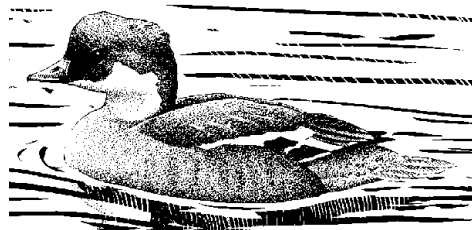


Bat Survey to
Oak Mills
Cliff Hollins Lane
Bradford
BD12 7ER



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1. Summary

- 1.1 A summer bat activity to Oak Mills, Low Moor, Bradford was commissioned to establish the likelihood of the building being used by roosting bats ahead of proposed demolition work.
- 1.2 The activity survey was undertaken at a time of year which is considered optimal for bat occupancy and, therefore, aimed to establish the likelihood of bats using the building by looking for evidence in the form of droppings or noting potentially suitable roosting cavities.
- 1.3 The building is former stone mill that has had the upper walls reduced due to fire damage. The initial survey was undertaken in 2014 outside the optimal period for bats but there are gaps to the walls that had some roost potential and therefore, activity surveys were scheduled for summer 2015. The flat roost offers little potential and there are only minor roosting opportunities in the stonework and as such the building is considered to be of low roost potential.
- 1.4 The evening activity surveys did not record any bats emerging from the building but bats are roosting close by in a row of stone cottages and there are known roosts nearby. No further activity surveys are required.
- 1.5 The area is in a good location for bats and bats are present close by, therefore permanent roost features should be incorporated into any new buildings erected on site.

2. Introduction

- 2.1 Mr John Fawthrop commissioned a bat survey to Oak Mills, Cliff Hollins Lane, Low Moor, Bradford BD12 7ER (NGR SE177278) in accordance with the Planning Authority's request, to determine whether bats have or are using the property as a roost site.
- 2.2 The owner is currently seeking permission to demolish the existing building and develop the site with residential dwellings.
- 2.3 The survey took place at a time considered optimal for bat occupancy, therefore, the survey aimed to establish the following
 - the likelihood of bats using the buildings
 - provide an impact assessment for the development on bats
 - define mitigation proposals where required
 - assess the requirement for a protected species licence.
 - a secondary objective was to assess potential impact on breeding birds.

3. Methodology

- 3.1 The buildings were surveyed in accordance with best practice guidelines by John Gardner, a surveyor with over 30yrs fields experience in searching for bats (licence number 2014-860-CLS-CLS)
- 3.2 Both the interior and exterior of the building were inspected during daylight using torches and binoculars. All normal signs of bats were looked for including bats, bat droppings, prey remains, scratching and staining of entry and exit holes.
- 3.3 The building was assessed for its degree of potential to support roosting bats including assessing the building design, construction, materials and condition. This combined with an assessment of the location of the site and the surrounding habitat in terms of bat suitability allows an assessment to be made as to the potential of the building to support bats. Factors such as the proximity of good foraging areas (woodland, water bodies) and features that link the site to the wider surrounds such as linear features (hedgerows etc) were also considered.
- 3.4 Data searches were conducted with West Yorkshire Ecology.
- 3.5 This report sets out the findings of a daytime survey carried out to the above property on Sunday 17th May 2015 and highlights the ecological constraints and opportunities associated with the proposed works and appraises the potential impacts. Appropriate actions to ensure the protection of bats are identified and mitigation measures detailed where appropriate.

4. Constraints

- 4.1 There are no constraints that would affect the outcome of the survey.

5. Site Description

5.1 The site consists of a large, former stone mill building, a large brick garage and a small, stone roofed outbuilding and is located adjacent to a small stream and grass pasture. The site is connected to the wider landscape by a series of linear features such as hedgerows and the stream corridor. It is situated in an area that is rich in insects and provides good foraging for bats.



Figure 1. Site location plan



Figure 2 Aerial view of the site, surrounds and buildings surveyed

6. Emergence and return surveys

7.1 An evening emergence survey was undertaken on Sunday 17th May in good conditions. The ground temperature was around 12.5°C and little wind. A second emergence survey was undertaken on Tuesday 2nd June and a dawn return survey on Thursday 4th June.

7. Data Consultation Exercise

7.1 Data searches were conducted with West Yorkshire Ecology and the results are shown in appendix 2. Analysis of the search results shows two known roosts within 300m of the survey site and these tie in with the flight direction and time of the first bats recorded on site suggesting the roost(s) are still active.

8. Survey results

8.1 The daylight survey.

Building 1: This is an old stone mill that was damaged by fire and had the upper storey lowered to create a large, single storey, flat roofed building. Part of the original two storey mill remains to the west end of the building.

Internally there is no roof void and the ceilings have a square ceiling tiles suspended around 30cm below the main ceiling. The roof is considered unlikely to support void dwelling species. Externally, the roof is flat and covered with felt or bitumen and has a raised parapet running around the perimeter of the building. The roof is considered to be of very low roost potential.

The walls are constructed of stone and are in good condition. There are some gaps between the stone window lintels and the walls that might offer some roost potential and therefore an activity survey was undertaken. There were no cavities thought likely to support maternity roosts, only individuals or small numbers of bats. There were no droppings adhered to the walls around the gaps and crevices.

There are no fascia boards, gutter boards or other external features that were considered to offer roost potential. There did not appear to be any urine spotting to the windows or droppings on windowsills.

Building 2: This building is a large brick garage with corrugated sheet to the roof. The walls are single skinned or possibly double skinned but without any kind of cavity and the gable walls are cement rendered. The single sheet roof is unlikely to support roosting bats and there were no gaps to the sound walls. The unit is in constant use as a mechanic's workshop and is subject to arc welding, noise and fumes from oil and diesel. It is considered highly unlikely that bats would be found roosting in this unit.

Building 3: This is a single storey stone outbuilding with stone slate roof. The roof is sagging heavily but has been replaced in the past as it is lined with traditional felt. The ridge tiles have been replaced with plastic or man-made tiles and do not appear to have gaps. The roof itself offers roosting potential beneath the tiles but not at the gable walls which are well pointed and have stone capping. The walls are stone and

are well pointed and have no cavities. There are no fascia boards or soffits and the remains of the gutters sit on stone corbels.

8.2 Emergence Survey

The first evening emergence survey was undertaken on Sunday 18th May by two surveyors using heterodyne and an RTE detector. The survey was undertaken from 60minutes prior to sunset until 90minutes after sunset and ground temperatures were 12°C and the wind speed was negligible. Skies were good with high cloud cover.

No bats were observed emerging from the survey site but small numbers of common pipistrelle (*Pipistrellus pipistrellus*) were recorded feeding and socialising along the north edge of the site around large sycamore trees on the boundary line. Bats were also very active under the tree canopy over Cliff Hollins Lane and in front of the stone cottages on the opposite side of the road to the survey site.

Species	Number	Time	Activity
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	Single	21:05	Feeding to north perimeter
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	Single	21:10	Feeding to north perimeter
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	3	21:20	Feeding on Cliff Hollins Lane beneath overhanging tree canopy
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	1	21:25	Feeding along Hunsworth Beck to the west of the site.
Lesser Noctule (<i>Nyctalus leisleri</i>)	1	21:35	Commuting south
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	c.5	21:45	Feeding on Cliff Hollins Lane and in front of cottages
Lesser Noctule (<i>Nyctalus leisleri</i>)	1	21:55	Commuting

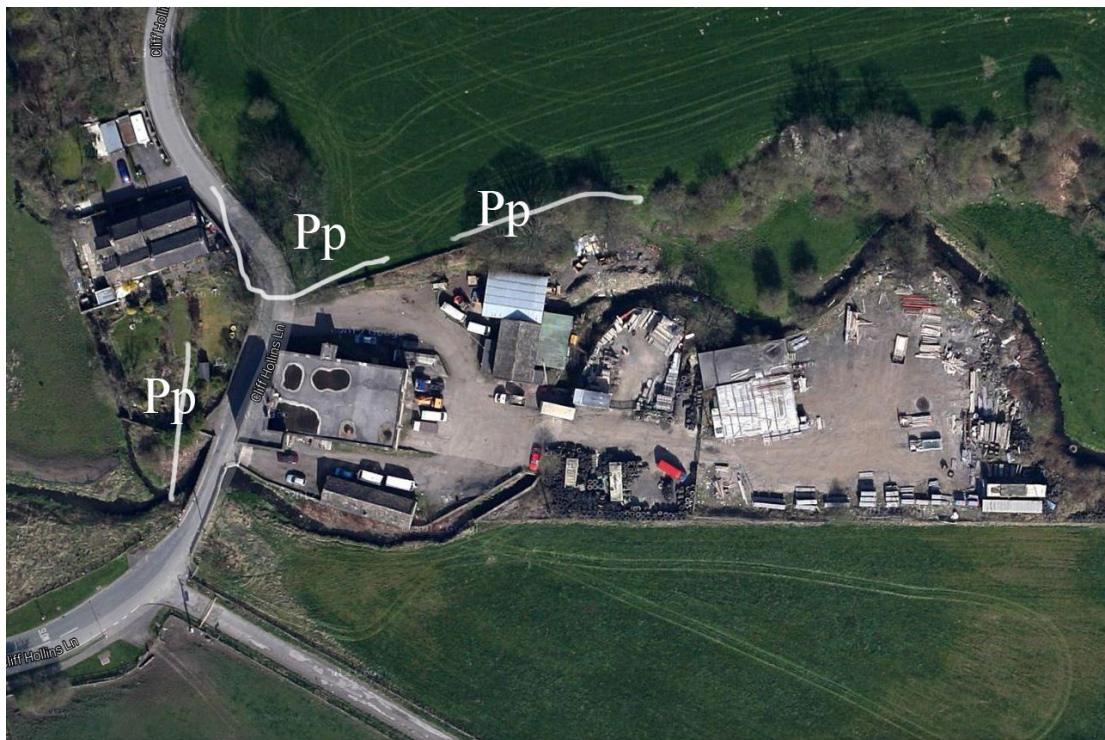


Figure 3. Flight direction of bats and main activity area

A second evening emergence survey was undertaken on Tuesday 2nd June, again by two surveyors using heterodyne and an RTE detector. The survey was undertaken from 60minutes prior to sunset until 90minutes after sunset and ground temperatures were 15°C and the wind speed was negligible. Skies were good with high cloud cover.

As with the first survey, no bats were observed emerging from the survey site but good numbers of bats were recorded, especially around the cottages opposite the survey site. In total, four species of bats were recorded feeding along the north edge of the site, under the tree canopy over Cliff Hollins Lane and in front of the stone cottages on the opposite side of the road to the survey site.

Species	Number	Time	Activity
Lesser noctule (<i>Nyctalus leisleri</i>)	2	22:55	Feeding over hay field north of site
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	Single	22:00	Feeding to north perimeter
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	4	22:05	Feeding in front of cottages
Lesser Noctule (<i>Nyctalus leisleri</i>)	3	22:05	Feeding over grass fields
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	5	22:10	Feeding in front of cottages and along Hunsworth Beck
Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>)**	2	22:15	Feeding along Cliff Hollins Lane (darkness making visibility hard)
Common noctule	Single animal	22:18	Commuting over the site
By 22:20 there were good numbers of bats of both common and Nathusius' pipistrelle feeding around Cliff Hollins Lane, Hunsworth Beck and over north side of the survey site.			
** Nathusius' pipistrelle identified by RTE software but recorded many times so is likely to be genuine records			

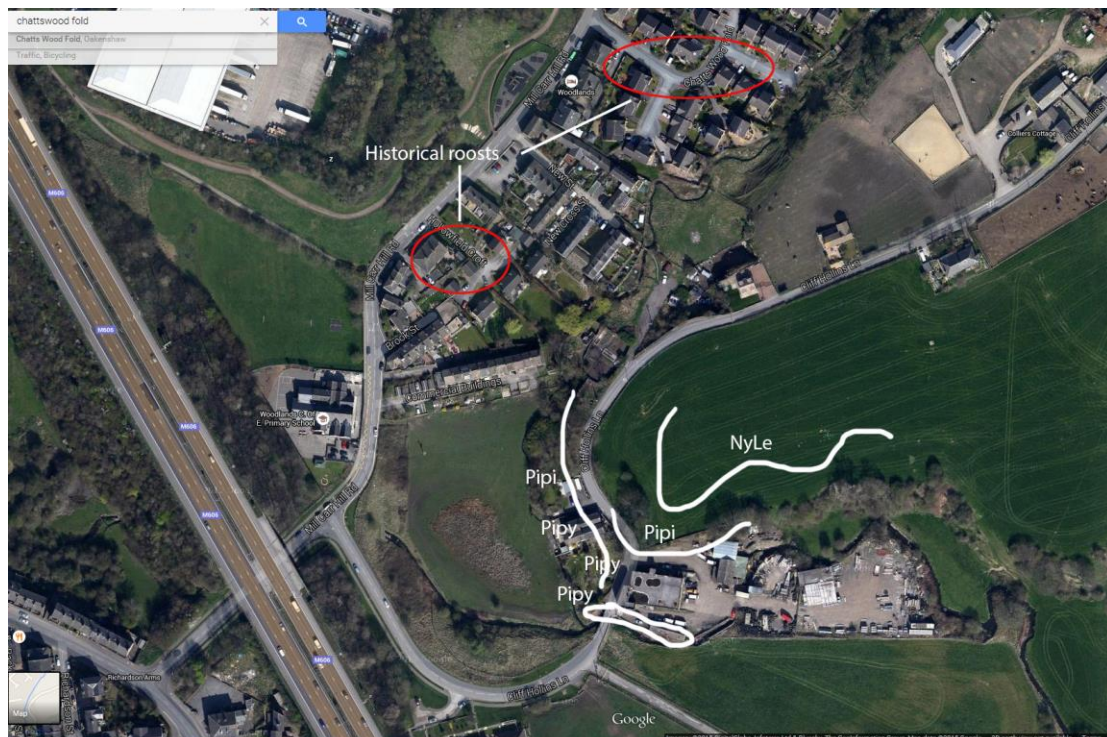


Figure 4. Flight direction of bats and main activity area

A dawn return survey on June 4th by a single observer did not record any bats entering the stonework of the survey site. All bat activity was recorded as being

around residential dwellings on the west side of Cliff Hollins Lane. Both common and Nathusius' pipistrelle were recorded heading back to roosting sites outside the survey site.

9. Discussion and analysis

The results of the survey did not find evidence to suggest that bats have used the buildings. There was no evidence to suggest the stone roof of building 3 had been used by void dwelling species and no bats were recorded emerging from the roof or walls. No bats were recorded emerging from building 1 and building 2 is regarded as not being suitable for bats.

Bats are certainly roosting close by and it is highly likely that they some are roosting in the stone residential dwellings opposite the site on Cliff Hollins Lane and this is likely to be a nursery roost. There are historical records of nursery roosts c.300m from the site and the flight direction of bats arriving at the survey site suggests these roosts are still present. None of the existing roosts will be affected by the proposed development as the site has little or no value as a foraging site. Inclusion of permanent bat roosting features in new buildings will improve the potential of the site.

10. Impact assessment

Overall, the building 1 is regarded as having limited bat roost potential with the only really suitable area being small crevices in the stone work that could offer roost to single or small numbers of bats. Building 2 is regarded as being unsuitable to bats and is considered to have very low roost potential, while building 3 offers most roost potential beneath the stone roofing tiles. However, no bats were recorded emerging from any of the buildings.

No bats were recorded emerging therefore the proposed demolition/renovation of the buildings is unlikely to have any effect on the local bat population. It will not damage or destroy maternity roosts and will not cause fragmentation of habitat.

11. Mitigation summary

Given the number of bats locally, consideration should be given to including a permanent bat roost feature in the new extension. Installing a bat tube on the south elevation would provide excellent and permanent roosting opportunities for bats which are clearly in the vicinity. Care should be taken to avoid siting tubes over doors and windows.

Appendix 1: Photographs of the survey site











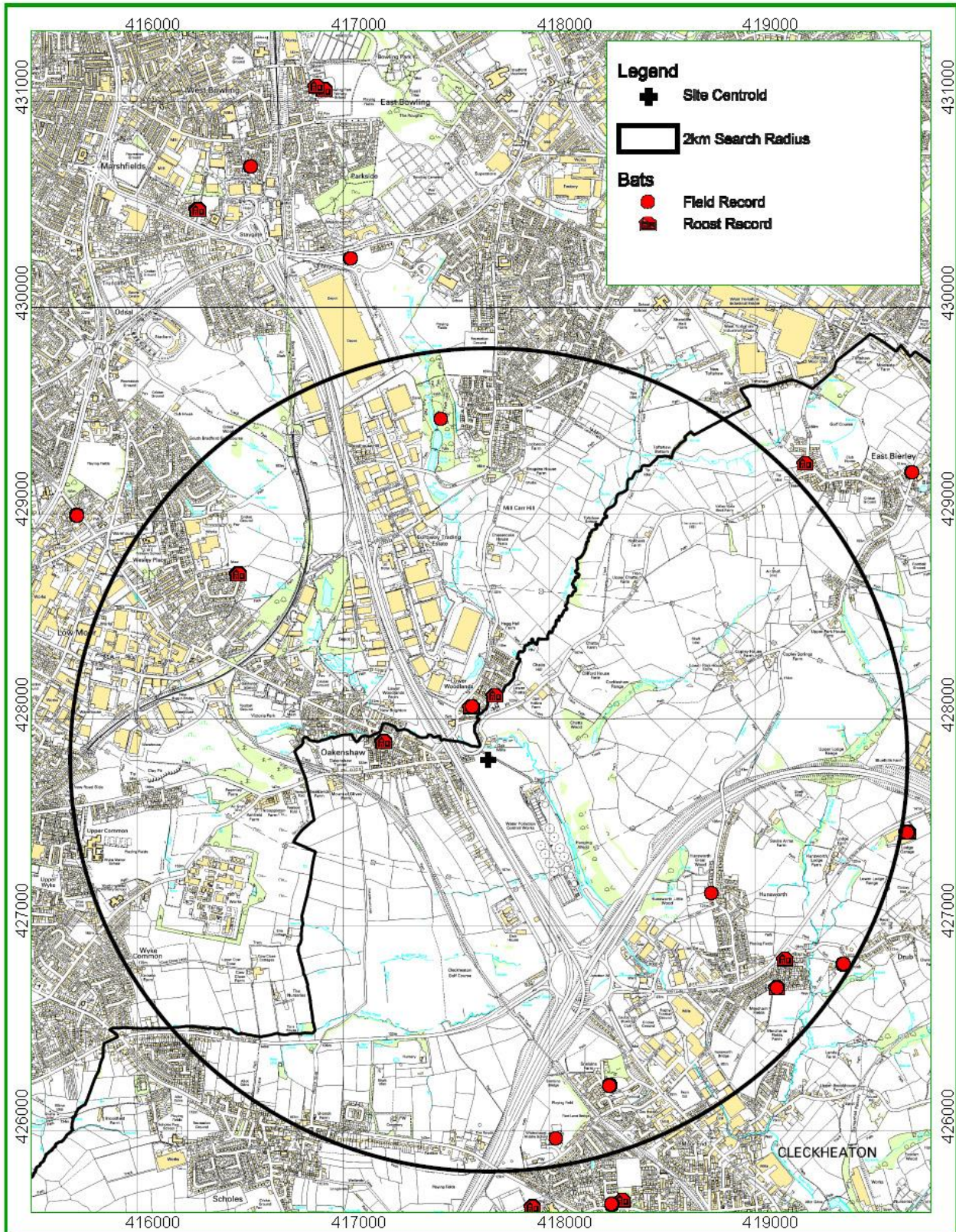


Appendix 2 Data search results

Grid Ref	Common Name	Latin Name	Date	Record Type	Abundance	Location Name	Distance from Site Centroid (m)
SE 174 70294 70	Daubenton's Bat	<i>Myotis daubentoni</i>	2012	field record		Bierley Wood, Bradford	1,685
SE 19101267 03	Leisler's Bat	<i>Nyctalus leisleri</i>	2002	Roost		23 Kilroyd Drive, Cleckheaton, BD19 4EA	1,776
SE 174 70294 70	Noctule	<i>Nyctalus noctula</i>	2012	field record		Bierley Wood, Bradford	1,685
SE 18027259 70	Noctule	<i>Nyctalus noctula</i>	01/05/2011	field record		Whitechapel School, Cleckheaton	1,858

Grid Ref	Common Name	Latin Name	Date	Record Type	Abundance	Location Name	Distance from Site Centroid (m)
SE 177 30281 25	Vesper Bat species	<i>Vespertilionidae</i>	11/05/2005	Roost		16 Chattswold Fold, Lower Woodlands, Oakenshaw, Bradford	326
SE 187 85271 62	Bats	<i>Vespertilionidae</i>	1999	in building		167 Hunsworth Lane, Cleckheaton, BD19 4DT	1,256
SE 191 02267 02	Bats	<i>Vespertilionidae</i>	05/03/2009	field record		23 Kilroyd Drive, Cleckheaton	1,777
SE 191 40268 42	Vesper Bat species	<i>Vespertilionidae</i>	15/06/2006	Roost		2 Drubb Lane, Cleckheaton	1,726

Grid Ref	Common Name	Latin Name	Date	Record Type	Abundance	Location Name	Distance from Site Centroid (m)
SE1648328715	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	23/06/2000	Roost	10 Count of Adult	Bradford, 43 Caldene Avenue, Low Moor BD12 0JR	1,520
SE1747029470	Pipistrelle	<i>Pipistrellus pipistrellus</i>	2012	field record		Bierley Wood, Bradford	1,685
SE1802725970	Pipistrelle	<i>Pipistrellus pipistrellus</i>	01/05/2011	field record		Whitechapel School, Cleckheaton	1,858
SE1829026227	Pipistrelle	<i>Pipistrellus pipistrellus</i>	30/05/2012	field record		Elliot Medway Construction, Snelsins Lane, Cleckheaton	1,679
SE1910326702	Pipistrelle	<i>Pipistrellus pipistrellus</i>	20/05/2009	field record		23 Kilroyd Drive, Cleckheaton	1,778
SE1914026842	Pipistrelle	<i>Pipistrellus pipistrellus</i>	2007	Roost		2 Drubb Lane, Cleckheaton, BD19 4BW	1,726
SE1942526818	Pipistrelle	<i>Pipistrellus pipistrellus</i>	01/08/2013	field record		Mazebrook Barn, Drubb Lane	1,981
SE1747029470	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	2012	field record		Bierley Wood, Bradford	1,685
SE1761628068	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	23/03/2007	Roost		1 Hollowfield Croft, Oakenshaw, Bradford	281
SE1914026842	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	25/05/2007	Roost	20 Count of Adult	2 Drubb Lane, Cleckheaton	1,726
SE17192790	Vesper Bat species	<i>Vespertilionidae</i>	21/07/2005	Roost	50 Count of Adult	8 Greenside, Oakenshaw, Kirklees	518
SE17622807	Vesper Bat species	<i>Vespertilionidae</i>	19/01/2005	in building	1 Count of Adult	1 Hollowfield Croft, Oakenshaw, Bradford	281



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Scale 1:25000
At Size A4



West Yorkshire Ecology

West Yorkshire Joint Services

**FIGURE 1:
BAT RECORDS**

