



BANK VIEW, WELL HILL, GREEN MOOR.

OS REF: SK 28288 99509.

BAT SURVEY.

Ref No: 210944/1.

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1. INTRODUCTION.

1.1. There are plans to demolish the existing bungalow, Bank View on Well Hill in Green Moor and build a new residential dwelling.

1.2. Whitcher Wildlife Ltd was therefore commissioned to carry out a bat survey of the site to establish whether there are any issues that may affect the proposed works.

1.3. The initial survey was carried out on 7th September 2021. That survey identified bat droppings under the eaves at the front of the bungalow and therefore, further surveys were recommended.

1.4. A dusk emergence survey was carried out on 3rd May 2022, a dawn survey on 13th June 2022 and a second dusk emergence survey on 28th June 2022.

1.5. This report outlined the results of all of the surveys and makes appropriate recommendations.

1.6. Appendix I of this report provides additional information on bats and the protection afforded to them and is designed to assist the reader in understanding the contents of this report.

2. SURVEY METHODOLOGY.

2.1. The buildings were thoroughly checked internally and externally for potential bat roosting sites by looking for the following signs: -

- * Holes, cracks or crevices.
- * Bat droppings.
- * Prey remains.
- * Staining on external walls.

2.2. Unless otherwise stated, all lofts were accessed and inspected using a high-powered torch and where necessary an endoscope.

2.3. A thorough external inspection was carried out from ground level for any gaps or openings in the roof and ridge tiles, behind soffits and fascia's and in the walls of the structure for suitable roost access points and field signs to indicate possible use by bats.

2.4. All window cills, walls and the ground around the structure were checked for signs of bat droppings or staining to indicate possible use by bats. Where necessary, ladders were utilised to gain access within the limits of health and safety. Any access constraints encountered are outlined within the following report.

2.5. All survey work was carried out in line with Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition)*, with an assessment of the buildings suitability for roosting bats made in accordance with these guidelines.

2.6. The initial survey was carried out by Jenny Witcher Roebuck MCIEEM. Since 2001 Jenny has had experience in a professional capacity as a Wildlife Consultant carrying out Ecology Surveys and Phase 1 Habitat surveys. Jenny holds Natural England Survey Licences in respect of bats, great crested newts, crayfish and barn owls, NRW and SNH Survey Licences in respect of bats and great crested newts. She has also successfully completed a number of courses run by the Chartered Institute of Ecology and Environmental Management (CIEEM), the Bat Conservation Trust (BCT) and the Field Studies Council (FSC) in the relative protected species, plant species and in carrying out Phase 1 Habitat Surveys. As a full member of CIEEM she is committed to continuous professional development, a continual process of learning and career development, a condition of CIEEM membership.

2.7. Subsequent surveys were led by Derek Whitcher who has over twenty years' experience of surveying for wildlife and has run his own wildlife consultancy since 1998. He has extensive experience of a wide variety of survey techniques for a variety of species of protected wildlife supplemented by attendance on a wide range of training courses through CIEEM, FSC and BCT. As a member of CIEEM he is committed to continuous professional development, a continual process of learning and career development, a condition of CIEEM membership. He holds current Natural England, CCW and NRW survey licences for, bat, great crested newt and white clawed crayfish.

3. SURVEY RESULTS.

3.1. Data Search Results.

Desktop data searches were requested from Barnsley Biological Records Centre and South Yorkshire Bat Group for records of bats and bat roosts within 2km of the survey area.

3.1.1. Barnsley Biological Records Centre.

No response has been received yet. When received, this will be added to the report and the report will be reissued.

3.1.2. South Yorkshire Bat Group.

3.1.2.1. There are numerous records of bats and bat roosts within 2km of the survey area. There are no records specific to the survey area.

3.1.2.2. The nearest record is of a single Common Pipistrelle bat roosting in a cliff face at Green Moor Quarry 100m to the north of the survey area, recorded in 2021. There are also records 220m to the west, recorded in 2020 and are of bats recorded at Green Moor School. All other records lie over 350m from the survey area.

3.2. Site Description.

3.2.1. The survey area is the bungalow, Bank View off Well Hill in Green Moor. The aerial photograph below shows the bungalow.



3.2.2. The site is on the eastern edge of the village with a few residential properties surrounding it and the wooded River Don valley to the north. The aerial photograph below shows the survey area and the wider surrounding area.



3.3. Initial Daytime Survey Results.

3.3.1. The bungalow is built on a hill and is single storey at the south and west sides and two storey on the east and north. There is an integrated garage on the western end of the building.



3.3.2. The bungalow is constructed with stone walls and a pitched interlocking tile roof. There is a small gable end on the southern side of the building over a porch. The building has pvc soffits all around with small round vents.

3.3.3. The walls are in good condition with no cracks or gaps. The roof is in good condition with all tiles in place and tight fitting.

3.3.4. There was no access into the building during the survey to inspect the loft space. However, this is not seen as a constraint as the eaves and roof are well sealed.

3.3.5. There are narrow gaps where the soffits meet the stone walls on all sides of the building. This provides potential for roosting bats. The photographs below show some of these gaps around the building.



3.3.6. During the survey approximately 25 fresh bat droppings were found on the window cill of the southern porch gable end, on the wall, window, window frame and alarm box. Above these droppings there is a gap between the soffit and the wall at the ridge of the gable end. No droppings were found on the floor below as the slabs here have recently been removed.

3.3.7. The photographs below show the location of the bat roost.



3.3.8. The photographs below show the droppings found below the roost.



3.3.9. Comparison with library samples show these to be Pipistrelle droppings.

3.3.10. As there are bat droppings present on the southern side of the building and potential on all sides for further roosts behind the soffits the building is assessed as providing **high** potential for roosting bats.

3.4. Follow up Daytime Survey Results, May 2022.

3.4.1. A follow up day time survey was carried out on 3rd May 2022 with full access to the inside of the building.

3.4.2. The bungalow remains very much as it was during the previous surveys. No bat droppings were evident at the front of the bungalow as in the previous survey and no bat droppings were found around the outside of the building.

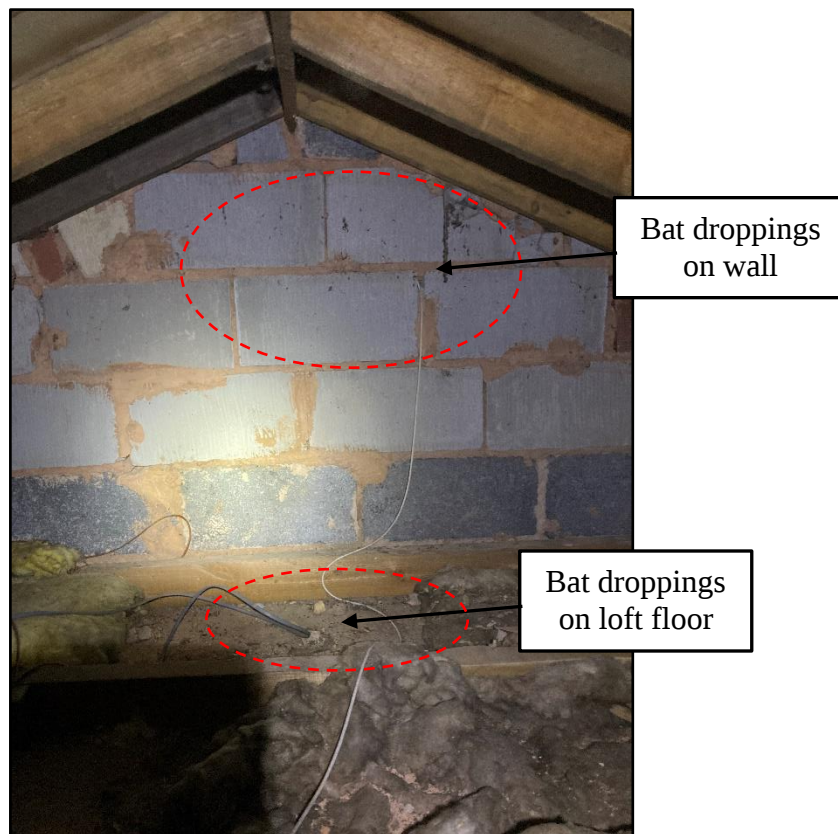
3.4.3. A full inspection of the loft space identified the roof to be effectively lined with tightly stretched breathable membrane. No tears or gaps were found anywhere in the loft space.



3.4.4. Part of the floor of the loft was boarded and strip lights fitted. Others were more inaccessible with no boarding or lighting.

3.4.5. Two areas of bat droppings were identified.

3.4.6. The first was behind the front gable end wall where droppings were found on the outside last year. The droppings inside the loft were found on the internal gable end wall and on the loft floor below. Approximately forty old droppings were found in total and are shown in the photograph below.



3.4.7. The second was a group of approximately sixty droppings underneath the ridge towards the eastern end of the building. These were small droppings and when compared to library samples were assessed to be Pipistrelle droppings. These are shown in the photograph below.



3.5. First Dusk Emergence Survey Results.

3.5.1. On the evening of 3rd May 2022, three surveyors carried out a dusk emergence survey. Two surveyors hold Natural England bat survey licences and the other surveyor is very experienced with bat surveys.

3.5.2. The evening was overcast with high cloud, there was only the hint of a breeze and a temperature of 11°C at 20:00. Sunset was at 20:39.

3.5.3. Each surveyor was equipped with a Batbox Duet detector and a two way radio and an Anabat recorder was placed beside each surveyor to record bat activity for subsequent analysis using Analook software.

3.5.4. The three surveyors were positioned in order to view all sides of the property simultaneously.



3.5.5. The first bat was a Common Pipistrelle, seen and recorded flying across the road from the south and down the western side of the bungalow. From that time onwards the bat foraged over the back garden of the bungalow and over the adjacent woodland.

3.5.6. A Soprano Pipistrelle was first recorded coming from the east and also foraging over the gardens and adjacent woodland until 21:33 when the level of bat activity dropped off as bats moved away from the site. The survey continued until 22:10.

3.5.7. Anabat 21 with surveyor S1 recorded thirty-six Common Pipistrelle calls between 20:49 and 21:39 and eight Soprano Pipistrelle calls between 20:52 and 21:27.

3.5.8. Anabat 18 with surveyor S2 recorded thirteen Common Pipistrelles between 20:57 and 21:37 and none Soprano Pipistrelles between 20:52 and 21:29.

3.5.9. Anabat 12 with S1 recorded the one Common Pipistrelle at 20:49 and the two Anabats placed in the loft space recorded no bat activity.

3.5.10. No bats emerged from the bungalow.

3.6. First Dawn Survey Results.

3.6.1. On the morning of 13th June 2022, three surveyors carried out a dawn survey. Two surveyors hold Natural England bat survey licences and the other surveyor is very experienced with bat surveys.

3.6.2. The morning was fine, with high cloud and still, 0 on the BWS, with a temperature of 11°C at 03:00 and sunrise at 04:37. The survey started at 03:00 and ended at 05:00.

3.6.3. Each surveyor was equipped with a Batbox Duet detector and a two way radio and an Anabat recorder was placed beside each surveyor to record bat activity for subsequent analysis using Analook software.

3.6.4. The three surveyors were positioned in order to view all sides of the property simultaneously.



3.6.5. Common Pipistrelles were observed foraging over the back garden from the start of the survey with the occasional Soprano Pipistrelle, Myotis and Noctule passing over the site. These bats appeared from the valley to the north and generally passed over the site to the southeast.

3.6.6. Very little bat activity was recorded at the front or to the south of the bungalow.

3.6.7. Anabat 16 with surveyor S1 recorded twenty-six Common Pipistrelle calls between 03:01 and 04:06, two Soprano Pipistrelle calls between 03:21 and 03:54, one Myotis passed at 03:35 and one Noctule at 04:08.

3.6.8. Anabat 22 with surveyor S2 recorded seventeen Common Pipistrelles between 02:57 and 04:06, one Myotis at 03:35 and two Noctules at 04:04 and 04:08.

3.6.9. Anabat 24 with S3 recorded five Common Pipistrelles between 03:26 and 03:51, one Soprano Pipistrelle at 04:00 and two Noctules at 04:04 and 04:08.

3.6.10. No bats swarmed around or entered the bungalow.

3.7. Second Dusk Emergence Survey Results.

3.7.1. On the evening of 28th June 2022, three surveyors carried out a dusk emergence survey. One surveyor holds a Natural England bat survey licences and the other two surveyors are very experienced bat surveyors.

3.7.2. The evening was overcast with high cloud, there was a gusty breeze 1 to 2 on the BWS and a temperature of 16°C at 21:00. Sunset was at 21:31.

3.7.3. Each surveyor was equipped with a Batbox Duet detector and a two way radio and an Anabat recorder was placed beside each surveyor to record bat activity for subsequent analysis using Analook software.

3.7.4. The three surveyors were positioned in order to view all sides of the property simultaneously.



3.7.5. The first bat heard by Surveyor 1 was a Common Pipistrelle foraging over the trees to the west of the site. From 21:48 a small number of Common Pipistrelles foraged over the garden to the north of the bungalow before moving away to the north.

3.7.6. Surveyor 2 saw two Common Pipistrelles pass over the east side of the bungalow from southeast to northwest at 22:06 and 22:22 and the only other bat activity heard was from an occasional, distant Common Pipistrelles foraging over S1 in the back the back garden.

3.7.7. Surveyor 3 heard occasional bat activity over the tree to the west of the site.

3.7.8. The recordings on the three Anabats confirmed the low level of bat activity observed and that all bats were Common Pipistrelles.

3.7.9. No bats emerged from the bungalow. No fresh bat droppings were identified around the outside of the bungalow or in the loft of the bungalow.

4. EVALUATION OF FINDINGS.

4.1. The building is generally in good condition, however, there are gaps where the soffits meet the stone walls on all sides of the building, which could provide potential for roosting bats.

4.2. During the original day time bat roost assessment in 2021 a small accumulation of approximately twenty-five fresh bat droppings found on the window at the south side of the bungalow.

4.3. Therefore, the building was assessed as providing **high** potential for roosting bats.

4.4. During a second day time bat roost assessment in 2022, there were no bat droppings on the outside of the building but two areas of old Pipistrelle droppings were identified inside the loft space.

4.5. Three further surveys were carried out, two dusk emergence surveys and one dawn survey in 2022 and during each of these, a low level of bat activity, predominantly Common Pipistrelle, was identified passing across the site and foraging over the back garden and trees to the west of the site. No bats emerged from or returned to the building and no bats paid any particular interest to the building.

4.6. The survey results suggest that a small bat roost has been present in the building in the past but that roost is no longer in use. This may be due to the bungalow having stood empty over the period in time when the surveys were undertaken causing a change in the temperature and humidity in the building.

4.7. The exiting buildings is assessed to be totally unsuitable for hibernating bats as it will be subject to an unsuitable fluctuations in temperature.

4.8. Demolition of the building and replacing it with a new building will therefore have no negative impact on bats but does provide the potential to improve the bat roosting potential on the site.

5. RECOMMENDATIONS.

5.1. Three surveys, carried out under suitable weather conditions and during the ideal period for carrying out bat surveys have identified no current bat interest in the existing bungalow. Therefore, no further surveys are recommended.

5.2. It is recommended that the proposed demolition of the existing building is undertaken with due care and under a suitable bat mitigation strategy that will ensure no bats are harmed and will ensure that the potential for roosting bats improves as a result of the development.

5.3. It is therefore recommended that one final check of the existing bungalow is undertaken immediately before demolition to determine whether circumstances have changed. In the event there has been a change in circumstances and there is fresh evidence of bats being present, the ecologist will advise accordingly.

5.4. In the event that circumstances remain as at present and there are no bats present, the demolition will be undertaken with due care and with a licensed ecologist present during the roof strip.

5.5. Prior to that happening, a bat box will be erected on a tree around the site perimeter. A Harlech Woodstone bat box as shown below or equivalent will be erected at least 3m up a suitable tree. In the unlikely event of a bat being found, this will provide somewhere it can be moved to.



5.6. In addition, bat roosting opportunities will be built into the new dwelling. One integrated bat brick with a finish to match the new dwelling will be placed high in a gable end wall. The design will be as shown below or equivalent.



5.7. In addition, four bat access slates will be incorporated into the roof of the building to provide access for crevice dwelling bats to access the gap between the tiles and the roof lining. These will be as shown below or equivalent.



5.8. Finally, to provide mitigation enhancements in line with the requirements of the NPPF, two swift nest boxes will be built into the outer skin of the new dwelling to provide additional nesting opportunities for swifts and other birds. These will be as shown below or equivalent.



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Checked by:	
Ruth Georgiou. BSc, MCIEEM	Date: 30 th June 2022.

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Appendix I. BAT INFORMATION.

Ecology

There are currently 18 species of bat residing in Britain, 17 of which are known to breed here. They are extremely difficult to identify in the hand and even more so in flight.

All appear to be diminishing in numbers, probably due to habitat change and shortage of food, caused by pesticides, as insects are their sole diet.

As their diet consists solely of insects, bats hibernate during the winter when their food source is at its most scarce. They will spend the winter in hollow trees, caves, mines and the roofs of buildings.

Certain species, particularly the pipistrelle (the commonest and most widespread British bat) can quickly adapt to man-made structures and will readily use these to roost and to rear their young.

Surveys

During walkover surveys, bat roosts can be identified by looking for:

- Suitable holes, cracks and crevices within any building, tree or other structure.
- Bat droppings along walls, window cills, or on the ground.
- Prey remains, such as insect wings.

Further investigations can be made using endoscopes, by carrying out aerial inspections of trees or by conducting bat activity surveys during dusk and dawn over summer months.

Legislation

Bats are protected under Appendix II and III of the Bern Convention (1982), Schedule 5 and 6 of the Wildlife and Countryside Act (1981), Annex IV of the Habitats Directive (some species under Annex II), Annex II of the Conservation of Habitats and Species Regulations (2010) and EUROBATS agreement. Numerous species are

also listed under section 41 of the Natural Environment and Rural Communities Act (2006) making them species of principal importance.

All bats and their roosts are therefore protected in the UK. This makes it an offence to kill, injure or take any bat, to interfere with any place used for shelter or protection, or to intentionally disturb any animal occupying such a place.

The UK has designated maternity and hibernacula areas as Special Areas of Conservation (SAC's) under the Habitats Directive. Implementation of the UK Biodiversity Action Plan also includes action for a number bat species and the habitats which support them.

Where development proposals are likely to affect a bat roost site, a licence is required from Natural England.

Toolbox Talk: Bats

Whitcher Wildlife Ltd

Ecological Consultants



18 species of bat have been recorded in Britain, 17 of which are known to breed here.

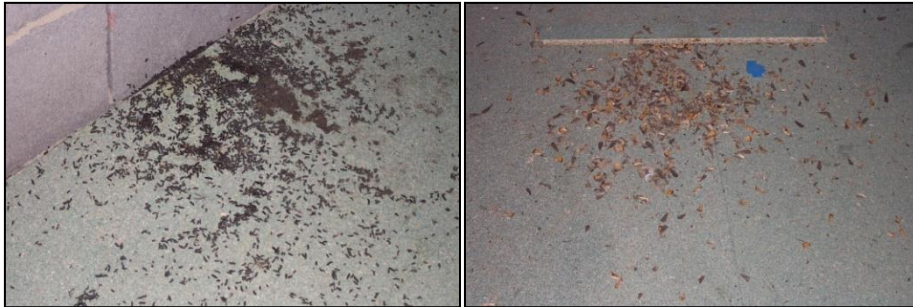
Identification.

Some species can be extremely difficult to identify in the hand and even more so in flight.

Species such as the Brown Long Eared bat pictured above can be more easily identified in the hand. Whereas, the Common Pipistrelle and Soprano Pipistrelle are more difficult to identify.



Bats are more easily identified by field signs such as droppings or feeding remains.



Habitat.

Bats are highly specialised creatures and require a relatively narrow range of suitable conditions in order to sustain a viable population. Bats require an abundant supply of flying insect food in places where they can easily be caught and they need safe and reliable roosting sites, particularly during breeding and hibernation.

Bats are heavily dependent on buildings and trees for their roost sites and therefore extremely susceptible to disturbance from human activities. Development schemes can also isolate bat populations and sever roost sites from favoured feeding areas by removing hedgerows or other features used as commuting routes.

Bats are susceptible to disturbance and have been known to abandon roost sites after instances of disturbance. The effects of disturbance are more pronounced at different times of year. Serious disturbance during breeding can result in the breeding females being killed or the abandonment and subsequent starvation of dependant young. Repeated disturbance during winter hibernation can result in the death of adult animals from starvation.

The level of protection afforded to bats in the UK and European legislation reflects the fact that it is now generally accepted that bats have declined substantially, maybe by as much as 60%, over recent years. Most species are declining and vulnerable with all species being protected.

As their diet consists solely of insects, bats hibernate during the winter when their food source is at its most scarce. They will spend the winter in hollow trees, caves, mines and occasionally the roofs of buildings.

Certain species, particularly Pipistrelle, can quickly adapt to manmade structures and will readily use these to roost and to rear their young.

Legislation.

Bats and their roosts are fully protected at all times (whether the bats are currently present or not). This protection comes from the Wildlife & Countryside Act 1981 (updated by the Countryside Rights of Way Act 2000) and the Habitats Regulations 1994. Under this legislation it is an offence to intentionally or recklessly kill, injure, capture or disturb bats or to damage, destroy or obstruct access to any place used by bats for shelter or protection.

Under the Habitats Regulations, where bats may be affected by development proposals, a licence is required from Natural England. Natural England's published guidelines on the licence procedure indicate that if, on the basis of survey information and specialist knowledge of the species concerned, the proposed activity is reasonably likely to result in an offence then a licence is required. If, on the other hand the proposed activity is reasonably unlikely to result in an offence, then a licence is not required.

If bats or bat field signs are identified during works, stop all works and contact Whitcher Wildlife Ltd directly on 01226 753271 or at info@whitcher-wildlife.co.uk