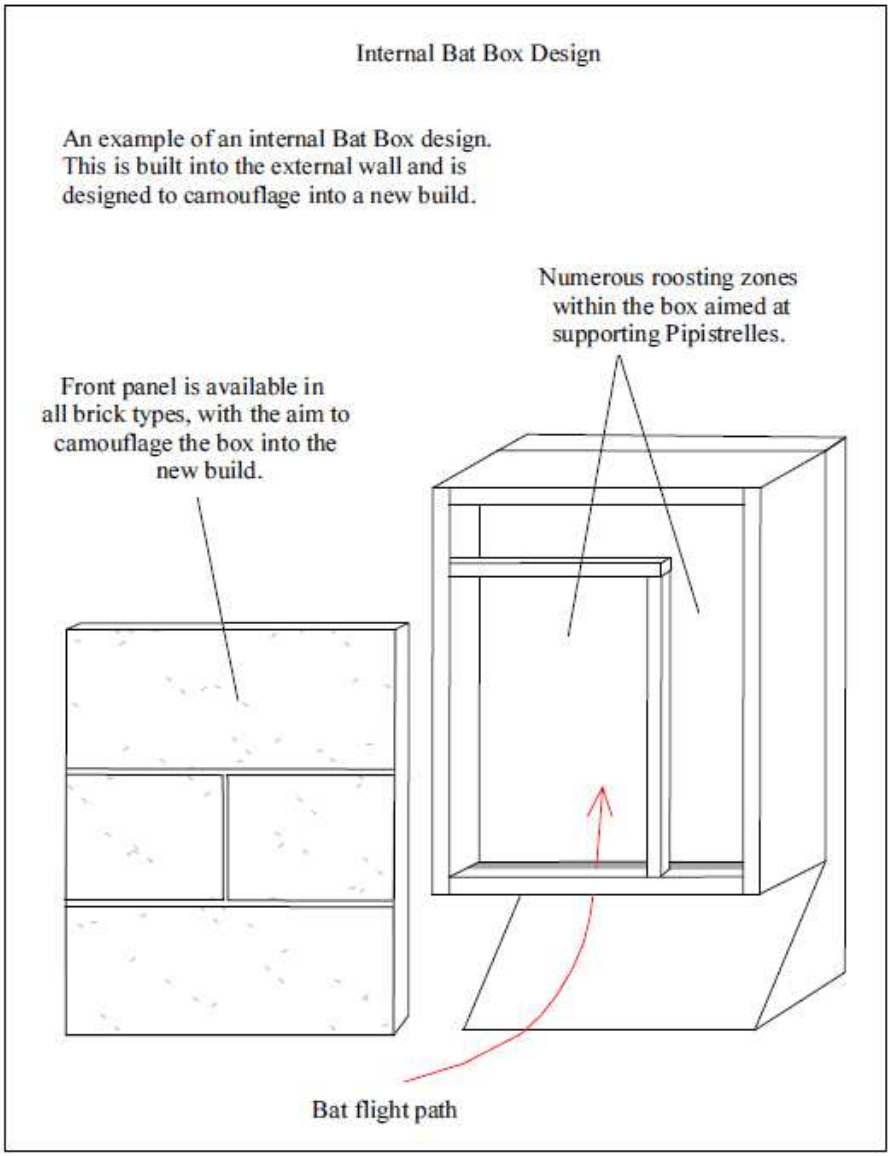
Appendix 4: Examples Artificial Bat Box Designs





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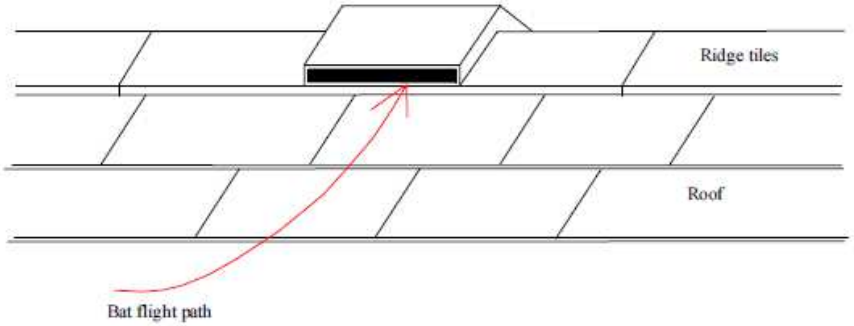
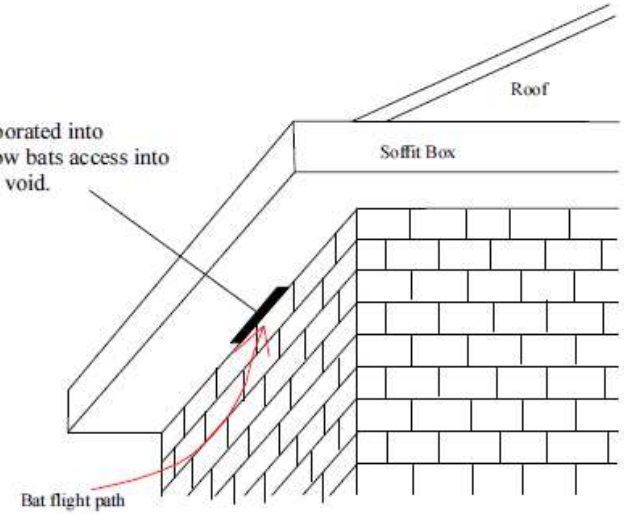
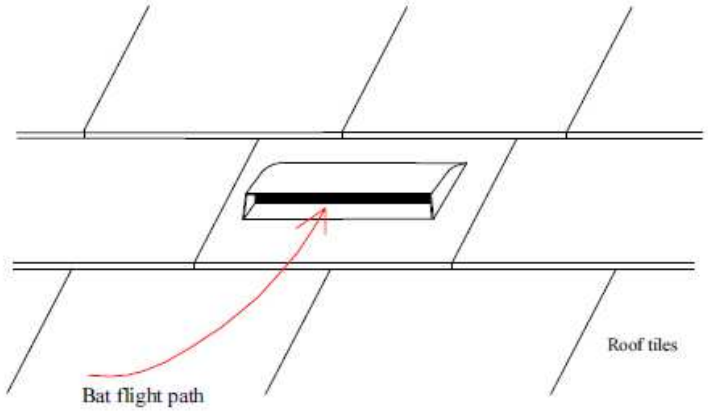
An example design for an artifical bat access point along the ridge tiles, allowing access into the loft space or roof insulation



Access slits incorporated into soffit boxes to allow bats access into the soffits internal void.

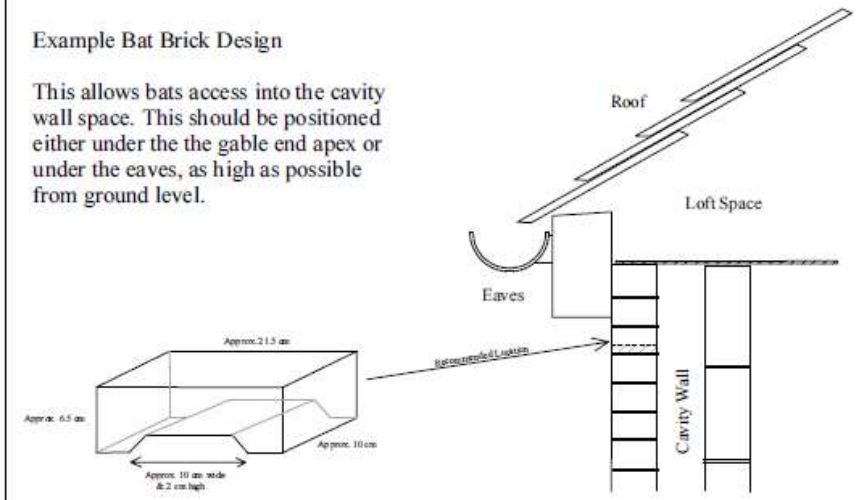


An example design for an artifical bat access point in the roof tiles. This typically consists of lead saddle and allows access into the loft space or insulation.



Example Bat Brick Design

This allows bats access into the cavity wall space. This should be positioned either under the the gable end apex or under the eaves, as high as possible from ground level.



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Appendix 5: Bat Ecology and Legislation

Bat Ecology

In the UK there are thought to be 18 native species of bat (17 known to be breeding), nearly all of which have experienced serious declines over the last century. All species are insectivorous and have evolved to hunt a different set of insects, present in different habitat types. Preferred bat habitat include, woodland, grassland, agricultural land, wetland and rivers. Bats typically roost close to foraging sites, and use linear features, such as hedgerows, tree lines and rivers to navigate. Removal of these linear features is thought to have a significant impact on their movement, which could be contributing to their decline. Bats will roost in a wide range of different sites including; built structures, underground sites and mature trees. Due to bats the bats ecology, different roost sites will be used at different times of the year. Known roost types include:

Hibernation roosts: November through to March
Temporary roosts: March to April and August to October
Maternity roosts: May through to August
Summer roosts (non-breeding): Used by males and immature females
Mating roosts: Around September and October

The two main roosts to be considered, with respect to buildings and development, are the maternity and hibernation roosts. Disturbance of these two roosts can have significant impacts on local bat populations. Maternity roosts are colonised around late May to early June and usually consist of mature females and their young. Females typically give birth to only one pup a year and disturbance during this time can result in females abandoning the roost and their young. Many species will use the same maternity roost year after year; the loss of a maternity roost can therefore have an enormous impact on the local population. Hibernation roots typically consist of underground sites, such as caves and cellars, where temperatures are low and relatively constant. Bats will hibernate to conserve energy over the winter months when falling temperatures cause a drop in the abundance of insects. Disturbing bats whilst hibernating may cause them to wake, wasting a lot of the bats energy reserves, reducing their chance of surviving the winter.

Bats and the Law

All bat species and their roosts in the UK are protected under European and UK law. The main piece of legislation protecting UK bats is the Conservation (Natural Habitats &c.) Regulations 1994 (better known as the Habitats Regulations). In addition to this bats and their roosts are also protected in England and Wales under the Wildlife and Countryside Act 1981 and The Countryside and Rights of Way Act 2000. Under these legislations, it is an offense to:

- Deliberately capture, injure or kill a bat.
- Deliberately disturb a bat in a way that would affect its ability to survive, breed or rear young (or hibernate or migrate in England, Wales and Northern Ireland) or (significantly in England, Wales and Scotland) affect the local distribution or abundance of the species.
- Damage or destroy a roost (this is an 'absolute' offence).
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat.
- Intentionally or recklessly disturb a bat at a roost.
- Intentionally or recklessly obstruct access to a roost.

If it is discovered that development may impact upon bat roosts (thus leading to an offence being committed) a mitigation plan should be devised and a Habitat Regulations derogation licence applied for from the relevant government department (i.e. Natural England). Gaining a licence will depend on many variables; such as species present, roost type, size and its local/regional/national importance.

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Appendix 6: Glossary

Activity surveys - are used to assess the level of bat activity at a site. This can be done either by using equipment such as an AnaBat device, or manually walking around a site, with a heterodyne detector, documenting the number of bat passes and interceptions.

Dawn surveys - begin around 2 hours before and up to sunrise, when bats are returning to their roosts from foraging and swarming behaviour can be seen close to roost entrances.

Dusk surveys - begin around 30 minutes before sunset and up to 2 hours afterwards. These are done in order to see bats emerging from their roost sites at night.

Echolocation – is a system similar to sonar, and allows bats to travel and forage even in total darkness. Bats make a call and then listen to the returning echoes in order to build up a map of their surrounding area. This allows bats to gauge what an object is and how far away it is, by how long sound takes to return to them.

Habitat - the ecological or environmental area that is inhabited by a particular species of animal, plant or other type of organism.

Hibernation - is a state of inactivity and metabolic depression characterized by lower body temperature, slower breathing, and lower metabolic rate. Hibernating animals conserve food, especially during winter when food is short, tapping energy reserves, body fat, at a slow rate.

Hibernation roost - typically consist of underground sites, such as caves and cellars, which remain relatively cold and humid. Bats will hibernate to conserve energy over the winter months when falling temperatures cause a drop in the abundance of insects. These will typically be colonised around November to around March.

Insectivorous – is when an organism feeds exclusively on insects.

Nocturnal - a behaviour characterized by being active during the night and sleeping during the day.

Maternity roosts – colonised around late May early June and consist of mature females and their young. These roosts need to be warm and quiet, and are used up until around August, with females typically leaving first and then the young.

Mating roosts – mating begins around late October to November; with males of most species using special mating calls to attract females. These can include purrs, clicks and buzzing.

Roost – a site where bats live during the day, rear young and hibernate. These can be in man made structures, such as buildings, bridges, tunnels, cellars and mines, or natural features such as mature trees and caves.

Roost in buildings – many types of buildings will be used by bats, the most likely sites are agricultural buildings (e.g. farmhouses and barns), buildings with exposed wooden beams (greater than 20cm thick), buildings with weather boarding and/or hanging tiles, and buildings close to woodland and/or water.

Roost in trees – these are typically in mature trees with deep sheltered cracks, under loose sections of bark, or in woodpecker holes.

Species – a group of organisms in which all members can interbreed and produce viable offspring.

Summer roosts (non-breeding) - these are generally occupied by groups of males and immature females during the summer, and are usually only occupied for a short period before the group moves to another location.

Swarming – a behaviour exhibited by bats returning to their roost sites at dawn. Bats can be seen repeatedly flying to and from the roost entrance, making it much easier for consultants to identify where roosts are on a building or structure.

Temporary/Transitory roosts – These are used after hibernation (March – April) before mature females disperse to maternity roosts and male/ immature females colonise summer (non-breeding) roosts. Similarly, temporary roosts form before hibernation (August -October).

Underground Roosts – these are typically used during the winter and can be mines, caves, tunnels or cellars.

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Appendix 7: References

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Relevant Legislation:

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Countryside and Rights of Way Act 2000 <http://www.legislation.gov.uk/ukpga/2000/37/pdfs/ukpga_20000037_en.pdf?view=interweave>

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I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

Signed

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