Survey & Evaluation for Bats in relation to development at

14 UPPER ROTCHER

Planning Application No. 2018/62/90675/W
Planning Application No. 2018/62/90676/W

Rotcher Lane, Slaithwaite, HUDDERSFIELD
West Yorkshire

2018

REPORT PRODUCED ON BEHALF OF
MR. RICHARD STOTT
CONTRACT NUMBER 8020-18-01

ENTOTAX CONSULTANTS UK
ENTOTAX CONTRACT SCIENCE
REPORT No. 1802BAT (JUNE 2018)

Survey & Evaluation for Bats
in relation to proposed development at
14 Upper Rotcher, Rotcher Lane, Slaithwaite, HUDDERSFIELD, West Yorkshire

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1 SUMMARY

SURVEY & EVALUATION FOR BATS AND BREEDING BIRDS: PROPOSED DEVELOPMENT AT 14 UPPER ROTCHER, ROTCHER LANE, SLAITHWAITE, HUDDERSFIELD

1.1 Mr. Richard Stott is proposing to renovate a semi-derelict Grade II Listed Building (cottage) at 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield West Yorkshire. The proposals constitute Residential Development of a Listed Building (**Kirklees Unitary Development Plan (UDP) adopted March 1999**) and are subject to a planning decision notice:

(1) Planning Application No. **2018/62/90675/W**
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Erection of two storey extension and alterations (Listed Building)

(2) Planning Application No. **2018/62/90676/W**
Received by Planning Department: 26 February 2018
Validated by Planning Department: 05 March 2018
Status: Pending

Listed Building Consent for erection of two storey extension and alterations

1.2 Prior to 27 March 2012, national guidance for assessing proposals that could impact upon protected species was given in **UK Government Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9) (August 2005)** which was accompanied by a Government Circular: **Biodiversity and Geological Conservation - Statutory obligations and their Impact within the Planning System (ODPM Circular 06/2005, Defra Circular 01/2005)** and in **Planning for Biodiversity and Geological Conservation: A Guide to Good Practice**.

UK Government Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9) (August 2005) was replaced on 27 March 2012 by the **National Planning Policy Framework (NPPF)**. **Section 11 (109-125) of the NPPF: Conserving and Enhancing the Natural Environment** provides the latest guidance for assessing proposals that may impact upon protected species and/or species of nature conservation/biodiversity importance.

The **Kirklees Local Plan** (Local Development Framework or LDF – the name has changed to reflect the NPPF) will become the statutory development plan for the Kirklees District. The main planning documents of the Kirklees Local Plan will include: the **Core Strategy** – the over-arching strategic policy document of the LDF (all other LDF documents must be in general conformity with the Core Strategy) and the respective ***policies document*** replacing many of the former policies of the Kirklees Unitary Development Plan (UDP).

The Core Strategy was withdrawn (unadopted) on 23 October 2013 and planning applications are currently being determined in terms of compliance with the National Planning Policy Framework (NPPF) and the saved policies of the Kirklees Unitary Development Plan.

1.3 Ecological Survey & Evaluation of buildings subject to proposed development (particularly demolition or partial demolition) should be undertaken in order to identify potential negative impacts of such development, upon protected species and/or species of nature conservation/biodiversity importance. In relation to the current proposals these potential impacts are most likely to include:

Impacts upon bats (disturbance of bats; loss of habitat used for refuge (roosting features); injury to immatures incapable of flight or to adults).

Impacts upon breeding birds (loss of breeding sites or habitat used for refuge; damage to nests or eggs or injury to unfledged young);

1.4 It is considered that the proposed development could potentially affect bats and breeding birds, and that appropriate consideration of bats and breeding is required. The proposals are otherwise considered to comply with relevant statutory legislation (Wildlife & Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2010) and with the National Planning Policy Framework (NPPF) in relation to bats and breeding birds.

1.5 **Potential Impacts upon Bats**

Survey and assessment of buildings subject to proposed development (e.g. partial demolition) should be undertaken to ensure that protected species (all species of bat) will not be detrimentally affected by the development proposals.

All species of native British bat and their roosts are protected under the **Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000)** and are further protected under **Regulation 39(1) of the Conservation (Natural Habitats &c.) Regulations 1994**.

Guidance for developers is given in English Nature's **Bat Mitigation Guidelines (2004)**.

West Yorkshire Ecology Service has recently published **Minimum Standards for Bat Surveys in West Yorkshire Version 5 (West Yorkshire Ecology, July 2012)** and these standards should be adopted as a baseline compliance standard prerequisite for any development where potential risks to bats exist.

1.6 **Potential Impacts upon Breeding Birds**

Survey and assessment of buildings subject to proposed development (e.g. partial demolition) should be undertaken to ensure that protected species (all breeding birds) will not be detrimentally affected by the development proposals.

All species of British wild bird are protected under the **Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000)**.

1.7 During April 2018 Entotax Consultants UK (ecological consultants) were commissioned by Mr. Richard Stott to undertake a Survey & Evaluation for Bats and Breeding Birds at a semi-derelict property (cottage) at 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield, West Yorkshire. The general aims of the Survey & Evaluation for Bats and Breeding Birds were to:

> Determine the likelihood of the presence/absence of bats within the building (by appropriate survey) and the likelihood of the building being used by bats within the immediate/near future i.e. prior to commencement of development.
>
> Determine the likelihood of the presence/absence of breeding birds within the building and the likelihood of the building being used by breeding birds within the immediate/near future i.e. prior to commencement of development.
>
> Provide a report to Kirklees Council (Planning Services) detailing the results of the Survey & Evaluation for Bats and Breeding Birds, together with appropriate mitigation aimed at ensuring that bats and breeding birds are unaffected by the development proposals.

1.8 The application site is located (somewhat remotely) to the western edge of Slaithwaite village (approx. 600m to the west-southwest of Slaithwaite village centre and approx. 8km to the west-southwest of Huddersfield town centre). The property lies to the immediate north of the main Huddersfield (Huddersfield- Manchester) railway line within 1km national grid reference square SE 0713 (Central National Grid Reference: SE 07254 13743 = 407254E 413743N) at an altitude of approx. 170m Above Ordnance Datum (AOD).

1.9 The application site lies within a rural landscape with the immediate wider environs comprising extensive areas of improved/semi-improved grassland to the north and west. An extensive, narrow belt of broadleaved woodland (running northeast–southwest) lies to the immediate south of the application site boundary and flanks the River Colne and near adjacent Huddersfield Narrow Canal watercourses. These woodland edge and wetland habitats provide good potential foraging opportunities for a number of bat species and there is good connectivity between these habitats and the wider, extensive rural landscape. Furthermore, the numerous field boundary and roadside hedgelines are also likely to provide additional habitat of potential value to foraging bats. In addition to these habitats, small pockets of broad-leaved woodland and mature trees (either as individuals or in groups) are scattered throughout the immediate and wider rural landscape.

1.10 Field Survey visits were undertaken during May 2018 with the building and adjacent habitats being assessed as to their suitability for roosting and foraging bats and for breeding birds. A Dusk Emergence Survey was undertaken on 03 May 2018 but night-time temperatures were considered borderline and the Dusk Emergence Survey was repeated on 07 May 2018.

The results of the Survey & Evaluation for Bats and Breeding Birds are fully discussed in the relevant sections of this report, which details the findings of the survey in respect of the proposed works and describes the methodologies used throughout this process. Measures to avoid, compensate or mitigate potentially significant adverse impacts upon bats and/or breeding birds are included as appropriate.

1.11 There are 6 records for at least two bat species (within the 2km radial search area) held by the Local Biological Records Office (West Yorkshire Ecology Service) and the West Yorkshire Bat Group. This is a low number of records, with only one record lying within 250m of the application site boundary.

1.12 The Building Survey and Dusk Emergence Survey were undertaken in accordance with the relevant sections of The JNCC Bat Workers Manual 3rd Edition (2004); Natural England's Bat Mitigation Guidelines (2004); The Bat Conservation Trust's Bat Surveys - Good Practice Guidelines (2007) and West Yorkshire Ecology's Minimum Standards for Bat Surveys in West Yorkshire Version 5 (2012).

1.13 Dusk Emergence Survey was undertaken at appropriate time of year (early May) and at appropriate times of day (21:00hrs. – 00:30hrs. and 21:15hrs. – 00:30hrs. respectively). The survey protocols included the use of **Pettersson D-240x** hand-held bat detectors with CF cards (these are sophisticated hand-held bat detectors combining heterodyne and time expansion capabilities) and **Yukon Ranger Pro Night Vision** (x5) binoculars.

Dusk Emergence Survey was undertaken by two Entotax surveyors, with particular attention being paid to all of the features identified as potential access/refuge points for bats.

Only two single registrations for echolocating 46.5kHz (Peak Frequency Range: 41.7-51.8kHz) Common Pipistrelle *Pipistrellus pipistrellus* bats were recorded during the Dusk Emergence Survey of 03 May 2018. However, due to relatively low nighttime temperatures (8.5-9.0°C) it was decided to repeat the survey on 7 May 2018 when 15 registrations and a maximum count of 4-5 echolocating 46.5kHz common pipistrelle bats were recorded. Registrations were made occasionally throughout the night, when bats were recorded foraging within the tall tree canopy flanking the River Colne and near adjacent Huddersfield Narrow Canal (some 75m to the immediate south of the application site). Bats were not recorded in close proximity to the application site and were not observed entering or exiting the building at any time during the surveys.

1.14 The Building Survey (undertaken on 27 May 2018) found no evidence of past or present usage by bats.

1.15 The conclusions drawn from the Survey & Evaluation for Bats are that bats are not using the building at the present time (May 2018) with the building being considered to be between **Negligible** and **Moderate** potential for roosting bats. Internal roosting potential (mainly for species such as Brown Long-eared Bat *Plecotus auritus*) and external roosting potential (mainly for species such as Pipistrelle spp. *Pipistrellus spp.*) was independently determined.

1.16 The survey data indicate that bats are not using the building at the present time and are unlikely to do so prior to commencement of development (partial demolition).

The works will entail careful partial stripping of the roof under the guidance of a suitably qualified and licenced bat worker in order to fit three Velux-type skylights. The bat worker will be available (contactable) at all times to guide the works and advise on all matters in relation to bats.

In keeping with best practice guidelines, a bat box will be erected within the curtilage of the property i.e. attached to the existing property or to an available nearby mature tree. Guidance as to the exact location and orientation of the bat box will be provided in full consultation with Kirklees Council Environment Unit.

1.17 A European Protected Species Licence (EPSL) is considered unnecessary for the proposed partial demolition works. However, the works should proceed with care and in the knowledge that in the unlikely eventuality of bats being discovered during the works, the works must cease immediately and the Statutory Authority (Natural England) and the Local Planning Authority – Kirklees Council (Planning Services) should be notified. An appropriate (licenced) mitigation scheme would then be required for the works to continue.

1.18 No significant ecological impacts upon breeding birds are anticipated as a result of any proposed works undertaken outside the breeding season (October-February inclusive).

It is accepted that the Statutory Authority (Natural England) and/or Local Authority (Kirklees Council - Planning Services) may request a Monitoring Survey (Watching Brief) for nesting birds prior to commencement and during ongoing development, should the proposed works be undertaken during the breeding season. Therefore, where potential disturbance to nesting birds cannot be reasonably avoided (i.e. if the proposed works need to be undertaken during the breeding season) a nesting bird survey will be carried out by an appropriately trained/experienced ecologist to determine whether nests are present. If nesting birds are subsequently discovered, works within the immediate area will cease and any nests will be monitored by the ecologist until fledglings have left the nest.

There was no evidence of external nesting species such as House Martin *Delichon urbicum* when the buildings were surveyed on 20 May 2018.

Chapter 2 SYNOPSIS

A report giving the results of a Survey & Evaluation for Bats and Breeding Birds, undertaken at 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield West Yorkshire by Entotax Consultants UK (ecological consultants) on behalf of Mr. Richard Stott is presented. Inferences drawn from the survey data are discussed in terms of the current (and potential) value of the site for bats and breeding birds and the potential risk to bats and breeding birds from the proposed development (partial demolition).

This report is the final report to Mr. Richard Stott (Entotax Contract Science Report 1802BAT) and covers the period up to and including 13 June 2018. Work for this contract commenced 18 April 2018.

Chapter 3 INTRODUCTION

3.1 OVERVIEW

Mr. Richard Stott is proposing to renovate a semi-derelict Grade II Listed Building (cottage) at 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield West Yorkshire. The proposals constitute Residential Development of a Listed Building (**Kirklees Unitary Development Plan (UDP) adopted March 1999**) and are subject to a planning decision notice:

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Listed Building Consent for erection of two storey extension and alterations

3.2 OBJECTIVES

During April 2018 Entotax Consultants UK (ecological consultants) were commissioned by Mr. Richard Stott to undertake a Survey & Evaluation for Bats and Breeding Birds at a semi-derelict property (cottage) at 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield, West Yorkshire. The general aims of the Survey & Evaluation for Bats and Breeding Birds were to:

> Determine the likelihood of the presence/absence of bats within the building (by appropriate survey) and the likelihood of the building being used by bats within the immediate/near future i.e. prior to commencement of development.
>
> Determine the likelihood of the presence/absence of breeding birds within the building and the likelihood of the building being used by breeding birds within the immediate/near future i.e. prior to commencement of development.
>
> Provide a report to Kirklees Council (Planning Services) detailing the results of the Survey & Evaluation for Bats and Breeding Birds, together with appropriate mitigation aimed at ensuring that bats and breeding birds are unaffected by the development proposals.

Field Survey visits were undertaken during May 2018 with the building and adjacent habitats being assessed as to their suitability for roosting and foraging bats and for breeding birds. A Dusk Emergence Survey was undertaken on 03 May 2018 but nighttime temperatures were considered borderline and the Dusk Emergence Survey was repeated on 07 May 2018.

The results of the Survey & Evaluation for Bats and Breeding Birds are fully discussed in the relevant sections of this report, which details the findings of the survey in respect of the proposed

works and describes the methodologies used throughout this process. Measures to avoid, compensate or mitigate potentially significant adverse impacts upon bats and/or breeding birds are included as appropriate.

Chapter 4 DESK STUDY & LEGISLATION

4.1 DATA SOURCE CONSULTATION

4.1.1 SCHEDULE OF CONSULTEES

A Desk Study was undertaken in order to collate and evaluate all the existing data for bats currently available for the site and the near wider environs (i.e. within a radius of 2km). Consultation was undertaken with statutory and non-statutory nature conservation organizations to supplement the information obtained during survey.

A desk based survey was also conducted using the Internet with the Multi-Agency Geographic Information for the Countryside (MAGIC) website www.magic.gov.uk being consulted for records relating to designated sites and selected habitat inventories.

Table 1: Summary of Consultee Responses

Consultee	Issues Highlighted	Consultee Response
Natural England Yorkshire and The Humber Region (Leeds)	Species protected under the Wildlife & Countryside Act 1981 (as amended)	No information
West Yorkshire Ecology (Leeds)	Species protected under the Wildlife & Countryside Act 1981 (as amended)	Records for bats within 2km radius
West Yorkshire Bat Group	Species protected under the Wildlife & Countryside Act 1981 (as amended)	Records for bats within 2km radius

4.2 LEGISLATION AND THE PLANNING SYSTEM

4.2.1 NATIONAL PLANNING POLICY FRAMEWORK (NPPF)

Prior to 27 March 2012, national guidance for assessing proposals that could impact upon protected species was given in **UK Government Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9) (August 2005)** which was accompanied by a Government Circular: **Biodiversity and Geological Conservation - Statutory obligations and their Impact within the Planning System (ODPM Circular 06/2005, Defra Circular 01/2005)** and in **Planning for Biodiversity and Geological Conservation: A Guide to Good Practice**.

UK Government Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9) (August 2005) was replaced on 27 March 2012 by the **National Planning Policy Framework (NPPF)**. **Section 11 (109-125) of the NPPF: Conserving and Enhancing the Natural Environment** provides the latest guidance for assessing proposals that may impact upon protected species and/or species of nature conservation/biodiversity importance. Compliance with this guidance will ensure that species of nature conservation/biodiversity importance protected under the **Wildlife and Countryside Act 1981 (as amended by the Countryside and**

Rights of Way Act 2000) and also protected under **Regulation 39(1) of the Conservation (Natural Habitats &c.) Regulations 1994** will be unaffected by the development proposals (partial demolition).

The NPPF makes the presence of a protected species or habitat a material consideration in the assessment of development proposals and requires planning authorities to take particular care to avoid harm to species or habitats protected under the **Wildlife and Countryside Act (1981), European Directives** and/or identified as priorities in the **UK Biodiversity Action Plan (UK BAP)**.

The Framework places great emphasis upon sustainable development and states that this gives rise to the need for the planning system to perform a number of roles including improving biodiversity. The specific policies within the Framework relating to biodiversity reaffirm the protection previously afforded through PPS9 to designated sites, priority habitats and priority species, ancient woodland and veteran trees. Within the Framework, more emphasis is placed upon ecological networks than in PPS9, requiring their creation rather than simply their maintenance and repair. The Framework also states that the planning system should provide a net gain for biodiversity wherever possible and should contribute to the Government's commitment to halt the loss of biodiversity (not specifically required under PPS9). However, the Framework places less emphasis on legally protected species than does PPS9, referring instead to the need to maintain biodiversity and the protection of priority species, presumably those listed in the UK Biodiversity Action Plan.

The protection afforded to wildlife on proposed development sites through planning policy appears largely unchanged. There are still requirements to avoid, mitigate and compensate for significant harm to biodiversity and protect Sites of Special Scientific Interest and irreplaceable habitats, such as ancient woodland.

The **Kirklees Local Plan** (Local Development Framework or LDF – the name has changed to reflect the NPPF) will become the statutory development plan for the Kirklees District. The main planning documents of the Kirklees Local Plan will include: the **Core Strategy** – the over-arching strategic policy document of the LDF (all other LDF documents must be in general conformity with the Core Strategy) and the respective ***policies document*** replacing many of the former policies of the Kirklees Unitary Development Plan (UDP).

The Core Strategy was withdrawn (unadopted) on 23 October 2013 and planning applications are currently being determined in terms of compliance with the National Planning Policy Framework (NPPF) and the saved policies of the Kirklees Unitary Development Plan.

Ecological Survey & Evaluation of buildings subject to proposed development (particularly demolition or partial demolition) should be undertaken in order to identify potential negative impacts of such development, upon protected species and/or species of nature conservation/biodiversity importance. In relation to the current proposals these potential impacts are most likely to include:

> Impacts upon bats (disturbance of bats; loss of habitat used for refuge (roosting features); injury to immatures incapable of flight or to adults).
>
> Impacts upon breeding birds (loss of breeding sites or habitat used for refuge; damage to nests or eggs or injury to unfledged young);

It is considered that the proposed development could potentially affect bats and breeding birds, and that appropriate consideration of bats and breeding is required. The proposals are otherwise

considered to comply with relevant statutory legislation (Wildlife & Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2010) and with the National Planning Policy Framework (NPPF) in relation to bats and breeding birds.

4.2.2 BREEDING BIRDS

Birds are protected under the Wildlife and Countryside Act 1981 (as amended) whereby it is an offence to:

- Willfully kill, injure or take any wild bird or attempt to do so.
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built.
- Take or destroy an egg of any wild bird.

4.2.3 BATS

All species of native British bat and their roosts are protected under the **Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000)** and are further protected under **Regulation 39(1) of the Conservation (Natural Habitats &c.) Regulations 1994** whereby it is an offence to:

- Intentionally kill, injure or take a bat [Section 9 (1)].
- Possess or control any live or dead specimen or anything derived from a bat [Section 9 (2)].
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat [Section 9 (4)(a)].
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose [Section 9 (4)(b)].

Potential adverse operational impacts of the proposed development (together with appropriate mitigation) are given in Table 2 (below):

Table 2: Potential Adverse Operational Impacts (together with appropriate mitigation) for all species of bat.

BATS (all species)	
Potential Adverse Operational Impact	**Appropriate Mitigation**
Damage to structures used for shelter, breeding or hibernation. Injury to roosting bats.	Identify suitable structures and assess risk (where risk is negligible proceed with care under the supervision of an appropriately qualified ecologist). Undertake appropriate survey if risk is above negligible. Appropriate timing of works.

Disturbance of roosting bats. Loss of roosting sites.	Obtain appropriate licence for continuation of works if bats are present. Undertake appropriate survey if risk is above negligible. Appropriate timing of works. Obtain appropriate licence for continuation of works if bats are present. Provide appropriate mitigation for loss of roosting sites.
BREEDING BIRDS (all species)	
Potential Adverse Operational Impact	**Appropriate Mitigation**
Damage to nests and eggs. Injury to nestlings. Loss of nesting sites. Disturbance of breeding birds (Schedule 1 - Part 1 only).	Appropriate timing of works. Appropriate timing of works. Provide appropriate mitigation for loss of nesting sites. Obtain appropriate licence where applicable.

Guidance for developers is given in English Nature's **Bat Mitigation Guidelines (2004)**.

West Yorkshire Ecology has recently published **Minimum Standards for Bat Surveys in West Yorkshire Version 5 (West Yorkshire Ecology, July 2012)** and these standards should be adopted as a baseline compliance standard prerequisite for any development where potential risks to bats exist.

Chapter 5 SURVEY FOR BATS

5.1 SURVEY RATIONALE

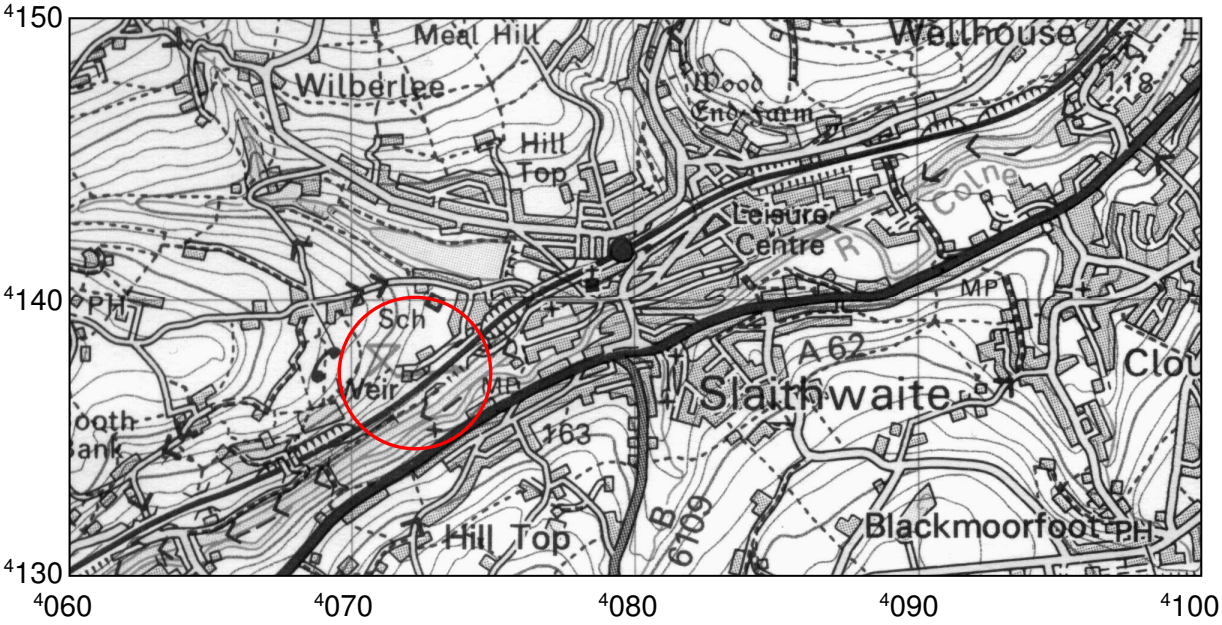
The Survey & Evaluation for Bats was based upon:

- A Desk Study for records of bats from within the site boundary and/or the immediate wider environs (within a 2km radius of the site) (see Chapter 4).
- Field Survey employing appropriate methodology in order to determine the presence/absence and suitability of the site for bats.

5.2 SURVEY AREA

The application site is located (somewhat remotely) to the western edge of Slaithwaite village (approx. 600m to the west-southwest of Slaithwaite village centre and approx. 8km to the west-southwest of Huddersfield town centre). The property lies to the immediate north of the main Huddersfield (Huddersfield- Manchester) railway line within 1km national grid reference square SE 0713 (Central National Grid Reference: SE 07254 13743 = 407254E 413743N) at an altitude of approx. 170m Above Ordnance Datum (AOD).

Figure 1: Map showing Site Location



The application site lies within a rural landscape with the immediate wider environs comprising extensive areas of improved/semi-improved grassland to the north and west. An extensive, narrow belt of broadleaved woodland (running northeast–southwest) lies to the immediate south of the application site boundary and flanks the River Colne and near adjacent Huddersfield Narrow Canal watercourses. These woodland edge and wetland habitats provide good potential foraging opportunities for a number of bat species and there is good connectivity between these habitats and the wider, extensive rural landscape. Furthermore, the numerous field boundary and roadside hedgelines are also likely to provide additional habitat of potential value to foraging bats.

In addition to these habitats, small pockets of broad-leaved woodland and mature trees (either as individuals or in groups) are scattered throughout the immediate and wider rural landscape.

5.3 BUILDING SURVEY

5.3.1 CONSTRUCTION DETAILS

The Building Survey was also supported by compilation of a photographic record (see Appendix 10.2 Photographic Record: 1802BAT.P1-P12).

Cottage (C)
A rectangular, two-storey building of stone construction. The roof of the building is simple, lengthwise duo-pitch (approx. 35°), comprising a timber rafter and purlin framework (hidden by internal plastic sheet cladding) overlaid with Yorkshire stone roof tiles. There is no independent upper floor roof void. The building is in a reasonably good state of repair (see Appendix 10.2 Photographic Record: 1802BAT.P1-P6).

Dimensions (approx.)
5.5m (length) x 6.25m (width) x 5.25m (max. roof height).

Rear Extension (E1)
An integral, narrow, rectangular single-storey building of stone construction running behind (the length of) the main building. The roof of the building is simple, widthwise duo-pitch (approx. 30°), comprising a timber rafter framework overlaid with Yorkshire stone roof tiles. The building has a small independent roof void and is in a reasonably good state of repair (see Appendix 10.2 Photographic Record: 1802BAT.P4 & P8-P10).

Dimensions (approx.)
5.5m (length) x 2m (width) x 4.0m (max. roof height).

Side Extension (E2)
An annexed, small, somewhat square single-storey building (lean to) of stone construction. The roof of the building is simple, lengthwise single-pitch (approx. 30°), comprising a timber rafter framework overlaid with Yorkshire stone roof tiles. The building has no independent roof void and is in a rather poor state of repair (see Appendix 10.2 Photographic Record: 1802BAT.P5).

Dimensions (approx.)
2.5m (length) x 2.5m (width) x 3.5m (max. roof height).

Summary of Buildings Surveyed for Bats and Breeding Birds

Code	Building	NGR	Construction Details
C	Cottage (main building)	407254E 413743N	Double-storey Roof – simple duo pitch
E1	Rear Extension (integral)	407254E 413747N	Single-storey Roof – simple duo pitch
E2	Side Extension (annex)	407249E 413742N	Single-storey Roof – simple single pitch

5.3.2 FIELD SIGNS FOR BATS

External survey of the building for suitable access points and for gaps and cracks in external stonework, or between external stonework and abutting soffits/fascias etc., was undertaken either by direct visual inspection or with 15x field glasses with particular attention being paid to features identified as potential access/refuge points for bats. Internal survey of the building for external light ingress (potential access points for bats) was also undertaken, and ledges, recesses and gaps between internal structures were examined using a 1.0 million candlepower (halogen) flashlight in order to determine if bats were present or if field signs of bats were evident.

Field signs indicating that bats are present typically include:

- Bat droppings on floors, on internal ledges or stuck to walls, doors and windows.
- Insect feeding remains, particularly the wings of moths.
- Grease/fur marks on masonry and timbers (joists etc.), particularly near access points.
- Odour.

5.4 DUSK EMERGENCE SURVEYS

Dusk Emergence surveys are undertaken when bats are active i.e. in suitable weather between spring and early autumn. Dusk Emergence surveys are undertaken from one hour before dark to two hours after, in order to record bats leaving buildings to forage for food.

5.4.1 CHOICE OF SURVEY

On the basis of the location of the building (good survey accessibility on three sides) and complexity (architecturally simple), it was determined that the building could be adequately surveyed by Dusk Emergence Survey but would require two surveyors located at appropriate survey stations in order to ensure full survey coverage of the building.

5.4.2 SURVEY DATES & TIMING

Field Survey visits were undertaken during May 2018 with the building and adjacent habitats being assessed as to their suitability for roosting and foraging bats and for breeding birds. A Dusk Emergence Survey was undertaken on 03 May 2018 but nighttime temperatures were considered borderline and the Dusk Emergence Survey was repeated on 07 May 2018.

The results of the Survey & Evaluation for Bats are fully discussed in the relevant sections of this report, which details the findings of the survey in respect of the proposed works and describes the methodologies used throughout this process. Measures to avoid, compensate or mitigate potentially significant adverse impacts upon bats and/or breeding birds are included as appropriate.

Dusk Emergence Survey and Pre-sunrise Return Survey were undertaken at appropriate time of year (early May) and at appropriate times of day (21:00hrs. – 00:30hrs. and 21:15hrs. – 00:30hrs. respectively). The survey protocols included the use of **Pettersson D-240x** hand-held bat

detectors with CF cards (these are sophisticated hand-held bat detectors combining heterodyne and time expansion capabilities) and **Yukon Ranger Pro Night Vision** (x5) binoculars.

Dusk Emergence Survey was undertaken by two Entotax surveyors, with particular attention being paid to all of the features identified as potential access/refuge points for bats.

The Building Survey and Dusk Emergence were undertaken in accordance with the relevant sections of The JNCC Bat Workers Manual 3rd Edition (2004); Natural England's Bat Mitigation Guidelines (2004); The Bat Conservation Trust's Bat Surveys - Good Practice Guidelines (2007) and West Yorkshire Ecology's Minimum Standards for Bat Surveys in West Yorkshire Version 5 (2012).

5.4.3 WEATHER

03 May 2018 (Dusk Emergence Survey)
Evening: fine and dry; rather cool; somewhat cloudy (passing cloud); gentle (8 m.p.h.) breeze.

Time	Light	Temperature (°C)
20:45	Sunset	9.5
21:00	Twilight	9.5
21:30	Twilight	9.0
22:00	Dark	8.5
22:30	Dark	8.0
23:00	Dark	8.5
23:30	Dark	9.0
00:00	Dark	8.0
00:30	Dark	8.0

A fairly low level of chironomid activity was observed throughout the survey. These are borderline conditions for the undertaking of a Dusk Emergence Survey with anticipated bat activity unpredictable. Repeat survey required.

07 May 2018 (Dusk Emergence Survey)
Evening: fine and dry; mild & rather humid; somewhat cloudy; gentle (8 m.p.h.) breeze.

Time	Light	Temperature (°C)
20:45	Sunset	16.0
21:15	Twilight	15.0
21:30	Twilight	15.5
22:00	Dark	14.0
22:30	Dark	13.5
23:00	Dark	13.5
23:30	Dark	13.5
00:00	Dark	13.0
00:30	Dark	12.0

A moderately high level of chironomid activity was observed throughout the survey. These are good conditions for the undertaking of a Dusk Emergence Survey with anticipated bat activity relatively high.

Chapter 6 LIMITATIONS OF SURVEY

This report should not be seen in any way as the definitive survey of 14 Upper Rotcher for bats and breeding birds - it presents a description and assessment of the building on the basis of the data gathered. However, it is considered more than adequate to make a reasonable assessment as to the suitability of the building for roosting bats and breeding birds; the likelihood of the presence/absence of bats and breeding birds within the building, and the risk of injury to roosting bats and breeding birds during the proposed development (partial demolition).

Chapter 7 RESULTS & EVALUATION

7.1 DESK STUDY

There are 6 records for at least two bat species (within the 2km radial search area) held by the Local Biological Records Office (West Yorkshire Ecology Service) and the West Yorkshire Bat Group. This is a low number of records, with only one record lying within 250m of the application site boundary.

Table 3: Records for Bats within a radius of 2km of NGR SE 07254 13743 (14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield, West Yorkshire).

Distance from Building/s (m)	Site Locality NGR	Species Recorded	Record Status	Date Recorder
200 (0.20km)	Hudds. N. Canal SE 0739 1371	Daubenton's Bat *Myotis daubentoni*	Field Record	13/06/2014 WYBG
670 (0.67km)	Slaithwaite (P.H.) SE 07883 13991	Pipistrelle sp. *Pipistrellus* sp.	Roost? (?)	23/08/2005 D. Barker
1,050 (1.05km)	Slaithwaite SE 08024 14328	Common Pipistrelle *Pipistrellus pipistrellus*	Field Record	11/08/2016 Entotax
1,450 (1.45km)	Heywoods Farm SE 08607 13670	Pipistrelle sp. *Pipistrellus* sp.	Field Record	19/07/2005 D. Barker
1,650 (1.65km)	Linthwaite SE 08865 14029	Common Pipistrelle *Pipistrellus pipistrellus*	Roost	13/06/2014 WYBG
1,950 (1.95km)	Black Rock Farm SE 09456 13734	Common Pipistrelle *Pipistrellus pipistrellus*	Field Record	03/07/2013 Entotax
6 Records		Roost? = possible roost (?) = roost but number of bats present not recorded		

WYE = records kindly provided by West Yorkshire Ecology Service
NYBG = records kindly provided by West Yorkshire Bat Group

7.2 SITE VISITS

7.2.1 SITE SUITABILITY

The application site is of high potential for foraging bats, primarily due to it lying proximal to significant areas of undisturbed semi-improved grassland and nearby areas of broadleaved woodland and wetland habitats. There is good connectivity between the application site and these habitats and the wider, extensive rural landscape. Foraging bats prefer to follow linear features (such features act as echolocation reference markers) and watercourses, woodland edges, hedgelines and field margins are ideal for this purpose. Furthermore, the numerous field boundary, roadside hedgelines and nearby residential gardens are likely to provide additional habitat of potential value to foraging bats. In addition to these habitats, mature trees (either as individuals or in groups) are scattered throughout the immediate and wider rural landscape.

7.2.2 BUILDING SUITABILITY SURVEY

The building was thoroughly examined for field signs indicating that bats were or had been present but there was no evidence of such. There were no bat droppings on floors, on internal ledges or stuck to walls, doors and windows, and no detectable odour (ammonia etc.) indicating potential presence. No insect feeding remains (wings of moths etc.) were evident and there were no grease or fur marks on masonry or timbers (joists etc.).

7.2.3 ROOSTING POTENTIAL

Code	Building	NGR	Potential Features of Interest
C	Cottage (main building)	407254E 413743N	Gaps between roof tiles; Hole in upper floor chimney breast (potential internal access via chimney stack).
E1	Rear Extension (integral)	407254E 413747N	Gaps between roof tiles.
E2	Side Extension (annex)	407249E 413742N	Gaps between roof tiles; Numerous gaps for entire side of south-southeast facing roof verge; Unrestricted potential internal access (open).

It is considered unlikely that the building will support a significant number of bats at any time of year and that only transient animals are ever likely to be present (if at all). For defined categories of roosting potential see **Chapter 8 Conclusions & Mitigation: 8.1 Roosting Bats**.

The conclusions drawn from the Survey & Evaluation for Bats are that bats are not using the building at the present time (May 2018) with the building being considered to be between **Negligible** and **Moderate** potential for roosting bats. Internal roosting potential (mainly for species such as Brown Long-eared Bat *Plecotus auritus*) and external roosting potential (mainly for species such as Pipistrelle spp. *Pipistrellus spp.*) was independently determined as follows:

Summary of Bat Roosting Potential as Determined for the Buildings Surveyed (27 May 2018)

Building Ref.	**Internal Roosting Potential** (behind timbers in roof voids etc.)			**External Roosting Potential** (in cracks, gaps and holes in masonry etc.) (behind fascias, under roof tiles etc.)		
	Roosting Potential (maternity)	**Roosting Potential (hibernation)**	**Roosting Potential (transient)**	**Roosting Potential (maternity)**	**Roosting Potential (hibernation)**	**Roosting Potential (transient)**
Cottage (C)	**Negligible**	**Negligible**	**Negligible**	**Negligible**	**Negligible**	**Moderate**
Extension (E1)	**Negligible**	**Negligible**	**Negligible**	**Negligible**	**Negligible**	**Low**
Extension (E2)	**Negligible**	**Negligible**	**Low**	**Negligible**	**Negligible**	**Low**

7.2.4 DUSK EMERGENCE & PRE-SUNRISE RE-ENTRY SURVEYS

Dusk Emergence Survey was undertaken at appropriate time of year (early May) and at appropriate times of day (21:00hrs. – 00:30hrs. and 21:15hrs. – 00:30hrs. respectively). The survey protocols included the use of **Pettersson D-240x** hand-held bat detectors with CF cards (these are sophisticated hand-held bat detectors combining heterodyne and time expansion capabilities) and **Yukon Ranger Pro Night Vision** (x5) binoculars.

Dusk Emergence Survey was undertaken by two Entotax surveyors, with particular attention being paid to all of the features identified as potential access/refuge points for bats.

Only two single registrations for echolocating 46.5kHz (Peak Frequency Range: 41.7-51.8kHz) Common Pipistrelle *Pipistrellus pipistrellus* bats were recorded during the Dusk Emergence Survey of 03 May 2018. However, due to relatively low night-time temperatures (8.5-9.0°C) it was decided to repeat the survey on 7 May 2018 when 15 registrations and a maximum count of 4-5 echolocating 46.5kHz common pipistrelle bats were recorded. Registrations were made occasionally throughout the night, when bats were recorded foraging within the tall tree canopy flanking the River Colne and near adjacent Huddersfield Narrow Canal (some 75m to the immediate south of the application site). Bats were not recorded in close proximity to the application site and were not observed entering or exiting the building at any time during the surveys.

7.2.5 DUSK EMERGENCE & PRE-SUNRISE RE-ENTRY SURVEY REGISTRATIONS

Survey Data for Bats (14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield, West Yorkshire).

The following data set should be read in conjunction with the respective bat activity schematic (see Appendix 10.3B: Bat Activity Patterns).

Legend

Bat Species
CP = Common Pipistrelle *Pipistrellus pipistrellus*

Bat Activity
comm. = commuting
for. = foraging

Direction relative to Application Site
SE = southeast; ESE = east-southeast; SSE = south-southeast; SSW = south-southwest;
> = direction of flight (towards)

Date **Survey Method**	**Time**	**Activity**
03 May 2018 (20:45 – 00:30) Dusk Emergence Survey	21:43 22:05	**CP** (x1) for. SE>ESE in tall tree canopy **CP** (x1) for. SE>ESE in tall tree canopy

Date **Survey Method**	**Time**	**Activity**
07 May 2018 (20:45 – 00:30) Dusk Emergence Survey	21:36 21:43 21:49 21:55 21:56 22:08 22:24 22:47 22:57 23:09 23:16 23:32 23:48 00:11 00:23	**CP** (x2) for. SSE>ESE in tall tree canopy **CP** (x2) for. to ESE in tall tree canopy **CP** (x2-3) for. to ESE in tall tree canopy **CP** (x1) for. to SSW in tall tree canopy **CP** (x1) for. to SE in tall tree canopy **CP** (x2) for. SSE>ESE in tall tree canopy **CP** (x1) for. to SSE in tall tree canopy **CP** (x2) for. to SSW in tall tree canopy **CP** (x2) for. to SSW in tall tree canopy **CP** (x2-3) for. SSE>ESE in tall tree canopy **CP** (x4-5) for. SSE>ESE in tall tree canopy **CP** (x4-5) for. SSE>ESE in tall tree canopy **CP** (x1) for. to SSW in tall tree canopy **CP** (x2) comm. ESE>SE **CP** (x1) comm. ESE>SE

Chapter 8 CONCLUSIONS & MITIGATION

8.1 ROOSTING BATS

Appraisal undertaken to determine the potential of the building to contain features of interest to roosting bats (cracks, crevices etc.) is based upon the following defined categories of roosting potential:

- **Negligible** This category is usually applied to a feature that appears initially to have significant bat roost potential but upon closer inspection is considered to have low or negligible potential to support roosting bats. During surveys it is usually applied to confirm that the inspection of a feature has been undertaken but has found that the feature does not comprise suitable habitat for roosting bats.

- **Low** This category is used to describe a feature that may have some superficial interest to roosting bats but is considered sub-optimal to the extent that bats are not considered likely to use the feature for shelter. A tree cavity that is open at the top or timbers below missing roof slates allowing access to wind and rain may be considered to be of low bat roost potential.

- **Moderate** This category is used to describe a feature that has some potential to support roosting bats, but is considered to be less than ideal in some way. For example the feature may be occupied by other animals such as birds or squirrels; it may be subject to disturbance or may have sub-optimal connectivity with navigational features. Surveyors would be neither surprised nor expect to find a bat using such a feature. Features considered to be of moderate roosting potential would not automatically be subject to an activity survey unless otherwise highlighted.

- **High** This category is used to describe an optimal feature considered to be ideally suitable for use by roosting bats where no evidence of occupation by bats has been found. Features considered to be of high bat roost potential (BRP) may include upwards-leading tree cavities of appropriate dimensions and height from the ground with no obstructions below the cavity entrance. The tree may be particularly prominent within the landscape and is likely to have good connectivity with navigational features and sufficient suitable foraging habitat in the vicinity. Features with high BRP are likely to be subject to activity surveys to assist confirmation of their status, and may be subject to a watching brief during works that may disturb them.

- **Confirmed** This category is used where positive evidence of bats usage has been recorded from a feature. For example, bats or bat droppings may be present, or existing bat records may be associated with the feature. A licence from Natural England is likely to be required if the bat roost is to be disturbed by the development.

The conclusions drawn from the Survey & Evaluation for Bats are that bats are not using the building at the present time (May 2018) with the building being considered to be between **Negligible** and **Moderate** potential for roosting bats. Internal roosting potential (mainly for species such as Brown Long-eared Bat *Plecotus auritus*) and external roosting potential (mainly for species such as Pipistrelle spp. *Pipistrellus spp.*) were independently determined (see Chapter 7 Summary of Bat Roosting Potential as Determined for the Building Surveyed).

The survey data indicate that bats are not using the building at the present time and are unlikely to do so prior to commencement of development (partial demolition).

The building is considered to be unsuitable internally for a maternity roost or winter hibernation roost on the basis of either inaccessibility or lack of suitably protected roosting sites i.e. the upper floor is open to the roof (no roof void) and the underside of the roof had been completely covered with plastic sheet cladding (see Appendix 10.2 Photographic Record: 1802BAT.P11).

The few potential roosting features identified during the Building Suitability Survey were closely monitored during the Dusk Emergence Survey and bats were not recorded during the survey despite more than sufficient survey effort.

It is considered unlikely that the buildings will support a significant number of bats at any time of year and that only transient animals are ever likely to be present (if at all). Whilst bats are unlikely to use the buildings prior to commencement of development (partial demolition) precautionary measures will be undertaken. The works will entail the careful stripping of the roof under the guidance of a suitably qualified and licenced bat worker in order to fit three Velux-type skylights. The bat worker will be available (contactable) at all times to guide the works and advise on all matters in relation to bats.

In keeping with best practice guidelines, a bat box will be erected within the curtilage of the property i.e. attached to the existing property or to an available nearby mature tree. Guidance as to the exact location and orientation of the bat box will be provided in full consultation with Kirklees Council Environment Unit.

A European Protected Species Licence (EPSL) is considered unnecessary for the proposed works (demolition). However, the works should proceed with care and in the knowledge that in the unlikely eventuality of bats being discovered during the works, the works must cease immediately and the Statutory Authority (Natural England) and the Local Planning Authority – Kirklees Council (Planning Services) should be notified. An appropriate (licenced) mitigation scheme would then be required for the works to continue.

Summary of Survey of Potential Bat Roosting Features as Determined for the Building Surveyed (27 May 2018)

Code	Building	NGR	Survey Results
C	Cottage (main building)	407254E 413743N	**External Roof Features** No dusk emergence from roof tiles. **Internal Features** The roof has been internally clad with plastic sheeting resulting in no access for bats. Negative light ingress test. No evidence of past or present usage.
E1	Extension (E1) (rear)	407254E 413747N	**External Roof Features** No dusk emergence from roof tiles. **Internal Features** Negative light ingress test. No evidence of past or present usage within small roof void.
E2	Extension (E2) (side)	407249E 413742N	**External Roof Features** No dusk emergence from roof tiles. **Internal Features** No dusk emergence from (open) building. No internal evidence of past or present usage.

Chapter 9 SURVEY FOR BREEDING BIRDS

9.1 SURVEY RATIONALE

The Survey & Evaluation for Breeding Birds was based upon:

- Field Survey employing appropriate methodology in order to determine the presence/absence and suitability of the site for nesting birds.

9.2 METHODOLOGY

Survey was undertaken using a combination of Swarovski EL 10x42 WB binoculars and visual hand searching.

9.3 RESULTS

There was no evidence of potential internal nesting species such as Robin *Erithacus rubecula* and no evidence of external nesting species such as House Martin *Delichon urbicum* when the building was surveyed on 27 May 2018.

9.4 CONCLUSIONS & MITIGATION

It is accepted that the Statutory Authority (Natural England) and/or Local Authority (Kirklees Council - Planning Services) may request a Monitoring Survey (Watching Brief) during the work programme.

No significant ecological impacts upon breeding birds are anticipated as a result of any proposed works undertaken outside the breeding season (October-February inclusive). However, for nesting birds prior to commencement and during ongoing development, should the proposed works be undertaken during the breeding season. Therefore, where potential disturbance to nesting birds cannot be reasonably avoided (i.e. if the proposed works need to be undertaken during the breeding season) a nesting bird survey will be carried out by an appropriately trained/experienced ecologist to determine whether nests are present. If nesting birds are subsequently discovered, works within the immediate area will cease and any nests will be monitored by the ecologist until fledglings have left the nest.

Chapter 10 APPENDICES

10.1 AERIAL SITE PHOTOGRAPHS

1802BAT.A1 Aerial Photograph: 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield, West Yorkshire

1. Application Site Boundary



Chapter 10 APPENDICES

10.1 AERIAL SITE PHOTOGRAPHS

1802BAT.A1 Aerial Photograph: 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield, West Yorkshire

2. Cottage (C) with small extensions to rear (E1) and side (E2).



Chapter 10 APPENDICES

10.2 PHOTOGRAPHIC RECORD

1802BAT.P1 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
South-southeast-facing elevation (frontage) of cottage (northwest perspective).



1802BAT.P2 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
East-northeast-facing elevation (gable) of cottage (west-northwest perspective).



1802BAT.P3 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
East-northeast-facing side elevation of rear extension (northwest perspective).



1802BAT.P4 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
East-northeast-facing side elevation showing roof detail of rear extension (southwest perspective).



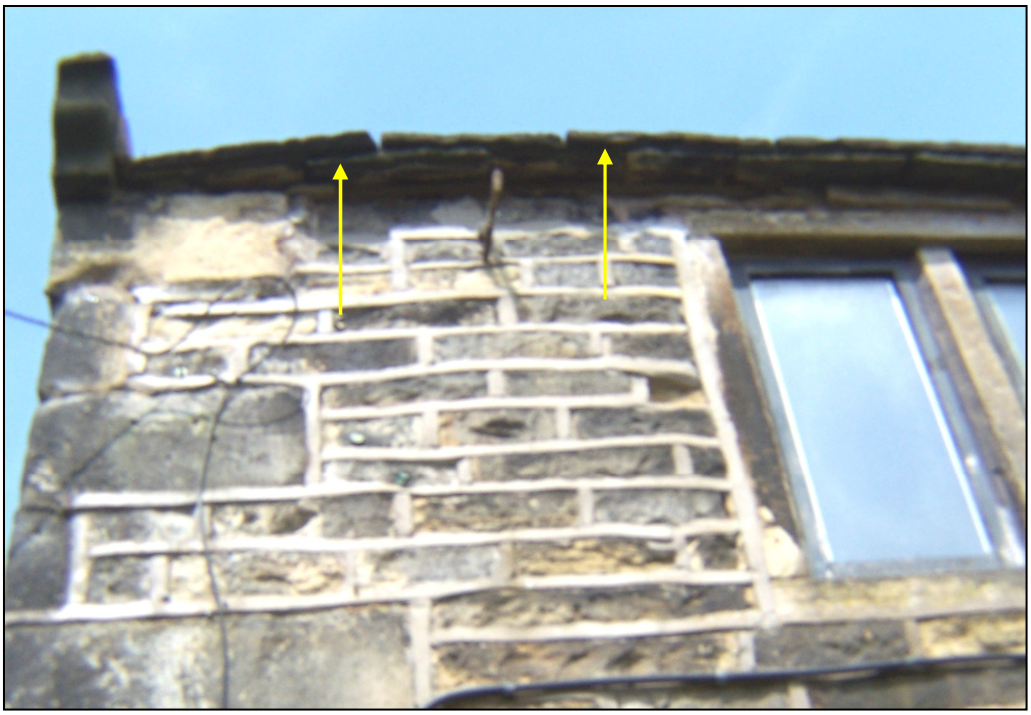
1802BAT.P5 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
South-southeast-facing side elevation of side extension showing numerous potential roosting points for bats (north-northwest perspective).



1802BAT.P6 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
Roof of north-northwest-facing rear elevation together with west-southwest facing side elevation of cottage (Southeast perspective).



1802BAT.P7 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
Detail of upper south-southeast-facing elevation (frontage) of cottage showing potential roosting points for bats (north-northwest perspective).



1802BAT.P8 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
Internal detail of rear extension roof void (west-southwest perspective).



1802BAT.P9 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
Internal detail of rear extension roof void (south-southeast perspective).



1802BAT.P10 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
Internal detail of rear extension roof void (north-northwest perspective).



1802BAT.P11 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
Internal roof detail of upper floor of cottage showing plastic sheet cladding (due east perspective).



1802BAT.P12 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield.
Detail of upper floor chimney breast showing potential access for bats (via chimney) (west-southwest perspective).

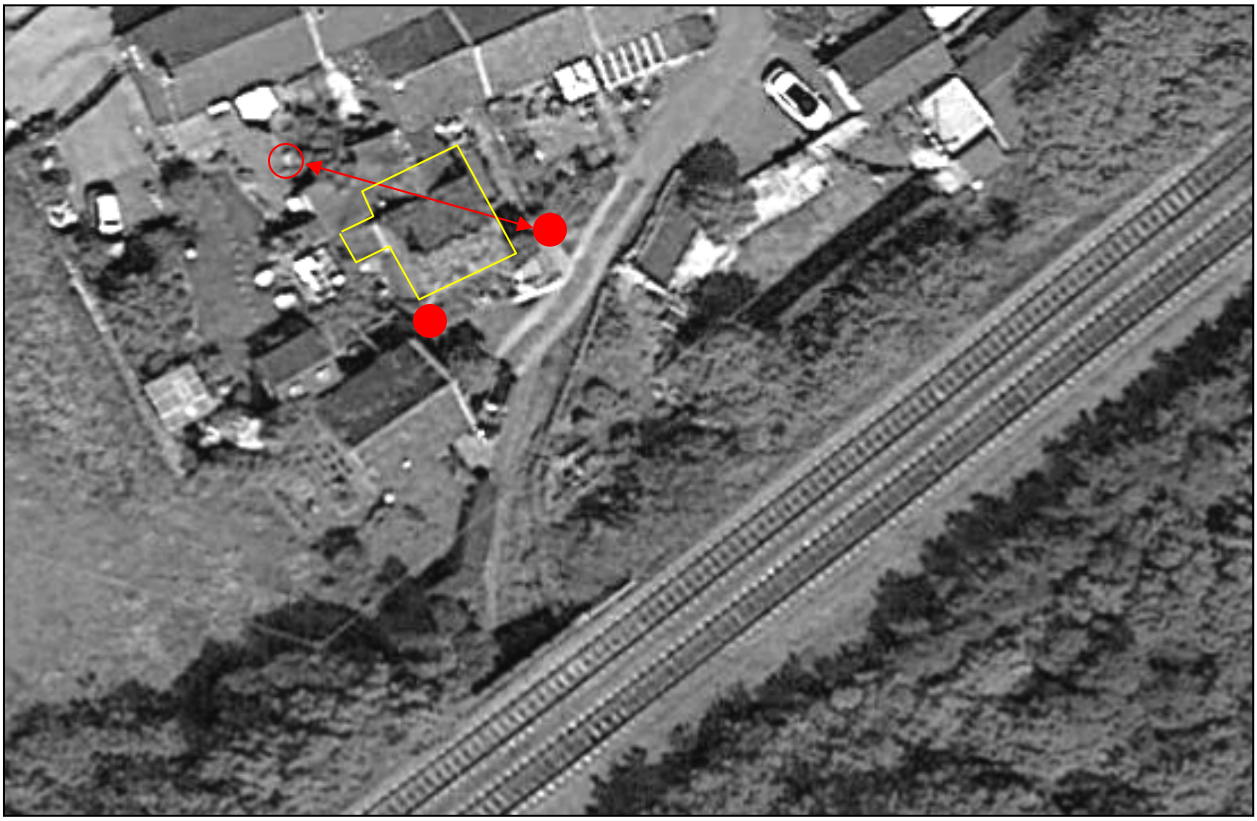


Chapter 10 APPENDICES

10.3A SURVEY DATA: SURVEY STATIONS

Aerial Photograph: 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield

3. Survey Stations (main locations of surveyors).



10.3B SURVEY DATA: BAT ACTIVITY PATTERNS 03.05.2018 & 07.05.2018

Aerial Photograph: 14 Upper Rotcher, Rotcher Lane, Slaithwaite, Huddersfield

4. Activity Patterns for Common Pipistrelle bats (red lines) 03 May 2018.
   Activity Patterns for Common Pipistrelle bats (yellow line) 07 May 2018.



Chapter 10 APPENDICES

10.4 MINIMUM STANDARDS FOR BAT SURVEYS IN WEST YORKSHIRE (2012)

West Yorkshire Ecology

Minimum Standards for Bat Surveys in West Yorkshire (Version 5)

Bats are legally protected under the EC Habitats Directive and in UK legislation by the Conservation of Habitats and Species Regulations 2010 and by the Wildlife and Countryside Act (1981) (as amended). Subject to some specific exceptions this makes it a criminal offence to intentionally or recklessly capture or kill, disturb in a place of shelter or destroy the resting place of any bat. **A roost site is protected even when bats are not present**. Bat surveys need to be undertaken before a planning application can be determined (ODPM Circular 06/2005 Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System).

All surveys are to be conducted in accordance with the relevant section of the JNCC Bat Workers Manual 3rd Edition (2004). For larger or more complex sites it is recommended that the scope of the survey be discussed with the local authority ecologist prior to starting. The most up-to-date good practice guidance should be followed as a basic minimum (refer to Bat Surveys – Good Practice Guidelines, Bat Conservation Trust, 2nd Edition (2012) and Bat Mitigation Guidelines, English Nature (2004)) and should include:

- The use of an appropriately qualified and experienced licensed bat surveyor and assistants as needed to carry out such work.
- A desktop study to establish existing records (including a search with West Yorkshire Ecology and the West Yorkshire Bat Group).
- A walkover of the survey site to assess the presence of features of importance to bats, in particular feeding, roosting, swarming and hibernating opportunities.
- A detailed internal and external inspection of buildings and structures to search for indications of bat activity and identify any limitations of such a survey.

- Trees with cracks, crevices, hollow trunks or broken limbs which are to be affected by the proposed development either directly, by lopping or felling, or indirectly, such as by lighting, should be surveyed for evidence of bat roosts.

- A dusk emergence or dawn re-entry survey will normally be expected to identify roost sites that cannot be located by a visual inspection of the building or structure. More than one may often be required. These should be undertaken at suitable times of the year (normally May to August – September to mid-October is sub-optimal but may be acceptable); suitable times of day (around dusk and/or dawn); and weather conditions (not during heavy rain, strong wind or cold). It is important that sufficient surveyors are present to cover the site.

- Use of heterodyne detectors alone, is not normally acceptable. If surveys are undertaken without frequency division or time expansion detectors, a justification must be given.

- Where dawn/dusk surveying is not appropriate due to the time of year, the bat surveyor will be expected to provide a detailed, reasoned statement (including photographs) of:

    - the opportunities available within the structure for bats and
    - whether or not emergence or re-entry surveys are considered necessary.

- Where survey limitations leave inconclusive results, precautionary mitigation may be acceptable with the approval of the local authority ecologist. This should adopt the format used for protected species licence applications (see http://www.naturalengland.org.uk/ourwork/regulation/wildlife/licences/applicationforms.aspx#bat) with less detail where it is not available to reflect the situation.

- This should cover the timing of the work, designs and location plans for permanent bat roosting / hibernation features, and be aimed at the types of bat which might be expected to use the features at the proposal site. This option is unlikely to be acceptable for larger proposals or known bat roosts.

- Where a proposal involves a bat roost requiring a protected species licence, a Method Statement in the Natural England format should accompany the application. This includes an assessment of how the proposal and mitigation will meet the 'three tests' set out in Regulation 53 of the Conservation of Habitats and Species Regulations 2010.

The bat survey report should include:

- an outline of the proposed development;

- details of the surveyors' experience and licence number;

- site location (including grid reference);

- survey objectives and methodology, including the equipment used;
- results of desktop survey, building searches, emergence/re-entry surveys (or alternative reasoned statement where applicable) and the species recorded, including details of the output from remote recording devices;
- date, time and weather conditions;
- a plan of the site with areas searched, bat habitat features, the location and direction of static detectors and cameras, the route taken/position and timing of surveyors with manual detectors and roost/activity areas;
- any limitations of the survey;
- photographs to help assess the adequacy of the report;
- any mitigation proposals and any requirement for European Protected Species Licences including a Natural England 'Method Statement' (and assessment against the 'three tests');
- a conclusion stating the potential impacts upon bats.

Electronic copies of reports should be supplied to the local authority planning department and directly to West Yorkshire Ecology to add to the Ecological Record. There is an expectation that the ecologist will note any other significant species using the site. See also 'Bat Surveys out of season flow diagram' for small applications outside of the active season for bats, between October and April (www.ecology.wyjs.org.uk).

Revised 18 July 2012.

Chapter 10 APPENDICES

10.5 BAT CONSERVATION TRUST DETERMINING THE NECESSARY LEVEL OF SURVEY

Where applicable, the following guidance was rigorously adhered to throughout the Survey and Evaluation for Bats.

Bat Conservation Trust

www.bats.org.uk

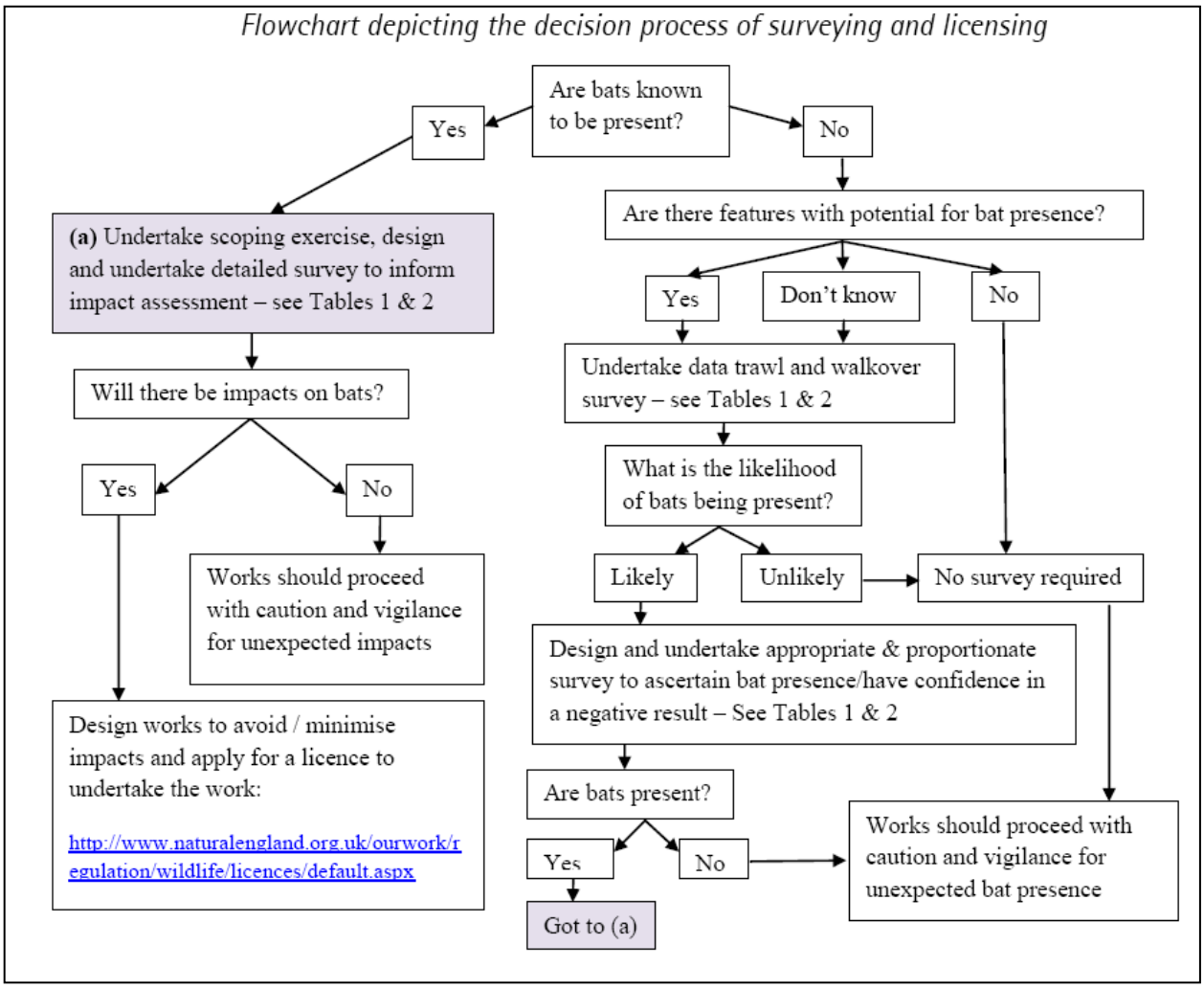
Determining the necessary level of survey

The guidance detailed in the BCT Bat Survey Guidelines is intended to provide an overview of best practice. The extent to which a surveyor deviates from the guidelines is reliant on the other assessments made on site such as potential for bats to be present. The need to increase survey effort will increase as the potential of the building or site to support bats increases and the surrounding environment.

For example:

- Is the building of high potential to support a particular species? Are the interior dimensions and roosting features in line with perceived species preferences?
- Has the space been internally inspected and shown evidence of bats? - If droppings are found increased effort should be applied.
- Is the surrounding habitat of high foraging potential? - If a shaded tree line forms a corridor adjacent to the building, this may increase likelihood of a roost.
- How shaded is the access point? - If it is in a darker corridor then emergence may be earlier, if not it may be delayed.

Flowchart depicting the decision process of surveying and licensing



If sufficient justification can be given to support deviation from best practice, which is based on a sound knowledge of bat ecology, then this approach can be accepted. However, it must be site specific, based on the features of the building and the surrounding habitat, local records, species roosting and their emergence characteristics. Only then can this survey be relied upon to satisfy the duties placed on planning authorities and the developers to protect bats.

Table 1: Recommended length of time over which manual bat surveys should be conducted

Survey objective	**Dusk survey**[1]	**Dawn survey (if undertaken)**
Bat activity away from roost (all species)	sunset to 2-3 hours after sunset[2]	2 -1½ hours before sunrise to sunrise[4]
Bat emergence from and re-entry to roost (all species)	¼ hour before sunset to approximately 2 hours after sunset[3]	2 -1½ hours before sunrise to sunrise[4]
Mating activity (all species)	sunset to 4 hours after sunset	-

Notes
[1] These surveys are not normally undertaken as one-offs and are usually part of a series.
[2] For greater horseshoe bats when the site area larger than 1ha and within 4 km of a greater horseshoe bat roost 3 hours is required.
[3] Some bats may emerge earlier and ½ an hour before sunset may be more appropriate.
[4] Some bats may return to their roost after sunrise.

Table 2: Recommended visit frequency & timing for manual bat activity surveys away from and at roosts

Location of activity survey	**Site/habitat being surveyed:**	
	Moderate to high value	**Low value**
In habitat away from known roosts (bat detector transects) **(all species)**[4]	• 3 surveys[1] during March[2] – September[3] • Optimum period June to August • At least one of the three surveys should comprise dusk and dawn (or dusk to dawn) within one 24-hour period.	• 2 surveys[1] during • March[2] – September[3] • Optimum period June to August
At known roosts (dusk emergence or dawn-re-entry surveys) **(all species)**	• 3 surveys[1] during May to September • Optimum period May – August • At least one of the three surveys should comprise dusk and dawn (or dusk to dawn) within one 24-hour period.	• 2 surveys[1] during May to September • Optimum period May - August

Notes:
[1] Best practice is to space the surveys evenly through the optimum period
[2] Surveys should not start before April in the north of the UK; some delay may also be caused by the weather.
[3] Season can be extended to October to November if working in southwest England or surveys for mating activity are required, although particularly cold weather will render this inadvisable.
[4] When the site area is larger than 1 ha and within 4 km of a greater horseshoe bat roost, the *Bat Mitigation Guidelines* (Mitchell-Jones, 2004) recommend 2 surveys in each month between May and September. Advice from the SNCOs should be sought and the same may be applied to other species also (in particular other Annex II Habitats Directive species).

For more information:

Natural England – Wildlife Management & Licensing website:
http://www.naturalengland.org.uk/ourwork/regulation/wildlife/default.aspx

Bat Conservation Trust: Bat Surveys - Good Practice Guidelines
http://www.bats.org.uk/publications_download.php/379/BCT_Survey_Guidelines_web_final_version.pdf

Chapter 10 APPENDICES

10.7 PRIMARY REFERENCES

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