Rustling End, Codicote, Hertfordshire

Bat Survey Report

Client: IBA Planning Ltd

Report Reference: RSE_703_01-V1

Issue Date: October 2016



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Project:	Rustling End, Codicote, Hertforshire
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Revisions:				

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1. Introduction and Background

Purpose and Scope of this Report

RammSanderson Ecology Ltd was instructed by IBA Planning Ltd to carry out a bat building assessment and nocturnal bat surveys of Rustling End, Codicote in Hertfordshire, to inform a planning application for the redevelopment of the buildings. The surveys were required to determine the presence or likely absence of bats.

This appraisal is based on a review of the development proposals provided by the Client, and surveys of the Site. The aims of this survey and report are to:

- Investigate the presence / likely absence of bats on site or in the immediate vicinity;
- Identify potential impacts on bats (if present); and
- Provide outline recommendations for mitigation or compensatory measures where applicable.

This report pertains to these results only; recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of RammSanderson Ecology Ltd.

The surveys undertaken as part of this review and subsequent report are prepared in accordance with the British Standard for Biodiversity Code of Practice for Planning and Development (BS42020:2013).

Zone of Influence

The study area is defined as shown in the enclosed Site Location Plan to include the Zone of Influence of the proposals (hereafter referred to as the "Site").

The term Zone of Influence is used to describe the geographic extent of potential impacts of a proposed development. The Zone is determined by the nature of the development and also in relation to individual species, depending on their habitat requirements, mobility and distances indicated in any best practice guidelines.

In relation to the site and its proposals the zone of influence is considered to be limited to the boundaries of the Site and its immediate surroundings.

Site Context and Location

The site (Rustling End) was located southwest of an unnamed road, off Three Houses Lane in the north of the large village of Codicote, North Hertfordshire, SG4 8TD (Central Grid Reference TL 209 213). It comprised a residential building and two barns, surrounded by arable land and open countryside. The residential building is to remain unaffected by the proposals and was therefore not subject to survey.

Figure 1: Site Location Plan

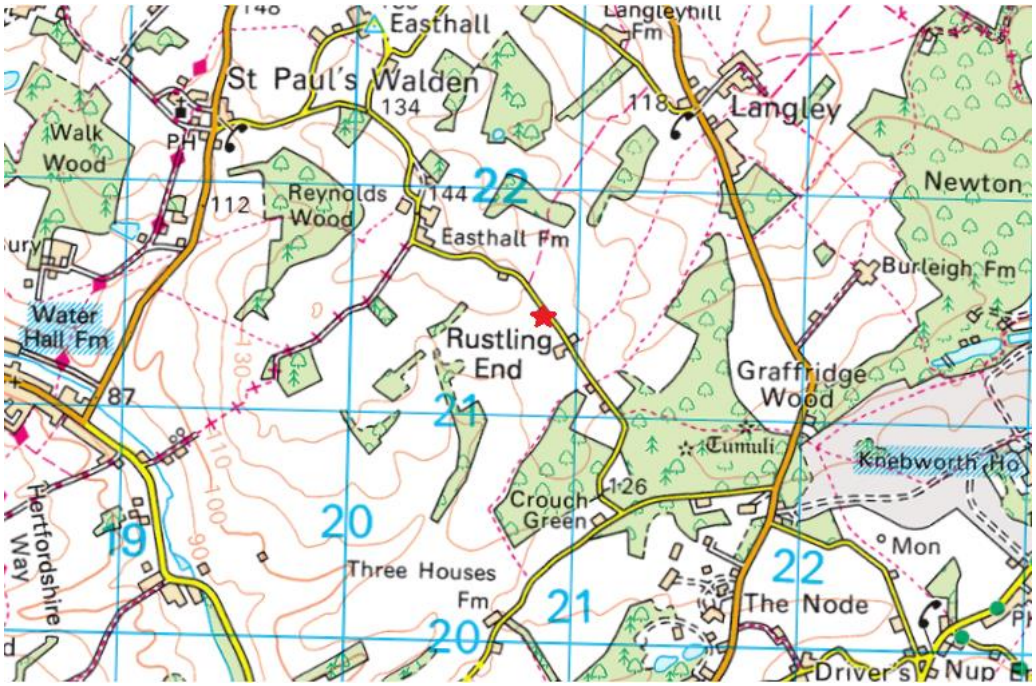

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Figure 2: Site Context Plan



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2. Legislation and Planning Policy

Articles of British legislation, policy guidance and both Local Biodiversity Action Plans (BAPs) and the NERC Act 2006 are referred to throughout this report. Their context and application is explained in the relevant sections of this report. The relevant articles of legislation are:

- The National Planning Policy Framework (2012)
- ODPM Circular 06/2005 (retained as Technical Guidance on NPPF 2012)
- Local planning policies (Hertfordshire Council)
- The Conservation of Habitats and Species Regulations 2010 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC;
- National Parks and Access to the Countryside Act 1949;
- The Countryside and Rights of Way Act 2000;
- The Natural Environment and Rural Communities (NERC) Act 2006;
- Local Biodiversity Action Plan for Hertfordshire

Bats

All species of British bats are fully protected within UK Law under *Wildlife and Countryside Act 1981* (as amended) through their inclusion in Schedule 5. Under the Act, they are protected from:

- Intentional or reckless killing, injury, taking;
- Damage to or destruction of or, obstruction of access to any place of shelter, breeding or rest;
- Disturbance of an animal occupying a structure or place;
- Possession or control (live or dead animals);
- Selling, bartering or exchange of these species, or parts of;

This law is reinforced by the UK's transposition of the EU Habitats Regulations under *The Conservation of Habitats and Species Regulations* 2010 (as amended). These Regulations also prohibit:

- the deliberate killing, injuring or taking of bats;
- the deliberate disturbance of any bat species in such a way as to be significantly likely to affect:
    - their ability to survive, hibernate, migrate, breed, or rear or nurture their young; or
    - the local distribution or abundance of that species.
- damage or destruction of a breeding site or resting place (roost);
- the possession or transport of bats or any other part of.

Under certain circumstances a licence may be granted by Natural England to permit activities that would otherwise constitute an offence. In relation to development, a scheme must have full planning permission before a licence application can be made.

Seven British bat species are listed as Species of Principal Importance (SPI) under the Natural Environment and Rural Communities (NERC) Act 2006. These are barbastelle (*Barbastellus barbastellus)*, Bechstein's (*Myotis bechsteinii)*, noctule (*Nyctalus noctula)*, soprano pipistrelle

(*Pipistrellus pygmaeus)*, brown long-eared (*Plecotus auritus)*, greater horseshoe (*Rhinolophus ferrumequinum)* and lesser horseshoe (*Rhinolophus hipposideros)*.

Under the National Planning Policy Framework 2012 the presence of any protected species is a material planning consideration. The Framework states that impacts arising from development proposals must be avoided where possible or adequately mitigated/compensated for and that opportunities for ecological enhancement should be sought.

3. Methodology

Impact Appraisal

In appraising any impacts, the review considers the Client's Site proposals and any subsequent recommendations made are proportionate and appropriate to the site and have considered the Mitigation Hierarchy as identified below.

- **Avoid:** Provide advice on how the development may proceed by avoiding impacts to any bats by either consideration of site design or identification of an alternative option.
- **Mitigate:** Where avoidance cannot be implemented mitigation proposals are put forward to minimise impacts to bats as a result of the proposals. Mitigation put forward is proportionate to the site.
- **Compensate:** Where avoidance cannot be achieved any mitigation strategy will consider the requirements for site compensatory measures.
- **Enhance:** The assessment refers to planning policy guidance (e.g. NPPF) to relate the ecological value of the site and identify appropriate and proportionate ecological enhancement in line with both national and local policy.

Daytime Bat Building Assessment

The buildings present on the site were assessed both internally (where accessible) and externally by a licensed bat ecologist then graded according to the Bat Conservation Trust's *Bat Surveys: Good Surveys Guidelines* (Collins J (*eds*) 2016). All defects or features of the building considered as potentially suitable entry / exit points for bats such as holes and crevices were recorded. Evidence of bat presence, such as droppings or feeding remains, was sought and recorded where present. .

Table 1: Building Roost Classification

Roost Potential	Description	Surveys Required (Buildings)
Confirmed roost	Evidence of roosting bats found during initial daytime inspection.	3 – including 1 dawn as a minimum
High	Structures with one or more features suitable for bat roosting, with obvious suitability for larger numbers of bats.	3 – including 1 dawn as a minimum
Moderate	Structure with one or more potential roost sites that could be used due to size, shelter and protection but unlikely to support a roost of high conservation status.	2– including 1 dawn as a minimum
Low	Structure with one or more potential roosting sites used by individual bats opportunistically. Insufficient space, shelter or protection to be used by large numbers of bats	1 Survey
Negligible	No or negligible features identified that are likely to be used by roosting bats	None

** Unless it is a confirmed roost, additional surveys are required of buildings to assess presence / likely absence of a roost. The number of surveys are indicative to give confidence in a negative result, i.e. where no bats are found, confidence in a result can be taken.*

Nocturnal Surveys

The buildings were assessed as confirmed bat roost (B2) and low potential to support a bat roost (B1). Consequently, three nocturnal surveys were recommended on B2 and one on B1, in order to determine the species, number of bats and roost egress points. These surveys were undertaken during the bat activity period of May to September and combined dusk and dawn survey methodologies. Surveyors were equipped with frequency division EchoMeter Touch bat detectors and sonograms were analysed in AnaLook. Dusk surveys commenced 15minutes before sunset and curtailed between an hour and half to two hours after sunset when all at species would be expected to have left roost sites. Dawn surveys commenced two hours before sunrise and were complete at sunrise. Surveys were undertaken in optimal weather conditions.

Surveyors

The surveys were led by Nick Sanderson BSc (Hons) MSc MCIEEM Nick (bat class 2 licence number 2015-15565-CLS-CLS). Nick has been a professional ecologist for ten years and is appropriately qualified and experienced to carry out this type of survey. Nick was assisted by additional RammSanderson ecologists whom are appropriately qualified and experienced to carry out these types of surveys.

Limitations

It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

Accurate lifespan of ecological data

The majority of ecological data remain valid for only short periods due to the inherently transient nature of the subject. The survey results contained in this report are considered accurate for approximately 1 year, notwithstanding any considerable changes to the site conditions.

4. Results

Table 2: Summary of weather conditions

	Survey 1	Survey 2	Survey 3	Survey 4
Survey type	Daytime Assessment	Dusk Emergence	Dawn Swarming	Dusk Emergence
Date completed	25.07.16	25.07.16	11.08.16	01.09.16
Temperature (Min. overnight)	19°C	19°C	14°C	18°C
Wind speed (Beaufort Scale)	2	1	1	1
Cloud cover	40%	50%	90%	25%
Precipitation	Nil	Nil	Nil	Nil
Sunset / Sunrise	n/a	21:01	05:38	19:46
Survey Start	n/a	20:45	03:38	19:30
Survey Finish	n/a	22:16	05:45	21:46

Site Description

The site comprised a residential dwelling (not surveyed due to being outside application boundary), with a stable block and barn structure (B1) to the south and a separate barn (B2) to the north. The buildings were set within a gravelled courtyard with scattered shrubs and trees. An area of amenity grass (lawn) and scattered trees was present in the northwest corner of B2 and the entire site was surrounded by arable fields and hedgerows.

Building 1

B1 comprised a single-storey red brick former stable block and an open-fronted brick built and wooden cladded barn. The stable block had a pitched, corrugated fibre roof, whilst the barn a pitched slate roof. Both were currently being used for storage.

Figure 3: General View of Building 1



In general, the stable block was in a moderate condition, with some missing mortar between brickwork and surface level cracks and crevices. The wooden stable doors, however were in poor condition, with gaps around the edges and missing sections of boards. The top half of one of the doors had also been left open.

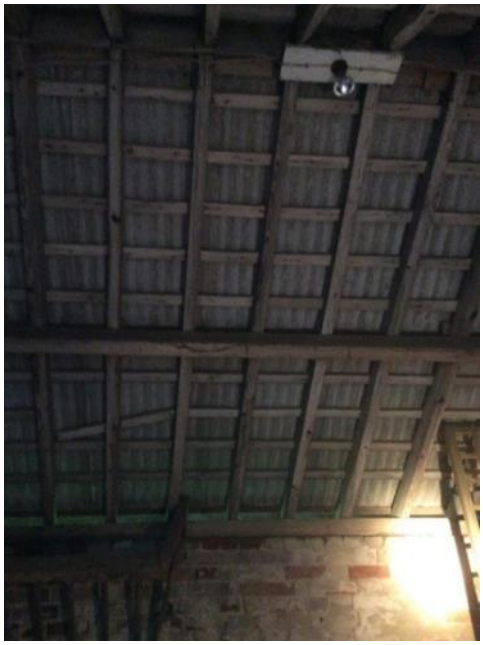
The roof was in a poor state of repair, with missing sections along the edges, exposing the metal sheeting underneath. Multiple gaps were visible along the ridge as well as under the eaves, between the drainpipe and the brickwork.

Figure 4: Old Stable Block Roof



There was no access into the stable block, but it was possible to view the interior of the building through the upper stable doors. Inside, there was no roof void, with rafters exposed and no roof lining present. There was a large ingress of light, particularly around the edges of the roof from gaps under the eaves.

Figure 5: Interior View of Old Stable Block



The open-fronted barn was in a very poor state of repair. The external door had been removed and the window on the north-western aspect, leading to the storage room had been boarded up, leaving several gaps around the edges.

There were numerous large gaps and missing tiles on the roof, as well as along the ridge. Large sections of the wooden cladding comprising the rear wall were missing and at some point previously, it had been covered with blue tarpaulin, which was also largely missing. The southwestern gable wall was rendered and in reasonable condition. The front and gable end elevations had waney-edged weatherboard cladding which had several gaps between the boards. However, these gave direct access to the interior of the building without crevices behind.

Figure 6: Rear View of Open-fronted Barn



The building's interior was heavily cluttered with stored machinery and timbers. There was no lining on the roof, with slate tiles resting directly on machine cut wooden rafters and posts. The interior of the building was very light and draughty as a result of the open doorway and the missing cladding on the southern elevation. No secluded niches were recorded within the building which was heavily cobwebbed at the ridge with light gaps apparent through the roof and the timber cladding.

Figure 7: Rafters and Interior Wall of Open-fronted Barn



Figure 8: Missing Waney-edged Boards on Rear Wall



Building 2

B2 comprised a single-storey L shaped barn / garage with a pitched tiled roof, overhanging eaves and valley adjoining the two sections. The western part of the roof was covered with clay tiles with a louvered air vent in the centre of the ridge. Concrete tiles covered the eastern roof section, with plastic guttering around the overhanging eaves. There were a number of missing and slipped tiles in the western section as well as lifted lead flashing in the valley. The eastern roof was in good condition with no gaps. To the rear of the building, there was a gap in the roofing felt under the eaves which was clear of cobwebs and ideal for bats, plus numerous large gaps above the wall plate.

Figure 9: General view of B2



Figure 11: Large Gap Identified Above the Wall Plate, Clear of Cobwebs

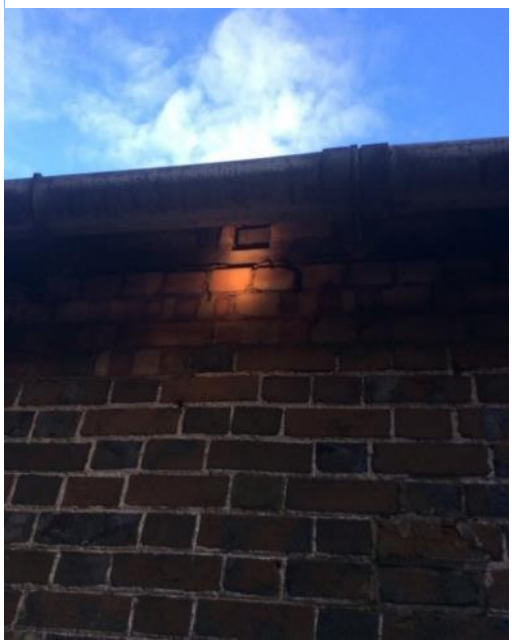


Figure 10: Gap Under the Eaves from Missing Mortar



The western section of B2 was entirely solid red brick, whilst only the lower part of the eastern wall was red brick, with waney-edged weatherboard cladding comprising the top portion. In general, the building was in moderate condition. There were some surface level cracks present in the brickwork and areas of missing mortar, particularly around the doorway and close to the eaves. The cladding on the other hand was in poor condition. Overlapping boards provided gaps underneath for potential roosting points and there were a large number of gaps present in the form of knot holes, warped boards and missing sections which provided access to the interior.

Figure 12: Knot Holes and gaps in Waney-edged Cladding



Single-glazed, leaded windows were present on the brick-built section of the building. They were in a moderate state of repair, with no glass panes missing; some rotting timbers were recorded, but no major gaps observed. A gap was present under the rear window, however this was covered with cobwebs and did not extend to the interior of the building. The wooden door on the western section was in a good state of repair and no suitable access points were observed. On the eastern section, however, the doors were in a poor state of repair, with gaps between the door and the brickwork and missing timber panels recorded.

Figure 13: Gaps in Door on Eastern Section of B2



The interior of both sections of B2 were heavily cluttered, being used for storage and as a workshop. The two sections of the building were separated by wooden panelling, with the western section split in two again to form two rooms. Inside the western section, a loft void was present, with a boarded out ceiling. The loft, which was accessible via a hatch, was formed from machine cut timbers and had a layer of roof felting and roof insulation also present.

Figure 15: Western section of B2 with Boarded Ceiling



Figure 14: Loft Void



The eastern section also comprised of machine cut timbers with roof felting, but no loft void was present. A double ridge beam ran the entire length of eastern section. In multiple places, the two boards had moved apart, leaving a large gap to the void above. There were numerous gaps in the waney-edged boards on the northern gable wall, evident through the ingress of light.

Figure 16: Ingress of Light on Northern Gable Wall



Daytime Survey Results

A bat roost was confirmed present within B2; two Brown Long-eared bats were visible on the roof felting and roof joists. Over 100 bat droppings were noted in the loft, covering the roof insulation and ceiling rafters. The droppings were a mixture of ages, from this season and previous years. No ingress of light was visible, however the gable end elevation consists of waney-edged boards with multiple gaps and knot holes which have the potential to be utilised by bats.

Two brown long eared bats were recorded roosting near the ridge of the loft void in B2. A further bat (of the same species) was recorded separately, roosting on wall insulation on the southern gable wall near the ridge board in the eastern section of B2. On the bench and floor below were approximately 100 plus bat droppings from this and previous seasons, plus discarded butterfly and moth wings, which are likely to have been deposited by brown long-eared bats which prey on lepidoptera but do not readily ingest the wings.

No evidence of bats was recorded during the survey within B1. Whilst the building had numerous potential access points, it was structurally in a very dilapidated condition resulting in a high degree of light ingress and exposing the building to rain water ingress and draughts. Whilst access was readily available, it was assessed that the condition of the building presents a generally inhospitable environment within for bats and so roosting is considered unlikely. It was therefore assessed as having low potential to support roosting bats.

Nocturnal Survey Results

During the 2016 active period, three nocturnal bat surveys were carried out at the site according to the following schedule.

Table 3: Schedule of Nocturnal Bat Surveys

Bldg. Ref:	Grading	Survey Dates		
		25/07/16	11/08/16	01/09/16
B1	**Low**	✗	✓	✗
B2	**Confirmed**	✓	✓	✓

25th July 2016 – Dusk (B2)

Sunset 21:01, survey start 20:45, survey finish 22.30

During the survey, two brown long-eared bats (*Plecotus auritus*) and a common pipistrelle (*Pipistrellus pipistrellus*) were observed emerging from the building. The first brown long-eared emerged from the eastern gable end, near the apex, in a gap between the waney-edged weatherboards at 21:40, followed by common pipistrelle at 21:44. The third emergence (a brown long-eared) was from the waney-edged weatherboards on the western gable end at 21:47.

Activity on site commenced at 21:38 in the form of a common pipistrelle seen foraging between the north western wall of the building and the hedgerow. Further common pipistrelles were observed foraging along this same route throughout the survey until 22:11. These were typically solitary bats, with two seen foraging together on one occasion at 21:50. One noctule (*Nyctalus noctula*) was recorded commuting high above the site, from west to east, towards the road at 21:42, and common and soprano pipistrelles (*P. pygmaeus*) were observed utilising the road and driveway for commuting and foraging.

11th August 2016 – Dawn (B1 and B2)

Sunrise 05:43, survey start 03:40, survey finish 05:45

Three bats were observed entering Building 2 during the survey. One brown long-eared bat was seen swarming, then entered B2 at 04:58 near the apex of the waney-edged weatherboards on the western gable. Two common pipistrelles were seen swarming close to the house and entered the south-east corner of the house at 05:11.

Bat activity commenced at 03:50 with the surveyor at B1 recording a common pipistrelle foraging briefly, but not visually recording the bat due to low light levels. Bats were recorded foraging sporadically around B2, with occasional recordings of distant bats around B1 travelling north-west through the courtyard. Common and soprano pipistrelles were heard, but not seen passing the north-east end of B2, with one brown long-eared pass at 04:23. Activity surrounding the southwestern gable end consisted of foraging brown long-eared bats and common pipistrelles foraging and social calling. No bats were seen to roost in B2, however two common pipistrelle bats were recorded roosting in flashing associated with the adjacent private dwellings chimney.

1st September 2016 – Dusk (B2)

Sunset 19:54, survey start 19:30, survey end 21:15

During the survey, ten bats were observed emerging from B2. On the eastern gable end, three common pipistrelles emerged from the apex, second waney-edged board from the top, behind the fascia board. These occurred at 20:08, 20:09 and 20:11. Two brown long-eared bats emerged approximately ¾ down the gable end at 20:39, followed by another at 20:44. On the eastern gable end, one common pipistrelle emerged from the waney-edged weatherboards at 20:03, followed by three brown long-eared bats at 20:12, 20:31 and 20:39.

Activity on the dusk survey commenced at 20:03 with a common pipistrelle emergence. There was an increase in activity compared to the previous dusk survey, with constant common pipistrelle foraging and commuting recorded between 20:07 and 20:32. Social calling was also recorded sporadically. Typically, only solitary bats were recorded foraging and commuting and activity was concentrated along the road, the north-west hedgerow and the courtyard. Notably, a juvenile bat was observed at separate times, flying unsteadily and falling into plant pots close to the surveyor positions in the northern corner and western edge. Activity persisted for the duration of the survey, with the final record of activity being identified at 21:07.

Figure 18: Waney-edged Weatherboard, Western Gable End Bat Emergence Locations

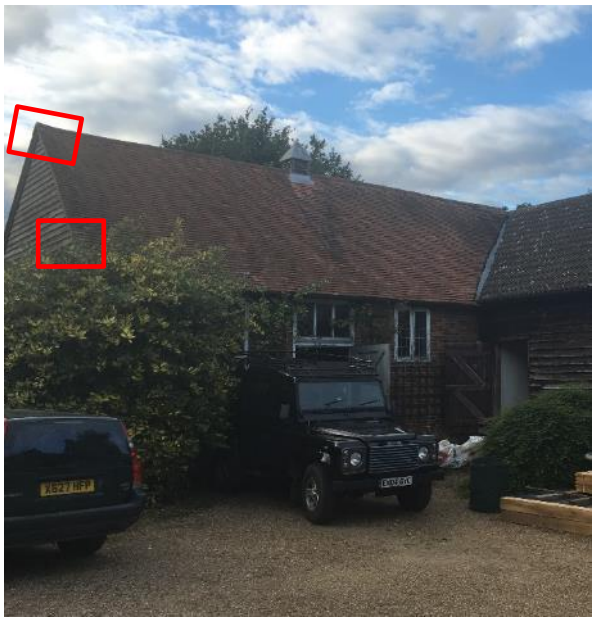


Figure 17: Waney-edged Weatherboard, Eastern Gable End Bat Emergence Locations



5. Evaluation and Recommendations

Bats

Building 1

During the daytime survey no evidence of bats was found, nor was any recorded in the subsequent nocturnal surveys. No bats were recorded emerging from or entering a roost in any section of B1. Whilst the building on face value appears to offer a suitable potential bat roost site, its sheer state of disrepair has rendered much of the building unsuitable for roosting as a result of its open nature and resultant light and exposure levels throughout.

Given the lack of activity recorded or evidence present, it is considered that B1 is not an active bat roost and no further survey is considered necessary to demonstrate this. The redevelopment of B1 would not require an EPSL for bats. However, due to the quantity of suitable access points, the presence of solitary, transient and opportunistic bats within the summer months can never be entirely ruled out. It is therefore recommended that the works to this building be completed following an ecologist inspection and / or dawn swarming survey (depending upon the time of year). In the extremely unlikely event that a bat is found during redevelopment of B1, work should cease and a qualified ecologist should be notified immediately.

Building 2

The daytime survey highlighted three brown long-eared bats roosting within B2. Following the nocturnal surveys, this has been identified as a small maternity colony for both brown long-eared and common pipistrelle. These roosts have been identified on all three survey occasions, with multiple bats seen emerging from and entering gaps in the waney-edged boards on the eastern and western gable end elevations. A maximum of ten bats were seen emerging from B2 during the third survey, indicating it is likely to be maternity roost of low numbers of brown long-eared and common pipistrelle, which are classified as common species in both a local and national context

Development of the building therefore potentially results in the loss and/or disturbance to a roost for two bat species and as such will require a European Protected Species Licence in order to legitimise the works. This will require mitigation to put in all reasonable avoidance measures during works to avoid disturbance to bats and their roost as well as include compensatory roost replacements on site. In this instance, roost compensation works are considered to include the retention of the loft above the western section of building and replacement crevice features on the southern facing gable wall and will readily replicate those features already present on site. To provide confidence in planning that such mitigation and compensation is achievable on this site, details are provided within Section 6 of this report which will form the basis of the EPSL.

Adjacent Residential Dwelling

During the nocturnal surveys, two common pipistrelles were recorded re-entering the residential dwelling. This building is not part of the planned development works and so the bats roost will not be affected by the current proposals. In the event of any changes and any works being planned for the residential dwelling, further surveys would be required.

6. Mitigation Recommendations

This section identifies the mitigation and compensation requirements for Building 2, which will form the basis of the EPS Licence. This will include partial retention of the loft space for bats within the building.

Lighting

Artificial lighting can affect the manner in which bats use habitats in a variety of ways, depending on the species and proximity to a roost. Direct bright lighting of a roost can cause bats to delay emergence from a roost and could even cause them to desert the roost (BCT and ILE, 2008). Consequently, lighting near to the roost entrance points must be avoided within the redevelopment of this site. Where artificial lighting cannot be avoided, the lighting scheme will be designed with reference to the Bat Conservation Trust and Institute of Lighting Professionals Guidance 5, 6 & 7, whereby light spill is reduced and downwardly directional. All new lighting will meet the current environmental standards of good practice in order to reduce potential light pollution and will use the lowest intensity for its purpose. This will minimise light spill onto foraging routes and minimise potential disturbance to foraging areas within the site

Mitigation

Site Supervision and Training

Before works commence on site, all site workers will be inducted by the licensed ecologist on site. This will include training on identification of bats and their roost requirements as well as appropriate working methods and behaviours in the unlikely event a bat is found.

The daytime and nocturnal surveys identified the location of the bat roost in the loft void of B2, as well as exit and entrance points behind the waney-edged weatherboards on the gable end elevations. As a precaution, an ecologist will check the waney-edged boards before construction works commence and supervise all critical works, such as board and roof removal etc. Where a bat is found during these works, they will be carefully removed and placed in a translocation roost box as discussed below.

The ecologist will remain on call for the duration of the building programme and provide ad-hoc advice if required. Spot checks for compliance will be made at any point during the contract period. This will also include signing off contractor method statements and works. The ecologist will also provide advice service and carry out an interim inspection of compensatory roost replacement works.

Temporary Roost Replacement

During the initial construction phase it will be essential to provide a temporary roost site. Two Schwegler 2FN bat boxes will be erected on suitable mature trees as close to the existing roost as possible, prior to the works commencing. These should be installed at a height of 3m, ideally south-facing and out of direct artificial light spill or obstacles blocking ingress and egress points.

Timing

As B2 has been identified as maternal roost, it is anticipated the works will have a medium impact upon the bats and as such, the works will be subject to time constraints. Pending licence approval, it is recommended that works commence during late September to October. This period ensures that works avoid the maternal period and also the hibernation period, where disturbance of bats in torpor can lead to mortality and disturbance during the maternity period can lead to the abandonment of young. Whilst this building is considered unlikely to provide suitable conditions for hibernation (and no hibernation survey is considered necessary or proportionate), the presence of solitary brown long-eared at any time of year can never be ruled out. The primary focus of the

early works must be to complete the loft and waney-edged boarding (all external works) before mid-April the following year in order to allow continued use of the roost uninterrupted.

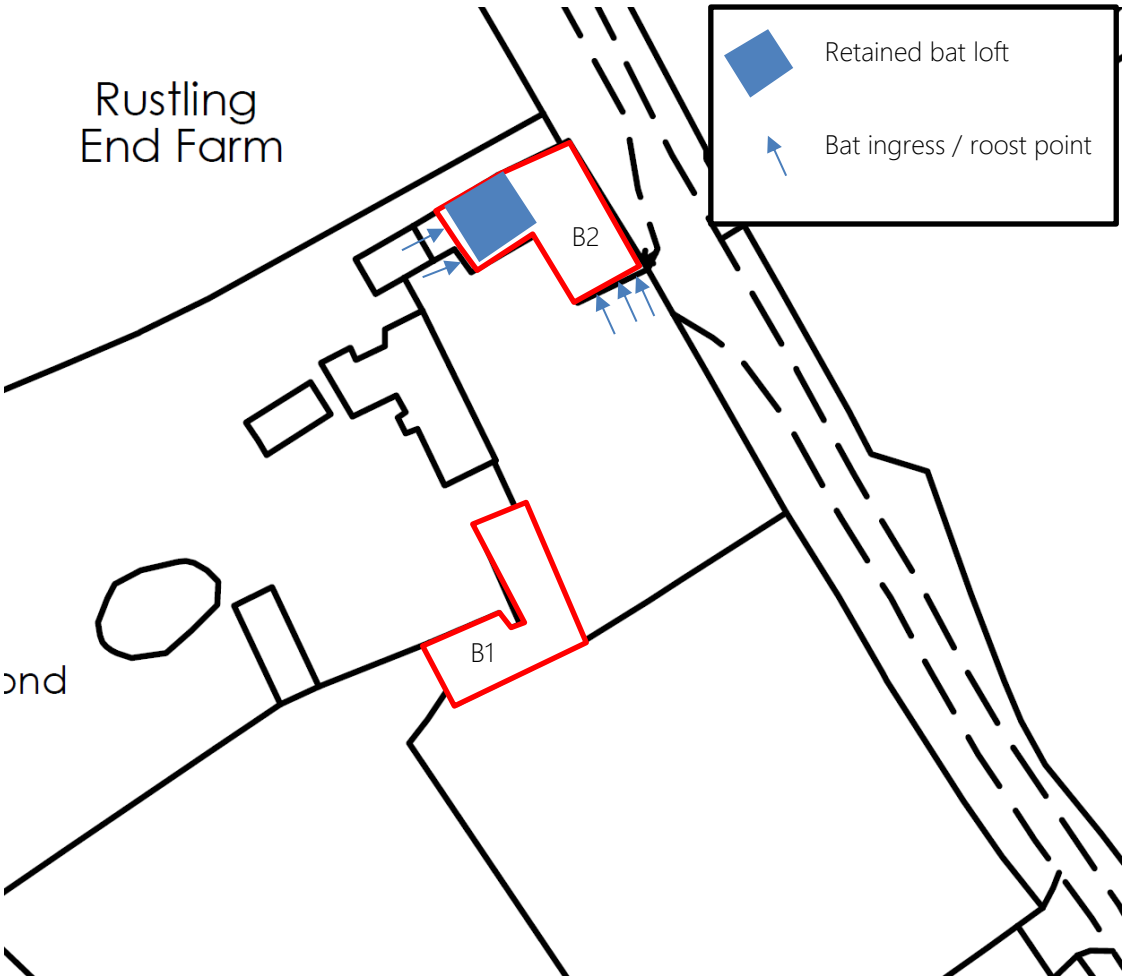
Roost Retention / Compensation

The buildings western loft section is to be retained entirely for use by bats including no alterations to the ingress / egress points on the external waney-edged boards. However, at present this area is not a discrete loft and is open in the east to the wider barn area. Consequently, a partition wall will be required. Once in place this will create a dedicated bat loft approximately 5m x 5m with a ridge height of 1.8m. The partition wall will have rough sawn timbers affixed to the inside in order to provide new perching points for bats.

As the entrance points are not to be altered it is considered impacts to the roost would be limited. Some remedial timber treatment of the waney-edged boards may be required. However, only materials approved for use on or near bat roosts can be used. Appendix 3 provides the current approved timber treatment lists from Natural England on the .gov.uk website.

Additional roost replacement will be required for the buildings southern gable wall where three roosts have been identified within the waney-edged boards. Currently the roost spaces exist between the external waney-edged board and an internal ply, which will be lost due to the need to improve the buildings thermal properties. It is therefore, recommended that three crevice roost boxes are installed behind the waney-edged boards, or that purpose built crevice boxes are installed behind this feature. These can be entirely sealed off from any habitable space, and designed so they are self-cleaning (i.e. allow droppings out) and require no maintenance.

Figure 19: Roost Compensation / Retention



Post Construction Monitoring

Due to the small size of the roost and its classification as being of medium conservation status, it is proposed that post construction monitoring be conducted for two years after works are completed. This will include an internal inspections and nocturnal bat surveys following BCT guidance.

Site Enhancements

The NPPF encourages biodiversity enhancements through the planning process. Sites such as this can easily and cost-effectively achieve localised enhancements through the inclusion of a range of nest boxes for birds and bats, as well as enhancing hedgerows with native species to provide foraging and commuting corridors for bats and connectivity with the wider countryside.

Appendix 1: References

BS 42020:2013 Biodiversity – Code of Practice for Planning and Development 2013: The British Standards Institution.

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Appendix 2: Bat Activity Plans



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Table 1. Remedial timber treatment products suitable for use in bat roosts[1]

Company and product name	Type[2]	User[3]	Active Ingredients[4]	HSE No.[5]
ADVANCED CHEMICAL SPECIALITIES LTD				
ACS Timber Treat	W	A	IPBC, Tebuconazole	9146
AKZO NOBEL COATINGS LTD				
Cuprinol Trade Decorative Preserver (BP)	S	A	IPBC, Propiconazole	9004
Cuprinol Trade Quick Drying Wood Preserver Clear (BP)	W	A	Propiconazole, IPBC	9070
Dulux Trade Weathershield Naked Wood Basecoat (BP)	W	A	Propiconazole, IPBC	9072
Dulux Trade Weathershield Preservative Primer + (BP)	W	A	Propiconazole, IPBC	9073
BARRETTINE PRODUCTS LTD				
Barrettine Premier Wood Preserver	S	A	Propiconazole	8265
BECKER ACROMA GROUP AB				
Laqvin Seal AA1940	W	A	IPBC, Tebuconazole	9152
BIOKIL CROWN LTD				
Woodzone Insecticide	M	A	Permethrin	9178
Ultra-Tech 20001 Insecticide	M	P	Permethrin	7273
Woodzone Masonry Biocide	M	A	IPBC	9177
CROWN PAINTS				
Sadolin Quick Dry Wood Preserver	W	A	IPBC, Propiconazole	9170
E W MIDDLETON AND SONS				
Creoseal +	S	A	IPBC, Tebuconazole	9156
ENVIROQUEST RESEARCH LIMITED				
Aqua-Pack Timber Preserver	M	A	Propiconazole, IPBC	8404
MORRELLS WOODFINISHES LIMITED				
Omnia Preserve	W	A	IPBC, Propiconazole	9171
N-VIROL SPECIALIST PRODUCTS				
N-Virol masonry biocide	M	P	IPBC	8476
N-Virol timber treatment paste	Pa	P	Permethrin, IPBC	8488
N-Virol Dual FI	M	P	Permethrin, IPBC, Propiconazole	8569
N-Virol woodworm killer	M	P	Permethrin	8570
OSMO UK LIMITED				
Osmo Base Coat Aqua	W	A	IPBC, Tebuconazole	9143
Osmo Base Coat Clear	S	A	IPBC, Tebuconazole	9159
PERMAGARD PRODUCTS LIMITED				
Dual Purpose FI	M	P	IPBC, Propiconazole	7379
Wood Worm Killler Concentrate	M	P	Permethrin	7380
Permagard Masonry Biocide	M	P	IPBC	7394
Micro Timber Gel	M	P	IPBC, Propiconazole	7396
Wood Worm Killler WSS Concentrate	M	A	Permethrin	7548
Dual Purpose WSS	M	P	IPBC, Propiconazole	7580
PETER COX LIMITED				
Insecticide WSS	Wc	P	Permethrin	7528
PETER COX PROPERTY SERVICES				
Fungicide T&M	M	A	IPBC, Propiconazole	8886
PREMIER Q COATINGS				
Premier Q Wood Preservative	S	A	IPBC	8350

Company and product name	Type[2]	User[3]	Active Ingredients[4]	HSE No.[5]
PROTIM SOLIGNUM LTD TRADING AS OSMOSE				
Osmose Endcoat Wood Preservative	S	A	Propiconazole	8329
Protim Fentex E2	Wc	P	Boric Acid, IPBC Propiconazole	8340
Protim Fentex E5	Wc	P	Boric Acid, IPBC, Propiconazole	8341
RENTOKIL INITIAL				
Woodworm Treatment	S	A	Permethrin	3911
Woodworm Spray	A	A	Permethrin	5619
RESTORATION UK LIMITED				
Timber Gel EQEF 159	M	P	Permethrin, Propiconazole, IPBC	6832
Excel Insecticide Fastrack	Wc	P	Permethrin	6941
Excel Dual Fastrack	Wc	P	Permethrin, IPBC	7429
Eco Dual	Wc	P	Permethrin, IPBC	7819
Eco - Insecticide	Wc	P	Permethrin	7830
Restor paste	Pa	P	Permethrin	8467
REMMERS (UK) LTD				
Induline SW-099	W	P	Propiconazole	8199
Aidol KH Lasur	S	A	IPBC, Tebuconazole	9153
RIGASE LAKU UN KRASU RUPNICA				
Texturdekor	S	A	IPBC, Tebuconazole	9158
RONSEAL LTD				
Ronseal Wood Preserver	M	A	IPBC, Propiconazole	9172
SAFEGUARD EUROPE LTD				
Fastrack Woodworm Killer Concentrate	M	P	Permethrin	7382
Fastrack Dual Purpose F/I	M	P	Permethrin, Propiconazole	7392
Fastrack Dry Rot Control	M	P	IPBC	7395
Soluguard Woodworm Killer	M	A	Permethrin	8152
Soluguard Fungicide Concentrate For Timber And Masonry	M	P	IPBC, Propiconazole	8545
Soluguard Masonry Fungicide	M	P	IPBC	8634
Soluguard Masonry & Timber Fungicide WSS	M	P	Propiconazole,IPBC	9147
Soluguard Woodworm & Rot Treatment	M	A	IPBC, Propiconazole	9290
Soluguard Woodworm RTU	M	A	Permethrin	9321
SIKA LIMITED				
Sika Timber Preserver Concentrate	M	A	Propiconazole, IPBC	8836
SOVEREIGN CHEMICALS LTD				
Deepkill Timber Paste	Pa	P	Permethrin, IPBC	6084
Remtox MF8	M	P	Flurox	6507
Remtox MF9	M	P	Flurox, IPBC	6508
Sovaq FLX FI	M	P	Flurox, IPBC	6509
Sovaq FLX I	M	P	Flurox	6510
Sovac FI / Sovereign Wood Preservative	M	A	Permethrin, IPBC	7862
Remtox M8	M	P	Permethrin	8176
Sovaq Powerpack FLX FI	M	P	Flurox, IPBC	8223

Company and product name	Type[2]	User[3]	Active Ingredients[4]	HSE No.[5]
Sovaq Powerpack FLX I	M	P	Flurox	8224
Sovereign Timbor Rod	R	P	Disodium Octaborate	8451
Sovereign Rot Stop	S	A	IPBC, Tebuconazole	9155
TROY UK				
TWP 085	W	A	IPBC, Propiconazole	8105
TWP 077	S	A	IPBC, Propiconazole	8138
TWP 21	S	A	IPBC	9139
WYKAMOL GROUP LIMITED				
Wykamol Plus	S	P	Permethrin, IPBC	7303
Woodtreat Paste	Pa	P	Permethrin, IPBC	7362
Wykamol Boron Rods	R	A	Boric Acid	7405
Microtech Dual	M	P	Permethrin, IPBC, Propiconazole	7533
Microtech Woodworm	M	P	Permethrin	7534
Aquatech Woodworm	M	P	Permethrin, IPBC, Propiconazole	7990
Aquatech Dual	M	P	Permethrin	7991