

Initial Bat Survey: Bodenham Manor, Bodenham, Herefordshire, HR1 3JS.

National Grid Reference 352715, 251425

Site Visit 1: 23rd February 2015

Site Visit 2: 21st March 2015

Site Visit 3: 6th April 2015

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1. SUMMARY

On 23rd February 2015, 21st March 2015 and 6th April 2015 an Initial Bat Survey was carried out on Bodenham Manor, Bodenham, Herefordshire, HR1 3JS.

It is understood that there is a proposal to demolish the Manor and to replace it with a new residential dwelling.

The Initial Bat Survey determined that the Manor does not provide bat roosting potential.

No physical evidence of bat was found on the exterior or within the interior of the Manor.

It is not considered necessary that further bat-specific survey work be carried out to inform the development of the Manor.

Furthermore; it is not necessary for a European Protected Species Licence for bats to be granted by Natural England to allow the lawful demolition of the Manor.

The Manor is surrounded by habitat suitable for bats to use for commuting, foraging and roosting purposes. Therefore; external lighting installed on the new, replacement, dwelling should be sensitive to bats. Recommendations for suitable external lighting are made.

No evidence of Small Breeding Birds was found on the exterior or within the interior of the Manor. However, Small Breeding Birds may nest on the Manor in the future. Therefore, mitigation for Small Breeding Birds is recommended.

It may be possible for future bat roosting potential and small bird nesting opportunity to be incorporated into or onto the new replacement dwelling and/or other buildings and/or trees within the Bodenham Manor property.

Suggestions for proportionate wildlife enhancement are made.

2. INTRODUCTION

2.1 Background

Star Ecology was commissioned to conduct an Initial Bat Survey of Bodenham Manor Bodenham, Herefordshire, HR1 3JS.

It is understood that there is a proposal to demolish the Manor and to replace it with a new residential dwelling.

The Initial Bat Survey was carried out on 23rd February 2015, 21st March 2015 and 6th April 2015 by Dr. R. M. Jones, experienced field biologist, surveyor, and Natural England licensed bat worker (Licence numbers 2014-4971-SCI-SCI and CLS01310).

Historical biodiversity records of bat within the vicinity of Bodenham Manor were purchased from the Herefordshire Biological Records Centre.

2.2 Survey Objectives

- To ascertain the potential for bat to roost within the Manor.
- To ascertain if bats are present in the structure of the Manor.
- To confirm where bats (if present) are roosting in the Manor.
- To determine the species of bat (if present) roosting in the Manor.
- To determine the number of bats that may be roosting in the Manor.
- To establish the type of roost(s).
- To assess potential impacts of the proposed development on bats.
- To determine if Small Breeding Birds are nesting in, or on, the Manor and to assess potential impacts of the proposed development on them.
- To make suitable recommendations for further survey work if appropriate.

2.3 Report Objectives

- To report on the findings of the Initial Bat Survey.
- To determine if a European Protected Species Licence, issued by Natural England, is necessary for the proposed development works.
- To determine if the proposed development may affect bats recorded within the vicinity of Bodenham Manor.
- If appropriate, to make suitable recommendations for further survey.
- If appropriate, to make recommendations as to how mitigation and/or compensation measures can be incorporated into the proposed development designs.

2.4 Site Location and Description

Bodenham Manor is situated within large private grounds which predominantly comprise mature deciduous woodland, various garden areas, various buildings and areas of hardstanding.

Bodenham Manor is situated at the west fringe of the sprawling village of Bodenham.

The area of woodland at the immediate north of the Manor extends west into large mixed trees species deciduous woodland, the majority of which is within Dinmore Hill Woods Site of Special Scientific Interest (SSSI).

The landscape surrounding Bodenham Manor consists of agricultural, commercial/industrial and residential properties, intensively managed agricultural fields, woodlands/copses and Bodenham Lake.

Lady Close Orchard and Bodenham Lakes Nature Reserve are situated to the south of Bodenham Manor

The River Lugg (which is a SSSI within the River Wye Special Area of Conservation) flows:

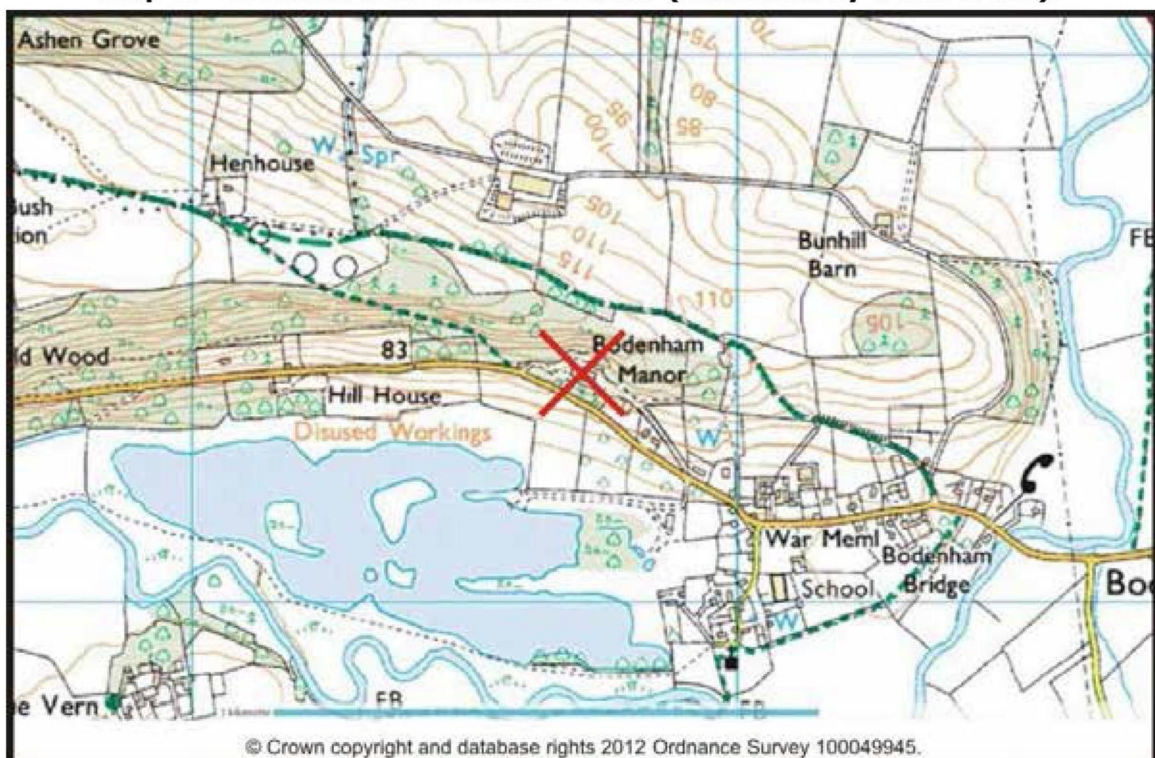
- west-to-east approximately 1km north of Bodenham Manor;
- north-to-south approximately 900m east of the Manor; and,
- east-to-west approximately 500m south of the Manor.

Map 1. Location of Bodenham Manor.

Map 2. Location of Bodenham Manor and surrounding habitat types.

Please note: the aerial photograph of habitat types is a 'screenshot' from Google Maps.

Map 1. Location of Bodenham Manor (indicated by a red cross).



Map 2. Location of Bodenham Manor (indicated by a red cross) and surrounding habitat types.



3. LEGISLATION AND PLANNING POLICY

N.B. This is a simplified summary of the legislation.
See other texts or refer to the full legislation for more detail.

3.1 Bat

All bat species (*Rhinolophidae* and *Vespertilionidae*) are protected under the Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2010.

Under this legislation it is illegal to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats;
- damage or destroy bat roosts or resting places of bats;
- keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from such a wild animal.
- intentionally or recklessly obstruct access to a bat roost.
- deliberately disturb any bat, in particular any disturbance which is likely to (i) impair their ability to survive, breed, reproduce or to rear or nurture their young; or in the case of hibernating or migratory species, to hibernate or migrate; or (ii) to affect significantly the local distribution or abundance of the species to which they belong.

A bat roost may be any structure a bat uses for breeding, resting, shelter or protection. Roost sites are protected whether or not bats are in occupation, as they may be re-used by bats.

All species of bat are priority species in the UK Biodiversity Action Plan (HM Government 1994 et seq.) and are Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

A European Protected Species (EPS) development Licence from Natural England may be required for development works affecting bats.

3.2 Small Breeding Bird

Under the Wildlife and Countryside Act 1981, all birds are protected while breeding. It is an offence, with certain exceptions to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- intentionally take or destroy the egg of any wild bird.

3.3 Planning Policy

3.3.1 National Planning Policy Framework

Bullet point four of Paragraph 118 of the National Planning Policy Framework states:

“opportunities to incorporate biodiversity in and around developments should be encouraged”.

3.3.2 Natural Environment and Rural Communities Act (2006)

Section 40 of the Natural Environment and Rural Communities Act (2006) states:

"Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity".

Section 40(3) of Natural Environment and Rural Communities Act (2006):

"conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat".

3.4 European Protected Species Licensing

European Protected Species (EPS) Licences derogating from the protection afforded to bats can be granted for a number of specified reasons or purposes as set out in Regulation 53(2)(e-g) and 53(9)(a-b) of the Conservation of Habitats and Species Regulations 2010.

There are three purposes that EPS Licences may be granted.

The first purpose ('test') must be one of either:

- Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social and economic nature and beneficial consequences of primary importance for the environment;
- Preventing the spread of disease;
- Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other forms of property or to fisheries; to allow people to carry out activities which would otherwise be illegal.

The following two criteria ('tests') must also be met:

- there is no satisfactory alternative; and
- the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

EPS Licence applications need to provide sufficient evidence to demonstrate that the 'three tests' are met before a licence can be issued.

Each application is assessed by Natural England on its own merits.

4. METHOD

4.1 Desk Study

A data search was commissioned from Herefordshire Biological Records Centre (HBRC) for records of priority/protected species and wildlife sites within a 2km radius of National Grid Reference (NGR) 352795, 251350. NGR is approximately 90m west of Bodenham Manor. The land in the immediate vicinity of NGR 352795, 251350 is understood to be subject to a proposed separate/unrelated development on which Star Ecology has provided consultation.

Designated wildlife sites within 2km of The Site were identified using the Multi-Agency Geographic Information Centre (MAGIC) (<http://magic.gov.uk>).

4.2 Bat Survey

4.2.1 Initial Bat Survey

4.2.1.1 Assessment of Bat Roost Potential

The Manor was assessed for its potential to support bats and the type and number of bat roosts.

This involves consideration of a number of abiotic factors including:

- Access to the interior of the building or to other suitable roosts
- Age
- Construction fabric
- Habitat context
- Light levels
- Previous use of, and activity within the building
- Temperature regime and protection from weather

4.2.1.2 Physical Evidence of Bat Occupation

The exteriors and interiors of Bodenham Manor were surveyed for the presence of bats and their roosts.

Search methods included the use of torches (including a Fenix RC40 3800 lumen torch), close-focussing binoculars (Zeiss 10x42), borescope (Visual Optics VO18 5.8mm Fibre Optic), endoscope (Provision PV2636-21 5.8mm), video-scope (Draper 05163 Recording Flexi Inspection Camera), a 3.8m Telescopic ladder, 8.15m Combination ladder; and combinations of these.

A search was also made for notable signs of past and/or present bat roost activity, including bat urine stains, fur oil stains, scratch marks and faeces. These may be found around a bat roost entrance, within a roost and within flight/foraging areas.

A partial destructive search was carried out. Where deemed necessary; ridge tiles were (temporarily) removed and their undersides inspected for physical evidence of bats.

4.2.1.3 Limitations of Initial Bat Survey

Natural deterioration and/or removal of bat droppings

Physical evidence of bats that may have been created within the previous bat-active season may have deteriorated or have been removed (for example by wind and/or rain) prior to the Initial Bat Survey being carried out.

Inaccessible structural features

An initial assessment cannot rule out bat presence as bats may roost in areas that are not accessible other than by a destructive search. However, surveyor access was provided to all areas of Bodenham Manor and, wherever necessary, a destructive search was carried out to allow the adequate inspection of structural features. Therefore the constraint of this limitation is considered to be negligible.

Viewing from the ground

Parapet walls obscure the viewing of the roof structures of the original section (Section A, see Map 3,) of Bodenham Manor. However, surveyor access was provided to all roofs of the Manor to allow their close inspection. Therefore the constraint of this limitation is considered to be negligible.

External height and parapet walls

Bodenham Manor measures approximately 10.0m high from the ground to the tops of horizontal parapet walls and approximately 12.0m high from the ground to the tops of gable apices.

The height of the Manor may, ordinarily, mean that some external wall surfaces would not be adequately surveyed.

However, external walls of the Manor were surveyed by:

- use of a 8.15m Combination ladder;
- viewing with the aid of close-focussing binoculars (Zeiss 10x42) and a powerful torch (Fenix RC40 3800 lumen torch; and,
- viewing from the interior of the parapet.

All parapet walls, including the junctions between wall stones and coping stones, were viewed from the interior of the parapet.

Therefore the constraint of this limitation is considered to be negligible.

Bodenham Manor Cellar

The Cellar of Bodenham Manor is contaminated with asbestos. However, the surveyor has received suitable training for working in asbestos contaminated areas and suitable Personal Protective Equipment was worn to allow the Cellar to be thoroughly inspected for physical evidence of bats.

Due to the asbestos contamination of the Cellar no photographic record of the Cellar was made. The constraint of this limitation is considered to be negligible.

4.3 Small Breeding Bird

The presence of bird nests, active (in current use) and inactive (not in current use), on and within the building were noted.

5. RESULTS

5.1 Desk Study

HBRC provided records to Star Ecology on 5th January 2015.

The HBRC has 61 records of Bat within 2km of The Site.

Of the records of Bat within 2km of The Site:

- the earliest record was collected in year 1984
- the most recent record was collected in year 2008
- records appear to have been collected from 14 different locations
- there is one record of Daubenton's bat (*Myotis daubentonii*)
- there is one record of Whiskered bat (*Myotis mystacinus*)
- there are four records of Lesser Horseshoe bat (*Rhinolophus hipposideros*)
- there are four records of Pipistrelle bat (*Pipistrellus* sp.)
- there are five records of unidentified *Myotis* (*Myotis* sp.) species of bat
- there are seven records of Noctule bat (*Nyctalus noctula*)
- there are seven records of unidentified bat (*Chiroptera* sp.)
- there are nine records of Long-eared bat species (*Plecotus* sp.)
- there are nine records of Soprano pipistrelle (*Pipistrellus pygmaeus*)
- there are 14 records of Pipistrelle bat species (*Pipistrellus* sp.)

There are records of bat within Bodenham Nature Reserve at the south of Bodenham Manor. However, it does not appear that there are records of bat at Bodenham Manor.

5.2 Initial Bat Survey

Appendix 1 contains a photographic record of the Initial Bat Survey.

Weather conditions during both survey dates were dry and bright and there was no breeze.

5.2.1 Bodenham Manor Descriptions

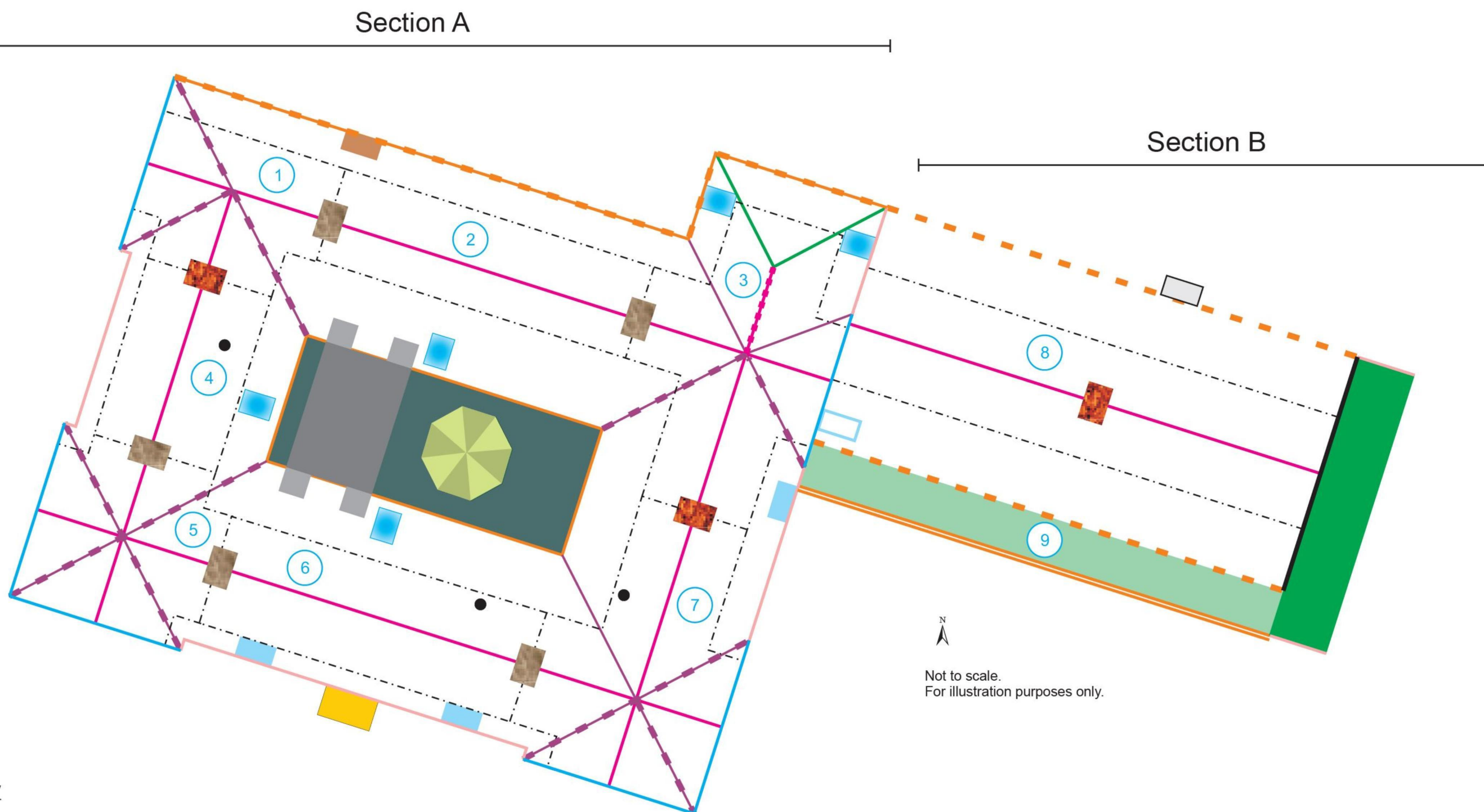
For ease of reference and reporting an illustrative diagram of the roof structures Bodenham Manor has been made. The Manor has been divided into two distinct sections (Section A and Section B) and each roof-space of the Manor has been given an identification number.

A referenced diagram of the roof structures of Bodenham Manor is contained in Map 3.

Please note:

- The diagram of the roof structures of Bodenham Manor is not to scale and is for illustrative purposes only.
- Map 3 and its keys should be referred to for descriptions of the roof structures of Bodenham Manor.

Map 3. Illustrative Diagram of the Roof-spaces of Bodenham Manor



Main Key

Section A.
The original section of the Manor. Three-storey with cellar. Constructed of stone with quoining, hood moulded windows and parapet walls with ornamental pinnacles and finials. Lead gutters are situated inside parapets.



























Section B.
A more recent extension. Predominantly two-storey with single-storey parts. The lower, ground-floor, is constructed of stone; the upper, first-floor, appears to be constructed of concrete-block and is (externally) rendered. The northwest elevation of Section B abuts Section A. Lead flashing forms a weather-tight seal at the junction between the roof of Section B and the southeast elevation of Section A.

----- Approximate outline of roof-spaces.

① Roof-space identification number.

Building Features Key

Please note: unless otherwise stated: roofs are covered with slate.

-  Single-storey ground-floor extension. Mono-pitch slate covered roof. Lead abutment to wall. Exterior common rafters, barge boards and fascia boards.
-  'Sunken' lead covered 'flat' roof. Lead abutments.
-  Single-storey 'lean-to'. Mono-pitch slate covered roof. Lead abutment to wall at northwest. Southeast-end has an over-hanging slate verge. Northwest-end has lead flashing to wall at northwest.
-  Single-storey 'toilet-block'. 'Flat' felt covered roof. Felt abutments. Gentle fall/slope to southeast felt verge/fascia. Northeast and southwest stone parapet walls with coping stones.
-  Brick pillar and Rolled-Steel-Joist support for galvanised metal water tanks. Brick pillars have lead cappings.
-  Glazed octagonal roof light.
-  Chimney stacks with brick plinths. Lead flashings and aprons.
-  Chimney stacks with stone plinths. Lead flashings and aprons.
-  Roofing-felt covered 'flat' roof of a third-floor brick-built (fire-escape) door-way. Felt verges/fascia. Timber tongue-and-groove 'ceiling' and eaves/soffits.
-  Transparent PVC/plastic corrugated sheet covered mono-pitch roof over a (fire-escape) stair-case.
-  Lead covered 'flat' roof dormer windows. Lead sheeting covers roof verges. Slate covered cheeks. Lead flashing abutments.
-  Lead covered 'flat' roof dormer window. Lead sheeting covers the southeast and southwest roof verges. The southeast elevation cheek is glazed. The northwest elevation abuts a wall.
-  Modern-type purpose-made roof-lights with purpose-made sheet-metal and lead flashings and aprons.
-  Modern-type purpose-made 'slate' roof vent terminal with plastic/rubber and lead flashings.
-  Horizontal parapet wall approximately 0.4m high with rolled-top coping stones. Shallow parapet and flat copings in front of dormer windows. The 'flat' roof of Section B has two parapet walls, approximately 0.2m high, with flat coping stones.
-  Sloping parapet gable walls with ornate triangular shaped coping stones with an apex round rail/bar.
-  Eaves with a small slate verge overhang and exposed wall-plates. Eaves overhang by approximately 40mm.
-  Overhanging eaves with fascia boards and stone soffits. Eaves overhang by approximately 150mm.
-  Overhanging open/unenclosed eaves with fascia boards and (rafter-to-rafter) in-filling. Eaves overhang by approximately 150mm.
-  Eaves with small slate verge overhang and wall-mounted fascia boards. Eaves overhang by approximately 40mm.
-  Apex gable with overhanging roof verge. Bargeboards are approximately 150mm from the gable wall and attached to exterior common rafters. The slate roof verge is bedded on mortar and overhangs barge boards by approximately 30mm.
-  'Flush'/Layboard lead lined valleys immediately beneath the slate line.
-  'Sunken' square-shaped lead lined valley-gutters. The central gutter part is approximately 120mm wide and 100mm deep.
-  Roof apexes covered with abutting (non-interlocking) ridge tiles.
-  Roof apex covered with lead and abutting (non-interlocking) ridge tiles (over the lead).
-  Lead covered roof hips.

General description of Bodenham Manor

Bodenham Manor consists of an original stone built section (Section A) and a later extension (Section B).

Section A is three-storey with a Cellar. Section B is predominantly two-storey with two single-storey areas.

It is understood that the conversion of the second-floor of the Manor (i.e. partially within the roof structure of Section A) ceased at least one year before Survey Visit 1 (23rd February 2015).

Section A has slate covered apex roofs with a central 'flat' roof and large octagonal roof-light. Apex roofs are supported by double-strut King-post/bolt roof trusses and internal walls.

The main, two-storey, part of Section B has a slate covered apex roof supported by double-strut King-post/bolt roof trusses and various braces/struts.

Section B has a single-storey 'flat' roof part and a single-storey part with a mono-pitch slate covered roof.

It is understood that Bodenham Manor may have been subject to various building works in the past 20 years or so - including its (partial) conversion to flats. At the time of survey various 'recent' building works were apparent including the stripping and repairing of three roof-slopes, the installation of purpose-made roof-lights and the re-fixing of slates using lead (and, occasionally, copper) tingles.

The history of Bodenham Manor, including its recent use within the past ten years, or so, may be obtained from the owner(s) of the Manor and/or their agents.

Roof-spaces

Please note:

- all stated measurements are approximate.
- the stated height of roof-spaces is the maximum height from the underside of the ridge-beam to the top of floor/ceiling joists.
- the stated width of roof-spaces is the maximum distance between structural timbers at the base of the roof-space.

Section A: Roof-space 1

1.8m high and 2.0m – 2.7m wide.

No roof underlining. Fibre-glass (or similar) insulation between floor/ceiling joists.

Section A: Roof-space 2

1.2m high and 1.9m wide.

No roof underlining. Fibre-glass (or similar) insulation between floor/ceiling joists.

Section A: Roof-space 3

1.7m high and 2.7m wide.

The 'original' roof-slopes above Roof-space 3 have underlining.

The three roof-slopes of the hipped section of the roof structure above roof-space 3 appear to have been stripped and recovered within the past 10 years or so. During the re-covering of the three roof-slopes modern breathable roof membrane and new slates were installed and the ridge was covered with lead and ridge tiles.

Fibre-glass (or similar) insulation is present between some areas of floor/ceiling joists, but not others.

Section A: Roof-space 4

1.6m high and 2.4m wide.

No roof underlining. Fibre-glass (or similar) insulation between floor/ceiling joists.

Section A: Roof-space 5

1.6m high and 2.2m wide.

No roof underlining. Fibre-glass (or similar) insulation between floor/ceiling joists.

Section A: Roof-space 6

1.8m high and 3.5m wide.

No roof underlining. Fibre-glass (or similar) insulation between floor/ceiling joists.

Section A: Roof-space 7

1.6m high and 2.7m wide.

No roof underlining. Fibre-glass (or similar) insulation between floor/ceiling joists.

Section B: Roof-space 8

1.6m high and 3.0m wide.

Roof is underlined traditional-type bitumastic/hessian roofing felt (1F).

No insulation present.

Section B: Roof-space 9

0.5m high and 0.9m wide.

Roof is underlined traditional-type bitumastic/hessian roofing felt (1F).

No insulation present.

Cellar

The Cellar is accessed by either an external doorway on the northwest elevation of Section A or via a doorway and staircase within the ground-floor of Section A.

The Cellar consists of five rooms and a corridor which are each easily accessible. In addition, the void beneath the main (ground-floor) front room of the mansion can be accessed – this area is low (0.70m) in height and consists of numerous stone structural pillars.

At the time of survey the Cellar was inaccessible to bats. The external doorway had been boarded over, all ground-level ventilation holes/grills had been blocked-off with slate and/or bricks and coal-shute grill covers had been blocked-off with ply-board.

5.2.2 Assessment of Bat Roost Potential

It is not considered that Bodenham Manor provides bat roosting potential.

Roof ridges

Ridge tiles are close fitting and the vast majority are bedded on mortar.

The lead ridge cover over the ridge of the hipped section of the roof of Section 1 (above Roof-space 3) is intact, close-fitting and in 'new' condition.

Lead hip ridges are intact and close-fitting and in 'new' condition.

There are no potential access points to the undersides of ridge tiles, including that tops of lead valleys.

Roof coverings

All slates are *in situ* and close fitting.

Where (previous) roof-repairs have been carried out and slates have been re-fixed with lead tingles; this appears to have been professionally done and slates are close-fitting.

Lead valleys are intact and close-fitting.

Valley heads (the undersides of ridge tiles) are well pointed.

There are no slate-to-slate crevices suitable for bat to roost within or to use to gain access to the batten void and/or internal roosting space.

Lead abutments

Roof lead abutments around chimneys, roof apex and/or verge abutments, roof-lights, and soil-pipe (or similar) 'slate' vent pipe terminals are intact and close-fitting.

Lead covered flat roofs

Lead covering dormer roofs and the roof of the northwest elevation door opening are intact and close-fitting. There are no crevices between the roof structures and the lead coverings which may potentially be used for roosting by (lone) crevice dwelling bats.

Parapet lead gutters

The gutters within the parapet walls have been formed/lined with lead.

With the exception of one roof-slope; lead flashing has been installed on the inside surfaces of the gable parapet walls. This lead work appears to have been installed properly and is intact and close-fitting.

However, it appears that the lead guttering within the horizontal sections of the roof structure has been poorly formed and/or re-formed and that no reglet/raggle is present. Consequently there are numerous gaps/crevices between the lead gutter and the inside face of the parapet walls. However, these gaps/crevices do not provide bat roosting potential as they are full of (leaf) debris and subject to water ingress.

(One of the junctions between a gable roof-slope and parapet walls has been formed by a metal-beading and mortar fillet).

Parapet walls

There are no missing-mortar crevices within the parapet wall structure which may be used by for roosting purposes. Where missing-mortar crevices are present they are on/within the interior faces of the wall and are too-shallow for use by bats and/or full of debris and/or subject to water ingress (as the crevices are usually within the area of the parapet gutter).

There are no crevices between the tops of parapet walls and the undersides of copings stones.

External walls

There are two missing-mortar holes/crevices within the southwest elevation wall of Section A. The holes/crevices are within approximately 0.40m of the base of the parapet and are too-shallow to be used by bats for roosting purposes. Furthermore one of the holes/crevices appears to be subject to water ingress caused by water moving through the base of the parapet - due to the failure of the parapet gutter.

There are numerous missing-mortar crevices within the northeast elevation of Section A. However, these are associated with a leaking/blocked water collection hopper and down-pipe. The rain water hopper appears to take (grey) water from second-floor (partially converted) flats and an internal second-floor roof gutter which takes water from the central 'flat' roof of Section A and roof-slopes falling towards

the 'flat' roof. The internal second-floor roof gutter is blocked and full of leaf debris which may have contributed to the blocking of the water collection hopper. In any event the wall crevices are either too shallow for use by bats for roosting purposes and/or full of algae and/or moss. Consequently, none of the missing-mortar wall crevices are considered to provide bat roosting potential.

Roof eaves and verges

Overhanging roof eaves are exposed/un-enclosed but well-formed.

Rafter-to-rafter infilling is present and intact. There is no potential bat access to the roof-structure via the eaves.

The exposed southeast elevation roof verge above the barge boards of the main (two-story) part of Section B is close-fitting and slates at the verge appear to be bedded on/with mortar.

The exposed southeast elevation roof verge of the single-storey mono-pitched roof of Section B is pointed with intact mortar.

The exposed roof verges of the single-storey porch of Section A are close-fitting. There is no potential access for bats to the interior of Bodenham Manor via roof eaves or verges.

Barge boards and fascia boards

There is no potential bat access to the interior of the main (two-storey) roof-space of Section B or its roof structure via the apex of the southeast elevation gable. The exterior wall fits closely/tightly to the roof felt/underlining.

Roof-spaces

There is no potential bat access to the interiors of roof-spaces.

The undersides of ridge beams are covered with cobwebs.

Interior ground-floor, first-floor and second-floor rooms of Bodenham Manor

There is no potential access for bats to the ground-floor, first-floor or second-floor rooms of Bodenham Manor.

Cellar

At the time of survey there was no potential bat access to the interior of The Cellar.

5.2.3 Physical Evidence of Bat Occupation

No physical evidence of bat was found on or within Bodenham Manor.

Considering the structural fabric of the Manor; it is not unexpected that no evidence of roosting bats was found.

5.3 Small Breeding Bird

No evidence of bird nesting was found on or within Bodenham Manor.

6. CONCLUSION

6.1 Bat

Bodenham Manor does not provide bat roosting potential.

No physical evidence of bats was found.

It is not considered necessary for further bat-specific survey work to be carried out to inform the proposed demolition of Bodenham Manor.

Furthermore, it is not necessary for a European Protected Species Licence for bats to be granted by Natural England to allow the proposed demolition of Bodenham Manor to be lawfully carried out.

Future bat roosting opportunity may be incorporated into the design of the new proposed replacement dwelling.

Details of the fabrication of purpose-made bat roost openings and bat roost space that may be suitable for installation within the new replacement dwelling are contained within Section 7.1.1.

External lighting:

In order to negate the potential impact of the development on bats that may roost and/or forage within the vicinity of the new replacement dwelling; external lighting to be installed should be done so in a sympathetic manner.

See Section 7.1.2.

6.2 Small Breeding Bird

No evidence of nesting by Small Breeding Birds was found on or within Bodenham Manor.

However, it is possible that Small Breeding Birds may nest on the exterior of the Mansion in the future.

Recommended mitigation and enhancement for Small Breeding Birds is contained in Section 7.2.

7. RECOMMENDATIONS

7.1 Bat Enhancement Measures

7.1.1 Purpose Built Bat Roosts

New potential bat roosts may be incorporated into the structure of the new replacement dwelling or installed within the vicinity of the new replacement dwelling and within the Bodenham Manor property.

For example, an Eaves Box, a Loft Box, a Rafter Box, Soffit Box Bat Roosts, Exterior Common Rafter Bat Crevices, Wall Cavity Bat Roosts, a series of purpose-made Bat Boxes or Raised Ridge Tiles could be installed in the structure of the new replacement dwelling.

Each of these bat roosting features is described in Sections 7.1.1.1 – 7.1.1.8.

Examples of bat compensation and enhancement measures are contained in Appendix 2.

7.1.1.1 Eaves Box

The dimensions of each Eaves Box should be a minimum of 300mm high (at the vertical 'back' inside the building roof) and a minimum of 400mm wide. The length of Eaves Boxes will be determined by the spacing of rafters forming the roof and therefore cannot be known until rafter installation has taken place. However, each Eaves Box should have a minimum length of 800mm.

One opening for bats should be provided to each Eaves Box, at the top of the external walls.

Each opening should be a maximum of 150mm long and between 20-25mm wide at the eaves.

The roof area over each Eaves Box should be lined with traditional type bitumastic/hessian felt to provide suitable purchase for bats.

The upper surface of Eaves Box floors should be covered with heavy duty (500 micron/2000 gauge) plastic sheeting, such as damp-proof membrane. The plastic sheeting should be securely fixed in place.

In order to aid monitoring of each Eaves Box bat roost, an inspection hatch of no more than 300 x 300mm should be constructed in the inside vertical wall of each Eaves Box.

A sign should be attached to each inspection hatch to indicate the presence of a bat roost, that only licensed bat workers should access it, and to provide the telephone number of the Bat Conservation Trust.

The design of Eaves Boxes follows that in the book "The Design and Construction of Bat Boxes in Houses" (Scottish Natural Heritage, 1996), reproduced in the Bat Mitigation Guidelines (S.9.4.2, pp. 61; 2004).

7.1.1.2 Loft Box

Loft Boxes should be a minimum of 500mm high (from ridge to floor), 600mm wide (at the base) and 500mm long.

Ideally, Loft Boxes should only be installed at building ends and not within middle-sections.

Access for bats may be provided by crevices on top of or within gable walls, gaps in outer weatherboarding, the creation of a 'letter box' style opening approximately 150mm long and 25mm high (the bottom edge of which should be a minimum of 40mm above the floor of the Loft Box) or by the use of purpose made bat access panels/bricks.

The roof area over each Loft Box should be lined with traditional type bitumastic/hessian felt to provide suitable purchase for bats.

The upper surface of Loft Box floors should be covered with heavy duty (500 micron/2000 gauge) plastic sheeting, such as damp-proof membrane. The plastic sheeting should be securely fixed in place.

In order to aid monitoring of each Loft Box, an inspection hatch of no more than 300 x 300mm should be constructed in a inside vertical wall of each Loft Box.

A sign should be attached to each inspection hatch to indicate the presence of a bat roost, that only licensed bat workers should access it, and to provide the telephone number of the Bat Conservation Trust.

No insulation materials should be installed within Loft Boxes.

The design of Loft Boxes follows that in the book "The Design and Construction of Bat Boxes in Houses" (Scottish Natural Heritage, 1996).

7.1.1.3 Rafter Box

Potential bat roost space may be created under the roof by providing exclusive areas between rafters for use by bats. Rafter Boxes may be created at the bottom of a roof slope, near to the eaves, at the apex, anywhere suitable in-between, or along the whole slope of the roof. Boxes formed at the base of the roof may provide an extension to potential bat roosting areas that may be created at the eaves.

By placing boarding on the underside of two or more rafters and closing off the bottom and top as required, potential roosting space is created. Dependent upon design plans, perceived occupation by a high number of bats, and the position of the Rafter Box on the roof slope, an access door or panel may be provided. A small door at the bottom of the Box or on its underside will allow the Box to be inspected by a licensed bat worker and cleaned-out as necessary.

Ideally the Box should be lined with bitumastic/hessian roofing felt on its base to provide suitable purchase for bats.

Access to Rafter Box bat roosts may be provided by purpose made Lead Bat 'Slates/Tiles', purpose-made Bat Access Slates/Tiles or modified slate-/tile- vents.

Lead Bat 'Slates/Tiles' can be formed by a competent roofing contractor on-site.

Lead Bat 'Slates/Tiles' must be formed from a minimum of Code 6 lead to the design recommended by Natural England (formerly English Nature) in their leaflet "Bat access 'slate' Detail 1B (with access to roof void)", reproduced in Appendix 3.

Using a minimum of Code 6 lead, a rectangle piece of lead, (approximately twice as wide of the slates/tiles covering the roof and slightly longer), can be double-folded and shaped to form a crevice approximately 20mm high suitable for bats to crawl through into the roost space.

A plan of a Lead Bat 'Slate/Tile' design, a photograph of a Lead Bat 'Slate' and a photograph of a Lead Bat 'Tile' are contained in Appendix 4.

Purpose-made Bat Access Slates may be purchased from companies such as Summit Slate Supplies (see website <http://www.summitslate.co.uk/index.php>). A copy of the Summit Slate Supplies Bat Access Slate ('Slate-line Bat Vent') leaflet is contained in Appendix 5.

Purpose-made Bat Access Tiles may be purchased from companies such as Tudor Roof Tile Company Limited (see website <http://www.tudorrooftiles.co.uk/>) or The Natural History Book Store (<http://www.nhbs.com/>). A copy of the Tudor Roof Tile Company Limited Bat Access Tile leaflet is contained in Appendix 6.

Alternatively, readily available slate-/tile- vents can be adapted – by removing internal mesh/filters – and installed to provide bat access.

Should the top of the Rafter Box touch the roof apex, access for bats may be provided by adapted ridge tiles: modified ridge ventilator tiles (those with their internal mesh or plastic mouldings removed) or raised ridge tiles. Raised ridge tiles can be achieved either by narrowing the gap between ridge tiles and resting the middle tiles on their neighbours, or by packing the ends of ridge tiles with an excess amount of mortar (or similar). (See Section 7.1.1.8).

7.1.1.4 Soffit Box Bat Roost

If overhanging eaves are part of the proposed building design and soffit boxes are to be formed; bat roosting opportunities may be achieved by leaving or creating potential bat ingress/egress 'slots' between external walls and soffit boarding. The minimum internal dimensions of slots should 150mm long and 22mm wide and should provide an unobstructed crevice to the interior of the soffit box.

Ideally, slots should be created near to apexes of overhanging gables.

Slots should not be installed above windows or doors.

If possible, the inner surface of some soffit roof voids should be lined with traditional type bitumastic/hessian felt. This provides extra purchase for bats that may roost within the soffit boxes.

Purpose-made bat boxes for installation within soffit boxes are commercially available.

7.1.1.5 Exterior Common Rafter Bat Crevices

It is possible that the gables of the new replacement dwelling may have exterior common rafters.

During roofing work crevices ('Exterior Common Rafter Bat Crevices') approximately 15mm – 25mm wide and the depth of the rafter, may be created between the top of exterior walls and the near-side edge of exterior common rafters. Crevices should not be less than 150mm in length.

If possible, crevices between exterior common rafters and exterior walls should extend to a small (approximately 100mm diameter) roosting cavity on the top of gable walls.

7.1.1.6 Wall Cavity Bat Roosts

Cavity-wall bat roost space may be provided where the proposed construction design allows. By forming an area of minimum 200-300mm high and 150-200mm wide, adequate roost space for bats can be created. Access should be created at the bottom of the roost space by providing a gap of 150mm long (minimum) and 20-25mm high.

These spaces are suitable for buildings to be covered with wooden boarding, as access can easily be created by raising and leaving open a section of board. This method may also be used to provide access to Loft Boxes (Section 7.1.1.2).

7.1.1.7 Bat Boxes

New potential Bat Box-type roosts can easily be incorporated into the design fabric of the new replacement dwelling.

"Bat bricks" may be built into building walls. These bricks can provide roosting opportunities for bats on their own, or could be used to provide an access point to internal roost spaces, such as a Loft Box (Section 7.1.1.2).

Similarly, specially designed Bat Boxes are available that may be built into walls or encased by exterior weather boarding.

Recommended designs are the Schwegler 1FR and 2FR Bat Tubes which provide maintenance-free roosting opportunities, the Schwegler N27 Bat Box and Wienerberger EcoSurv Bat Boxes.

These Bat Tubes and Boxes may be aesthetically unobtrusive if sympathetically integrated into the finished design of the proposed development.

Bat Boxes should be installed where design plans allows, in the under-eaves region, at gable apexes or along barge-boards.

On trees and on fence boundaries in the surrounding area potential bat roosting opportunity may also be provided by the installation of Bat Boxes/Tubes.

Although longer-lasting woodcrete varieties are preferred, traditional wooden Bat Boxes may be appropriate for this task.

Recommended commercially available woodcrete Bat Tubes that are suitable for use on trees and on fence boundaries include Schwegler 1FF Bat Tubes and Schwegler 2F Bat Tubes.

Bat Boxes/Tubes should be sited at a minimum height of approximately 4m from the ground and in an area suitable for a clear bat flight path.

7.1.1.8 Raised Ridge Tiles

Ridge tiles on the apex or and/or hips of (the) roof(s) may be permanently raised to potentially allow bats to roost on the underside of them.

Purposely raised ridge tiles

The raising of ridge tiles may be achieved by securing them on the roof with mortar placed on the inner lower half of the ends of ridge tiles only. The height of bat openings should be between 18mm and 22mm.

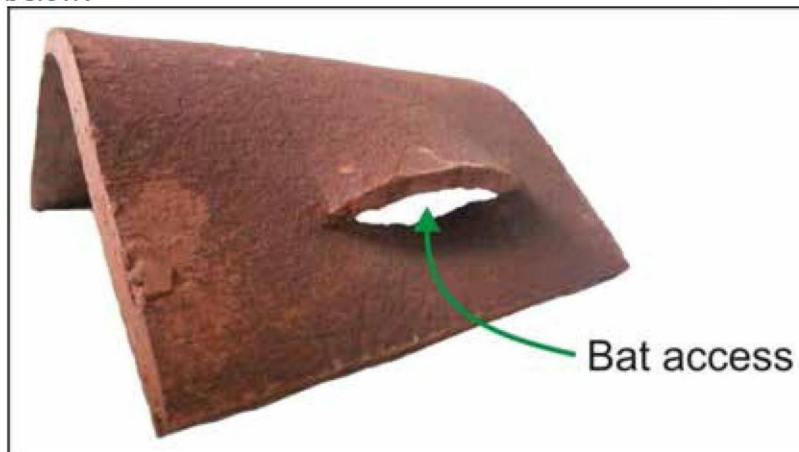
Reclaimed and/or misshaped ridge tiles

Should re-claimed and/or misshaped ridge tiles be used during roofing work, it is possible that not all of the ridge tile will fit closely with roof slates/tiles underneath them. Should these gaps be between approximately 12mm and 22mm in height – there is potential that crevice dwelling bats may use them to gain access to the undersides of ridge tiles. The 'natural' gap of misshaped ridge tiles may be exaggerated by packing with mortar and the undersides of the ridge tile should not be completely filled with mortar to provide a potential roosting space for bats.

Purpose-made ridge tile bat roosts

Purpose-made ridge tiles with bat-access openings are available commercially. For example, the handmade 'bat access ridge tile' produced Tudor Roof Tile Co. Limited, Dengemarsh Road, Lydd, Kent, TN29 9JH.

A picture of the Tudor Roof Co. Limited purpose-made ridge tile bat roost is shown below:



Please note: Star Ecology has no association with Tudor Roof Tile Co. Limited.

Roof underlining

It is possible that modern breathable roofing membrane may be installed during roofing work.

In order to prevent bats from coming into contact with the modern breathable roofing membrane covering roof apexes; prior to the positioning of ridge tiles, a small section of traditional bitumastic-hessian roofing felt will need to be secured over the ridge of the roof, at the places where ridge tiles are to be positioned and raised.

7.1.2 External Lighting

In order to avoid any unnecessary disturbance to bats in the future, any external lighting to be installed on-site should be low powered and on short-timed Passive Infrared (PIR) sensitive to large objects only.

Usually, 11 watt, low energy lights that are PIR activated may be appropriate for such developments.

Lighting should not be in the vicinity of, or shine towards, bat roost openings.

7.2 Small Breeding Bird

7.2.1 Small Breeding Bird Mitigation

Ideally, development work on the Manor, including any demolition/dismantling work, should not be started between 1st March and 1st October (inclusive).

Should it not be possible to time demolition works to avoid disturbance to nesting birds, potential access points to the building for birds should be closed off with mesh or fabric barriers, in order to prevent birds from nesting.

Should it be required that development works commence between March and September, the Manor should be inspected by a suitably qualified ecologist for evidence of nesting birds.

No works may commence if birds have started to build, or if they already occupy, nests.

If birds gain access to the Manor and start nesting - prior to or during the construction phase - delays will be inevitable up to the moment when the young birds leave the nest.

7.2.2 Small Breeding Bird Compensation and Enhancement

In order to encourage the long term survival of nesting birds at Bodenham Manor and the local area it is recommended that woodcrete nest boxes be installed where possible. Ideally, these should be positioned in areas of low future disturbance.

Ideally nest box placement and construction of nesting features should be undertaken outside the bird breeding season (March-September inclusive).

Where suitable, nest boxes should be placed under the eaves of Manor, or under gable-end barge boards or roof verges.

7.3 Proposed Minimum Compensation and Enhancement

7.3.1 Bat

If development plans allow a minimum of two purpose-made bat roosting features (see Sections 7.1.1.1 – 7.1.1.6) should be incorporated into the design of the Manor;

or a minimum of:

- four Bat Boxes (see Section 7.1.1.7) should be installed on/in the Manor or within their immediate vicinity;

and a minimum of:

four ridge tiles suitable for future use by bats (see Section 7.1.1.8) should be installed on the roof of the Manor.

7.3.2 Small Breeding Bird

A minimum of five Schwegler woodcrete (or similar alternatives) bird nest boxes should be installed at Bodenham Manor.

It is recommended that this number be divided as follows:

- one House martin nest box (e.g. Schwegler House martin Nest 9A)
- one Swallow nest boxes (e.g. Schwegler Swallow No.10);
- one Tit nest boxes (e.g. Schwegler 2M woodcrete bird box);
- one Wren nest boxes (e.g. Schwegler Number 1ZA woodcrete nest); and,
- one generic bird species open-fronted nest box (e.g. Schwegler 2H woodcrete open fronted nest box).

If any protected species is found at any stage of the property development, work should immediately cease and Natural England should be consulted (Telephone 0845 600 3078).

Another survey will need to be conducted if no building works (including removal/demolition) are carried out on the Manor at Bodenham Manor within two years from the date of this survey.

8. RELEVANT PUBLICATIONS

Bat Conservation Trust (2006). *A review of the success of bat boxes in Manor*. Scottish Natural Heritage Commissioned Report No. 160 (ROAME No. F01AC310).

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

Bat Conservation Trust and Institute of Lighting Professionals (2008). *Bats and Lighting in the UK. Bats and the Built Environment Series*.

Gunnell, K., Murphy, B. and Williams, C. (2013). *Designing for Biodiversity: A Technical Guide for New and Existing Manor*, 2nd ed., RIBA Publishing.

Hundt, L. (2012). *Bat Surveys: Good Practice Guidelines*, 2nd ed., Bat Conservation Trust.

Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough, England.

Mitchell-Jones, A.J. and McLeish, A.P. (2004). *Bat Workers' Manual*. Third Edition. Joint Nature Conservation Committee, Peterborough, England.

APPENDIX 1 – Photographs of Bodenham Manor



Bodenham Manor. Exteriors.

Left and centre: part of the Northeast elevation of Section B.
Upper centre: part of the Southeast elevation of Section A.
Right: Northeast elevation of Section A.



Bodenham Manor. Exteriors.

Extreme left: part of the Northeast elevation of Section B.
Centre and right: Northeast elevation of Section A



Bodenham Manor. Exteriors.

Lower left: part of the Southeast elevation and the Northeast elevation of single-storey structure at the southeast-end of Section B.

Upper left: Southeast elevation of the main, two-storey, part Section B.

Right: Northeast elevation of the main, two-storey, part of Section B



Bodenham Manor. Exteriors.

Upper left: part of the Southeast elevation of Section A.

Main picture: Southeast elevations of Section B.



Bodenham Manor. Exteriors.

Extreme left: Southwest elevation of Section A.

Left: Southeast elevation of Section A.

Right: Southwest elevations of Section B.

Extreme right: Southeast elevations of Section B.



Bodenham Manor. Exterior.

View of part of the Southwest elevation of Section B.



Bodenham Manor. Exterior.

Left: Southwest elevation of Section A.
Centre: Southeast elevation of Section A.
Right: part of the Southwest elevation of Section B.



Bodenham Manor. Exterior.

Extreme left: part of the Northwest elevation of Section A.
Main picture: Southwest elevation of Section A.



Bodenham Manor. Exterior.
Northwest elevation of Section A.

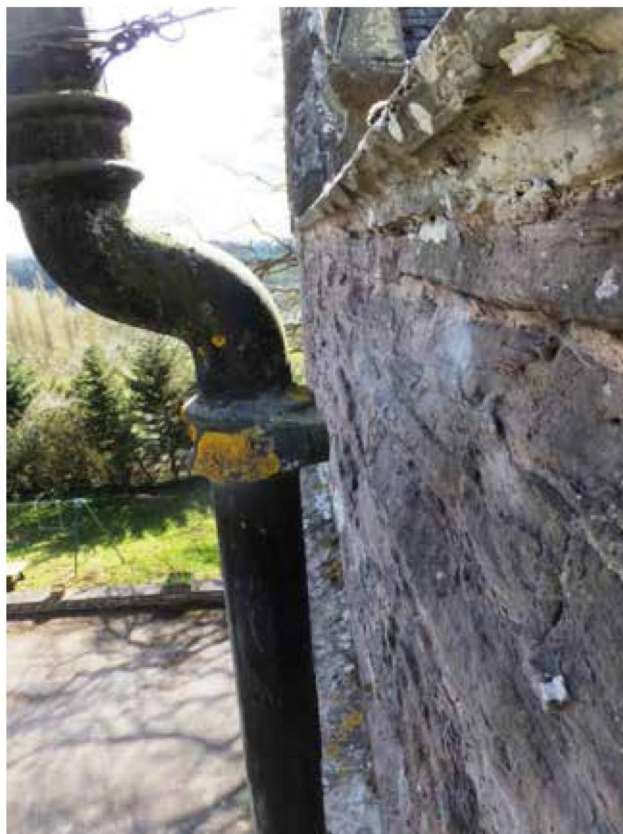


Bodenham Manor. Exterior.
View of part of the Northeast elevation roof structure of Section A.
Left: part of the 'recently' re-covered hipped roof.
Right: part of the main Northeast elevation roof-slope.



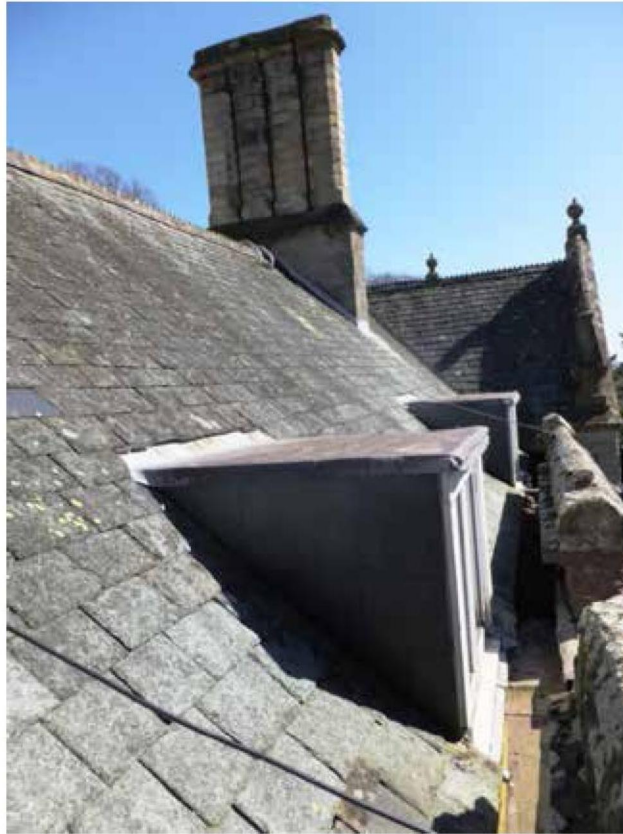
Bodenham Manor. Exterior.

View of the main Southeast elevation roof-slope of Section A.



Bodenham Manor. Exterior.

View of part of the Southeast elevation parapet wall of Section A.



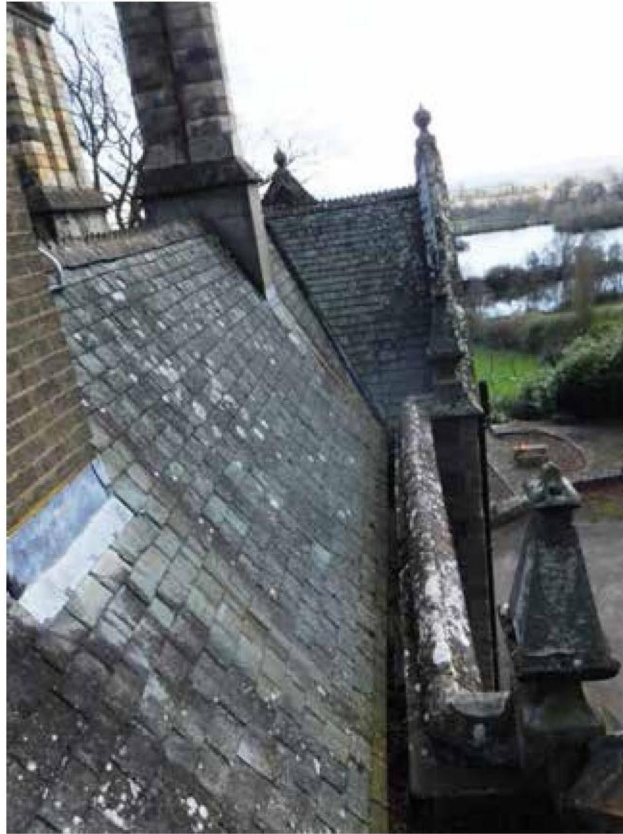
Bodenham Manor. Exterior.

View of part of the main Southeast elevation roof-slope of Section A.



Bodenham Manor. Exterior.

View of part of the Southwest elevation parapet wall of Section A.



Bodenham Manor. Exterior.

View of the main Northwest elevation roof-slope of Section A.



Bodenham Manor. Exterior.

View of part of the Northwest elevation parapet wall of Section A.



Bodenham Manor. Exterior.
View of the central roof area of Section A.
Looking northwest from southeast.



Bodenham Manor. Exterior.
View of the Southeast part of the central roof area of Section A.
Looking southeast from northwest.



Bodenham Manor. Exterior.

'Typical' view of the apex roofs and chimney abutments of the Section A roof structure.



Bodenham Manor. Exterior.

Example of the temporary removal of ridge tiles from apex roofs of Section A to allow the inspection of the undersides of the tiles for physical evidence of bats.



Bodenham Manor. Exterior.

View of the Southwest elevation roof-slopes of Section B.



Bodenham Manor. Exteriors.

Left, centre and lower right: view of the Northeast elevation roof-slope of the main, two-storey, part of Section B.

Upper right: part of the Southeast elevation of Section A.



Bodenham Manor. Exterior.

Upper left: part of the southeast elevation of Section A.
Lower left, centre and right: Southwest elevation roof-slope of the main, two-storey, part of Section B.



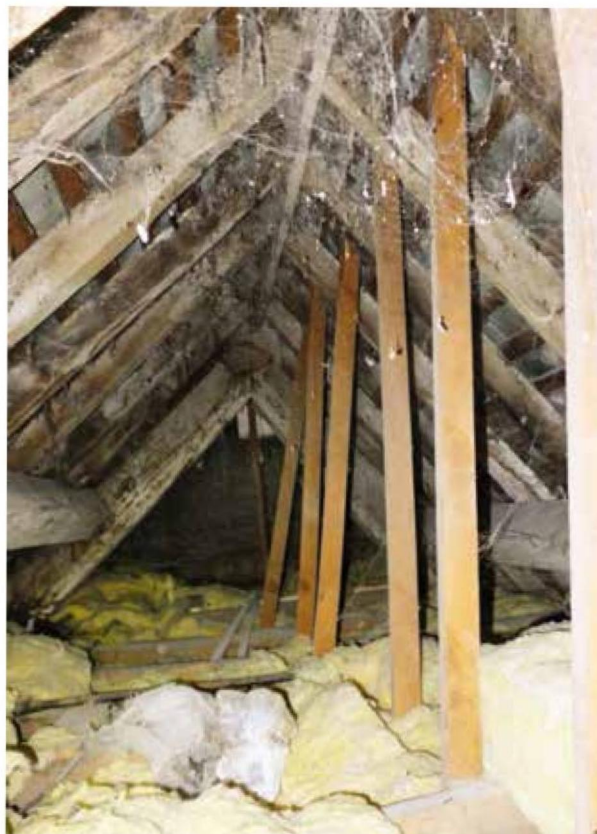
Bodenham Manor. Exterior.

Centre: view of the 'flat' roof of the single-storey structure at the Southeast-end of Section B.

Upper right: the Southwest elevation of the single-storey structure at the southwest of Section B and part of the Southwest elevation of the main, two-storey, part of Section B.



Bodenham Manor. Interior.
A view of part of Roof-space 1.



Bodenham Manor. Interior.
A view of part of Roof-space 2.



Bodenham Manor. Interior.
A view of part of Roof-space 3.



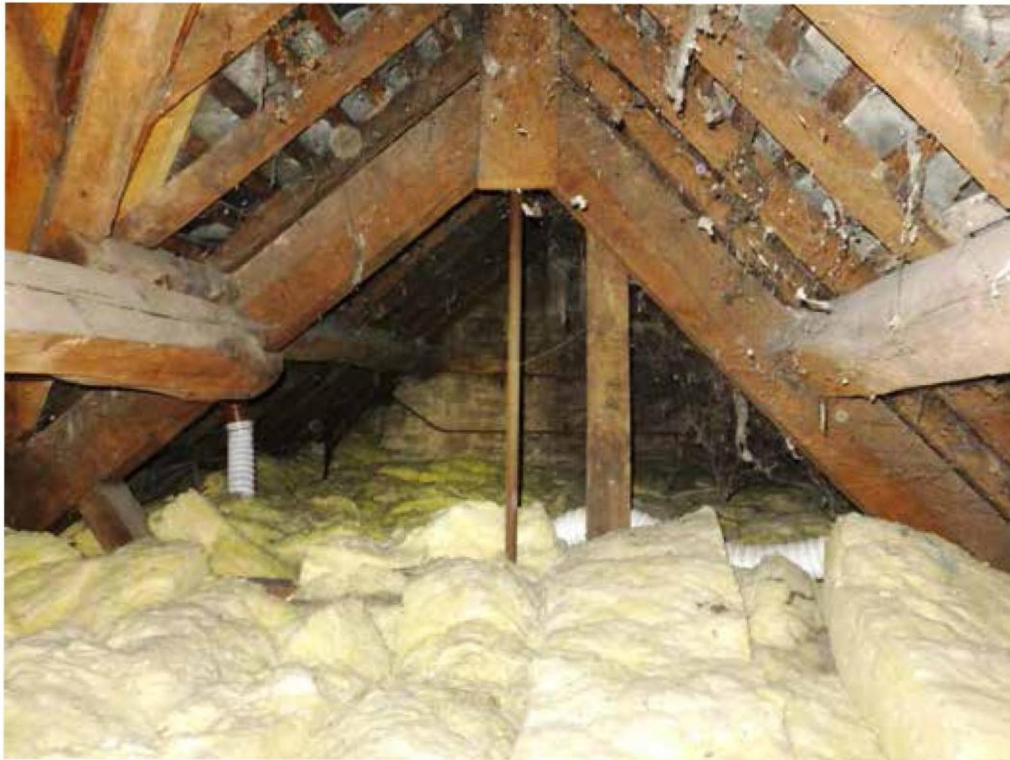
Bodenham Manor. Interior.
A view of part of Roof-space 4.



Bodenham Manor. Interior.
A view of part of Roof-space 5.



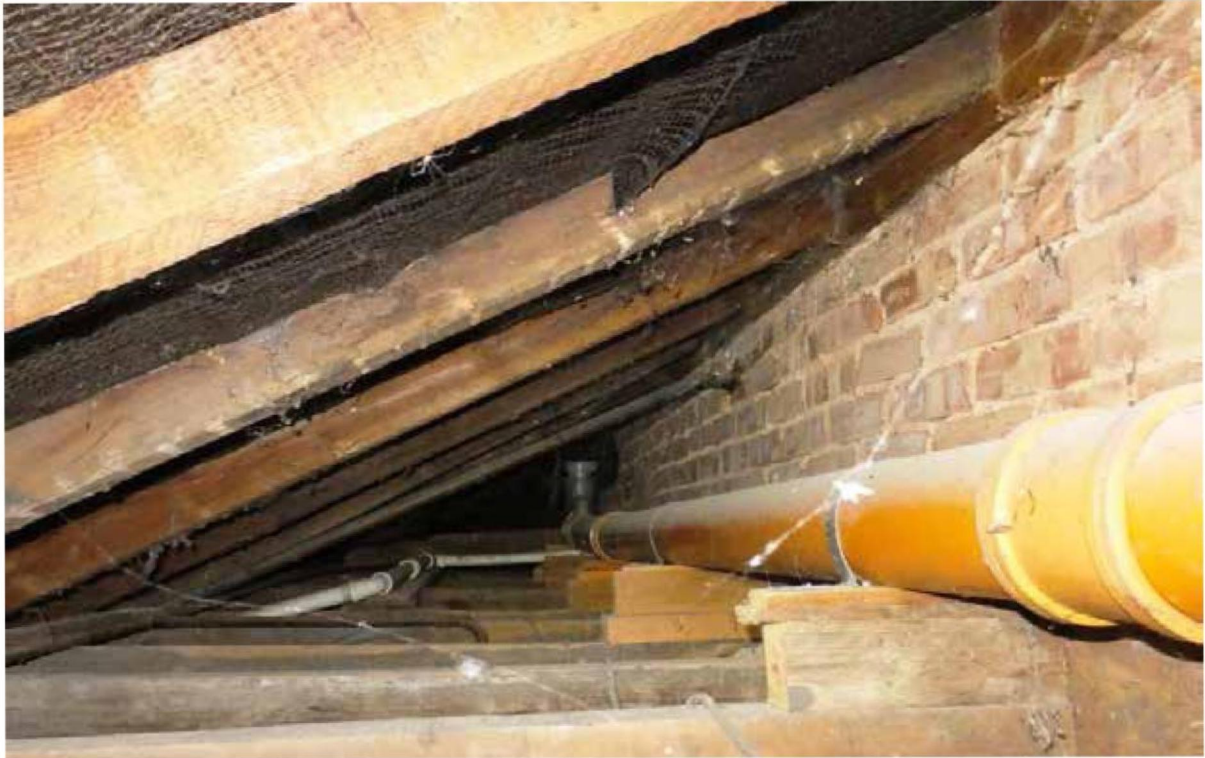
Bodenham Manor. Interior.
A view of part of Roof-space 6.



Bodenham Manor. Interior.
A view of part of Roof-space 7.

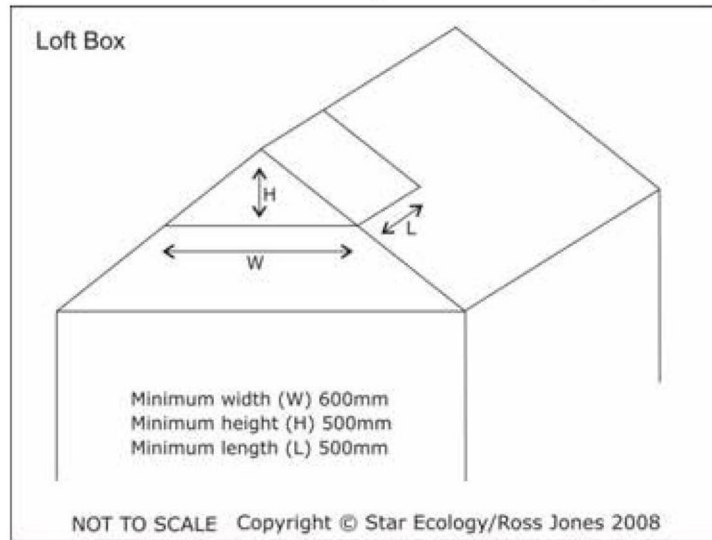


Bodenham Manor. Interior.
A view of part of Roof-space 8.

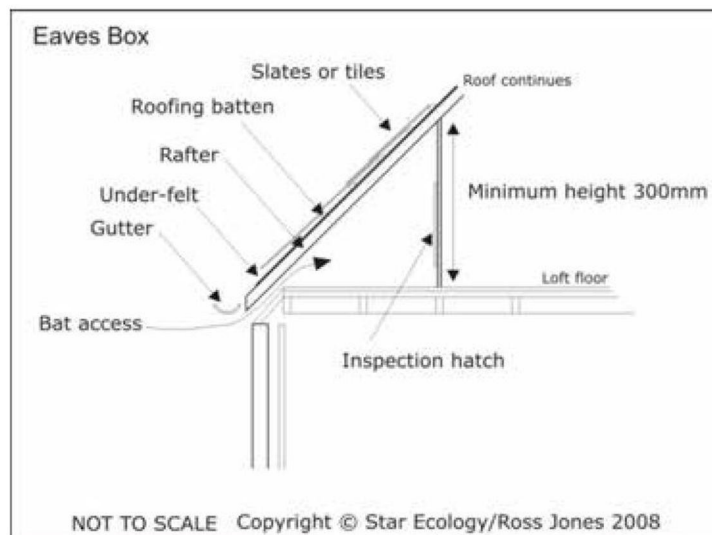


Bodenham Manor. Interior.
A view of part of Roof-space 9.

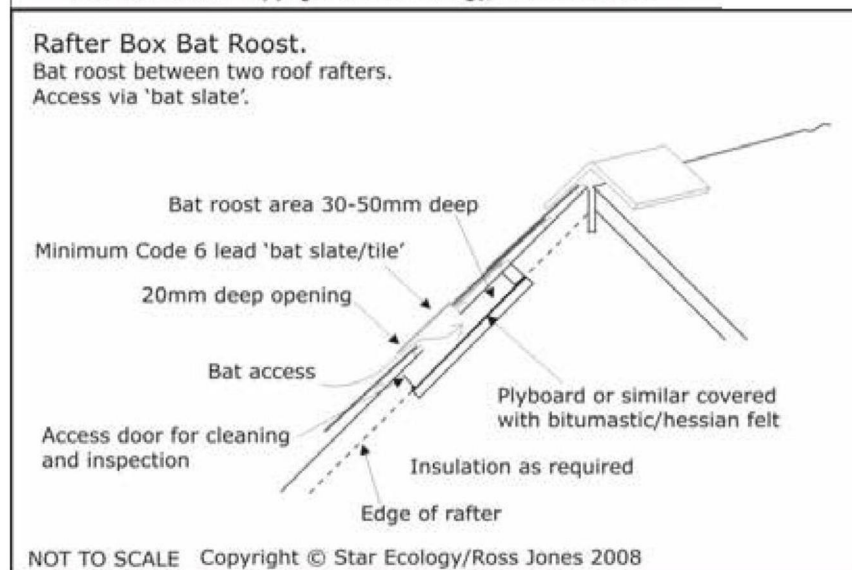
APPENDIX 2 – Example Bat Compensation Designs



Loft Box.



Cross section of Eaves Box.

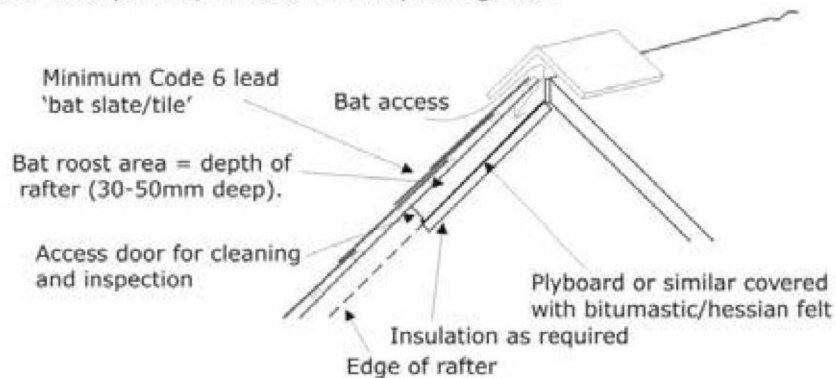


Rafter Box.
Midway on roof slope.
Access via lead 'bat slate' or 'tile'.

Rafter Box.

Bat roost between two roof rafters.

Access via unpointed, raised or mis-shaped ridge tile.



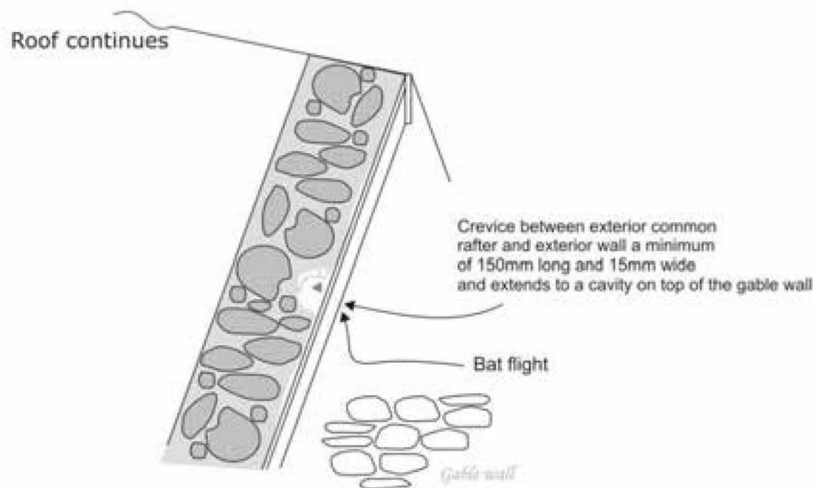
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Rafter Box.

At roof apex.

Access via ridge tile.

Exterior Common Rafter Crevice with roost cavity on top of gable wall.

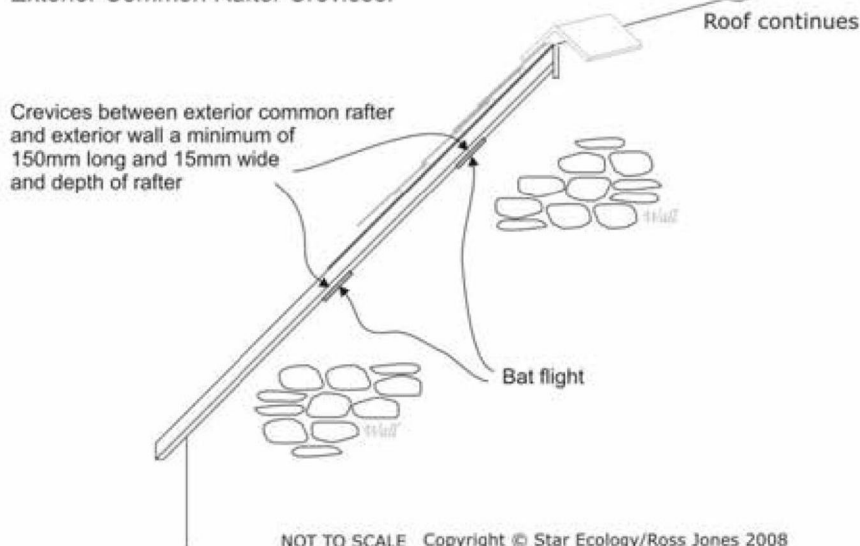


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Exterior Common Rafter Crevice

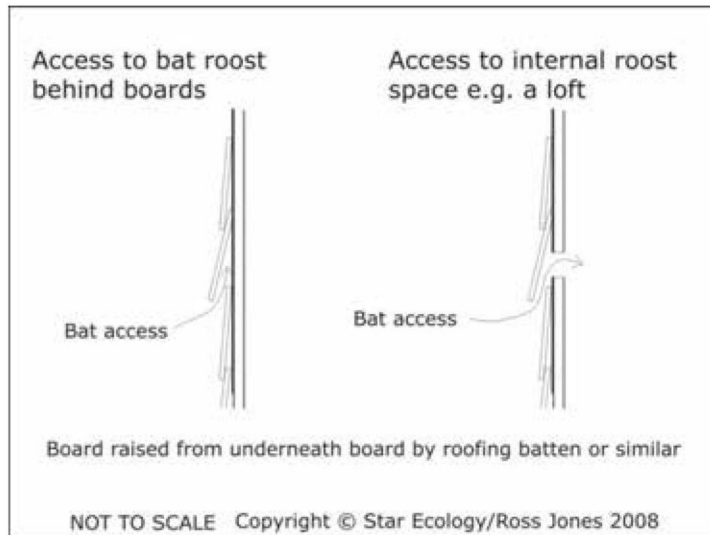
leading to a roosting cavity on the top of a gable wall.

Exterior Common Rafter Crevices.

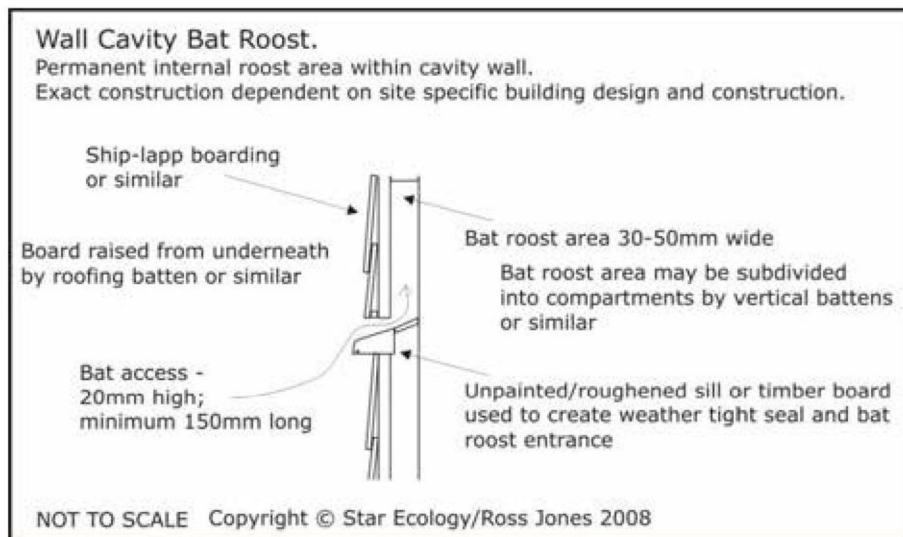


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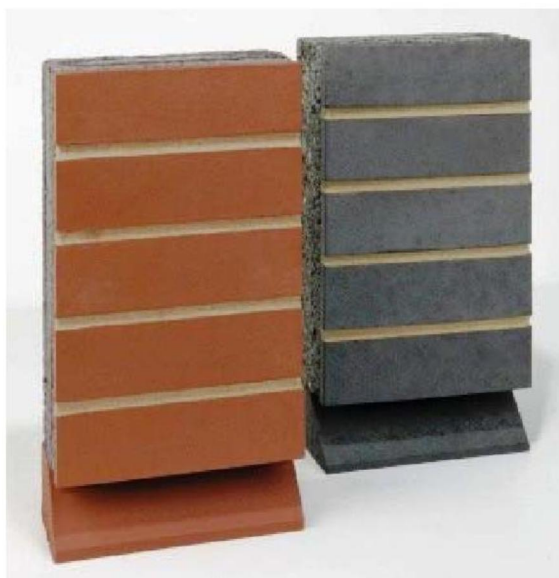
Exterior Common Rafter Bat Crevices



Bat roost access via external timber weatherboarding.



Cavity Wall Bat Roost.



The **Wienerberger Ecosurv** Bat Box.

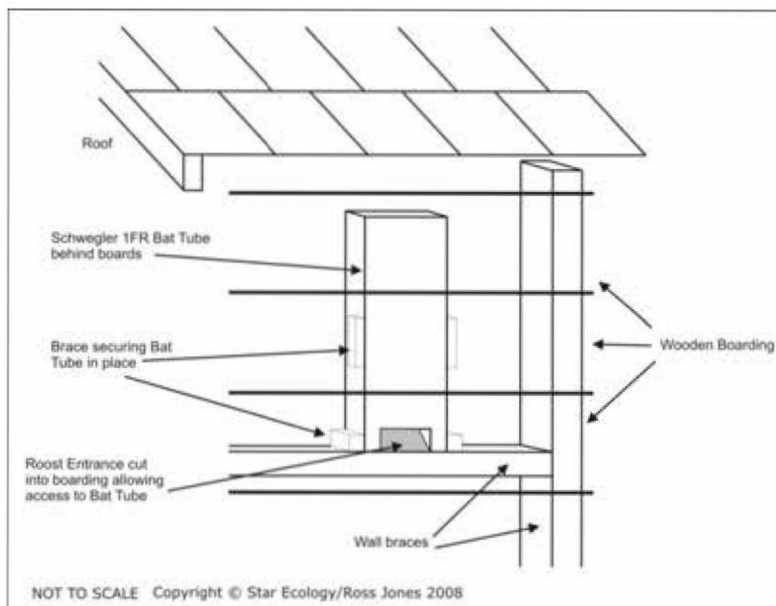
Boxes may be purchased with brick fascias to match those of existing walls or those of proposed new walls.

(<http://www.wienerberger.co.uk/>)

Other similar Bat Boxes are commercially available.



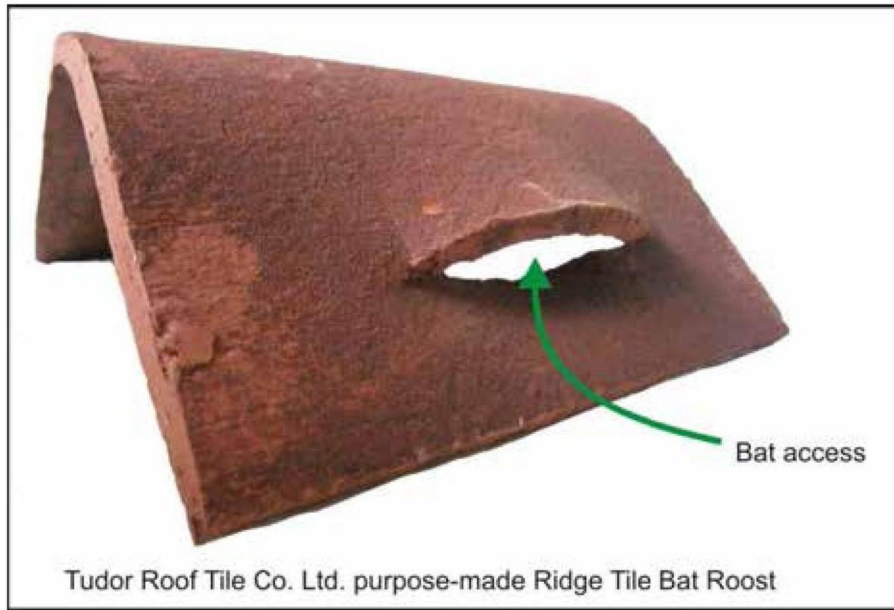
Schwegler 1FR Bat Tube built into stone gable wall.
Hay loft ventilation pipes have been retained for potential use by small birds for nesting.



Schwegler 1FR Bat Tube incorporated into building structure of timber framed building, behind external wooden boarding.

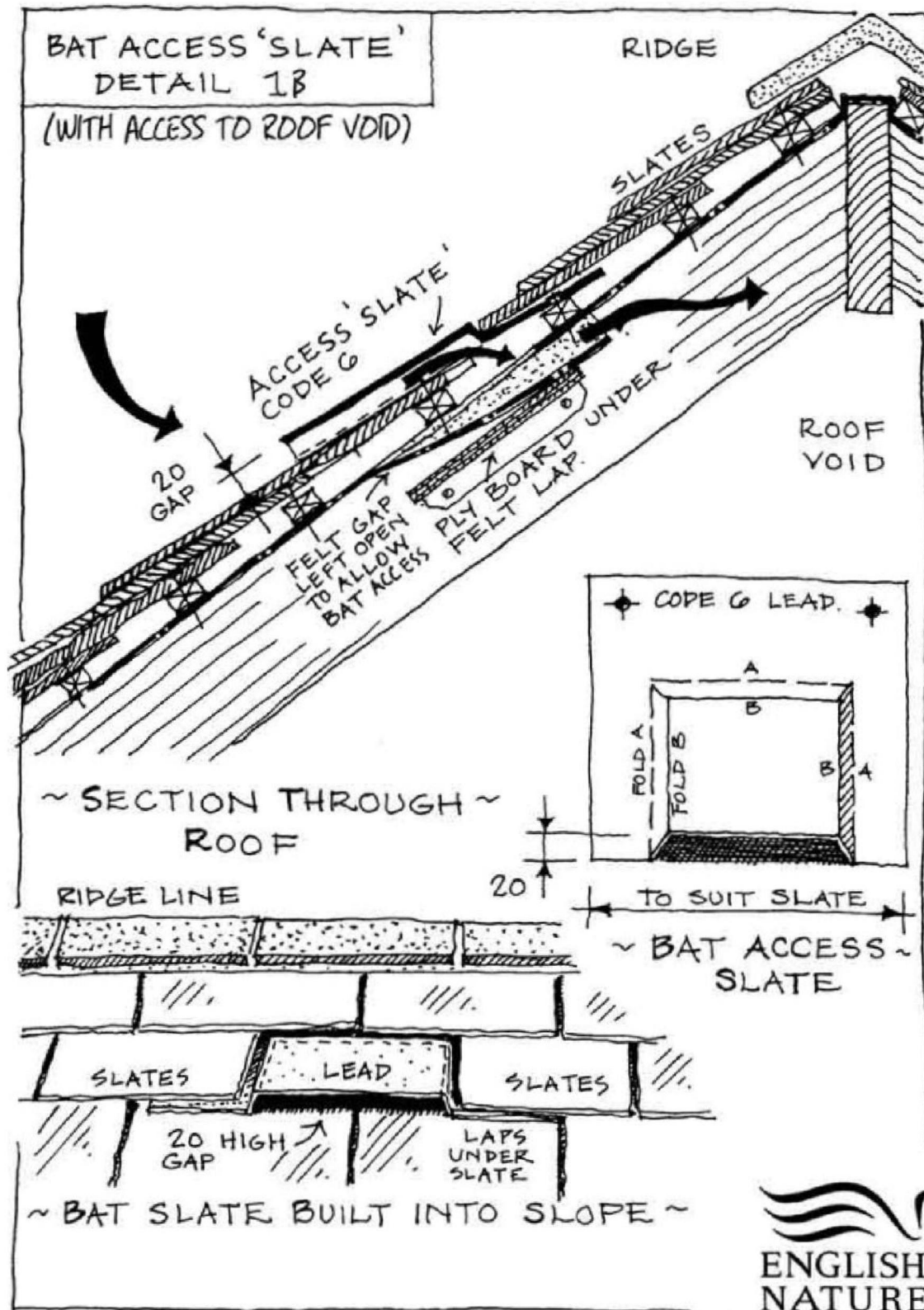


Schwegler 1FR Bat Tube built into thermalite® building block wall.
Weatherboarding will cover the Bat Tube, leaving access permanently open for bats.



Tudor Roof Tile Co. Limited purpose-made ridge tile bat roost

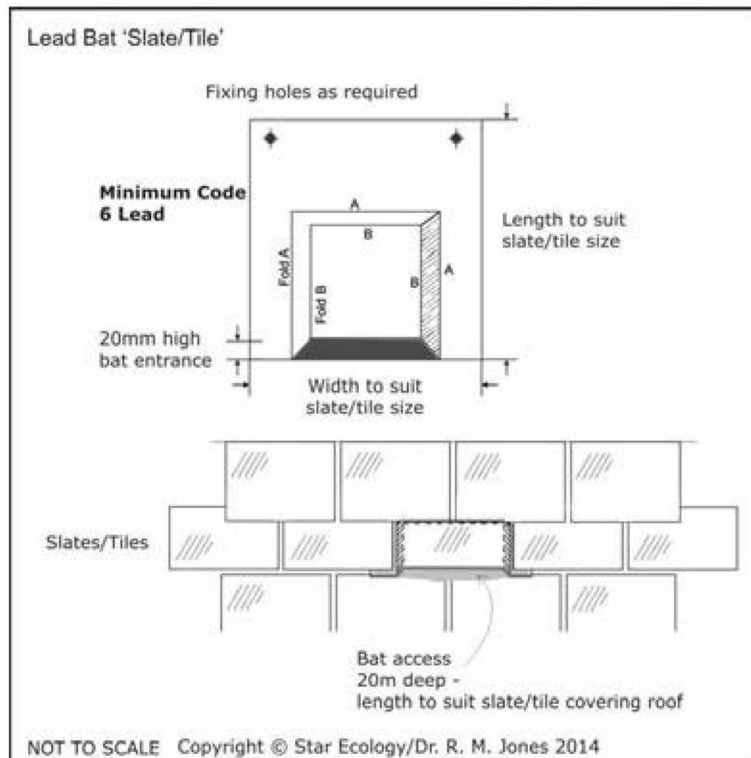
APPENDIX 3 – Natural England Lead Bat 'Slate' Leaflet (b)



5P

The above information is for guidance only and may not be appropriate in all circumstances, if in doubt seek professional advice.
English Nature Cumbria Team, Juniper House, Murfey Moss, Oxenholme Road, Kendal LA9 7RL. Tel: 01539 792800 Fax: 01539 792830 Email: cumbria@english-nature.org.uk

APPENDIX 4 – Lead Bat 'Slate/Tile' Plan and Photographs



Slate-line Bat Vent

Designed and manufactured by **summit slate supplies**
The Bat Vent is designed to satisfy the growing demand to meet current legislation protecting bats and their habitat.

The Bat Vent provides a discreet and un-interrupted path from the roof exterior to the interior and is available in a number of slate finishes and sizes or in colour matched plastic.

The Bat Vent comprises of an exterior vacuum formed weathering cow! let into the body of a slate to allow entry and is combined with an injection moulded base which includes a factory applied non slip surface facilitating easy access for the bats into the roof space

The Bat Vent has been designed in association with Mr A. Jones
Chair of THE BAT CONSERVATION TRUST in London



summit slate supplies

tel: 03333 441166
info@summitslate.com

APPENDIX 5 – Bat Access Roof Slate



Bats and the law

All 17 species of bat in the UK are protected by law.
This differs slightly from country to country, but in summary it is illegal to:-

- kill, injure or disturb bats
- obstruct access to bat roosts
- damage or disturb bat roosts

because of the following legislation:
Wildlife and Countryside Act 1981: England, Scotland and Wales
Wildlife (Northern Ireland) order 1985: Northern Ireland
Wildlife Act 1980: Isle of Man
Countrywide and Rights of Way (CROW) Act 2000: England and Wales
Nature Conservation (Scotland) Act 2004: Scotland
Habitats Directive (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora

"Disturbance" is any work in or affecting a bat roost
Under the law, a roost is any structure or place used by bats for shelter or protection.
Because bats tend to re-use the same roosts year after year, the roost is protected whether or not bats are present at the time

Best practice for working in bat roosts

In order to work within the law, seek advice from the appropriate Statutory Nature Conservation Organisations (SNCO) in any situation where an operation may affect bats or their roosts.

If operations have already started when bats or their roosts are discovered, work must stop and the relevant SNCO must be contacted immediately

Useful Contacts
SNCO (Statutory Nature Conservation Organisations)
Natural England
Northminster House,
Peterborough PE1 1UA
Telephone 0114 241 8920
www.naturalengland.org.uk

SNCO (Statutory Nature Conservation Organisations)
Countryside Council for Wales
Maes Y Ffynnon, Penrhosgarnedd, Bangor, Gwynedd LL57 2DW
Telephone 01248 385500
www.ccw.gov.uk

summit slate supplies
unit 1 - castle court - leighton - welshpool - sy21 8hh

tel: 03333 441166
info@summitslate.com

APPENDIX 6 – Bat Access Roof Tile



Tudor Roof Tile Co. Limited
Dengemarsh Road, Lydd, Kent, TN29 9JH
Tel: 01797 320 202 Fax: 01797 320 700
Email: info@tudorrooftiles.co.uk
Web: www.tudorrooftiles.co.uk



CRAFTED by Tudor Tiles



Bat Access Tile Set

All UK bats and their roosts are protected by law. The Wildlife & Countryside Act introduced in 1981, gave legal protection to all bat species and their roosts in England. The Conservation (Natural Habitats, etc.) Regulations 1994 as amended (most recently in 2007 and 2009 and better known as the Habitats Regulations), further strengthened this legal protection.

Bat-related offences are arrestable. The potential fine for each offence is £5,000 per bat. An offender can also be imprisoned for six months. If any property has been, or is suspected to have been, home to any number of bats, at any time, legislation requires taking advice and precautions when working on the roof. Legislation also requires provision to allow access for bats if they return.

Different species of bats prefer differing places to roost. The two most usually found species in the UK are Pipistrelle and Brown Long-Eared.

Pipistrelle



Brown Long-Eared

Pipistrelle prefer confined spaces such as under tiles on roof and hanging. The Brown Long-Eared prefer roof timbers and ridges inside lofts.

Tudor Roof Tiles Co. Limited can provide purpose made access points within your roof tiles or ridge tiles. The Bat Access Set can form part of a mitigation package required by law for existing roosts or as potential access where a roost had not previously been present.



Available in all 5 Tudor colours, or in Natural Clay (without sand face), the Bat Access Set presents a bat optimised entrance to the under-felt, or to the loft when the under-felt is opened.

For use within the roof tiles, the top 'tunnel' tile offers the bat an 18mm high x 165mm long (approx.) tunnel to an entrance hole in the undertiles. This allows the bat to crawl into the roost area.

An advantage of Tudor's tiles large double camber, is that it provides the maximum amount of natural air flow under the tiles. The carefully designed access, along with this air flow between the tiles and the under-felt, aims to provide conditions where the bats are protected from any extremes of heat. Tudor also offer ridge tiles with a similar 18mm access cut into the ridge tile side, and we can look to manufacture bespoke access tiles to your requirement.

Expert advice on bats can be obtained from the Bat Conservation Trust, 15 Cloisters House, 8 Battersea Park Road, London, SW8 4BG. Bat Helpline 0845 1300 228 www.bats.org.uk email enquiries@bats.org.uk