



WE KNOW SERVICES

Bat Survey Report

Address

Valleyfield, North End Lane, Halewood

Client

Mr & Mrs Dickson

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We Know Services
Yorkon Building, Archway Road, Huyton, Merseyside, L36 9YU
E: info@weknowservices.co.uk
www.weknowservices.co.uk



Valleyfield, North End Lane, Halewood

Quality Assurance

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Summary

A Bat survey was commissioned in May 2021 by Mr & Mrs Dickson of Valleyfield, a detached residential property on North End Lane in Halewood, Liverpool. The survey was commissioned to support a planning application for demolition and re-build of the property.

An existing Ecological Survey and Assessment report (WeKnow Services, 2021) indicated no evidence to suggest the presence of a bat roost in association with the building. However, due to the presence of a number of features with potential to support crevice dwelling bats such as Pipistrelle species (*Pipistrellus* sp.), the building was assessed as being of “Moderate potential” to support bat roosts and two emergence and re-entry surveys was recommended to be under taken (May - September inclusive) in line with current professional bat survey guidelines (Collins et al, 2016).

The survey conducted did not identify any notable bat activity in association with the site, with all activity limited to low numbers of Common Pipistrelle foraging and commuting through or past the site. **No bat roosts were identified** during the survey.

Whilst the surrounding habitat provides good foraging resource, the site is not considered to be of significant value for bats, though will contribute to habitat in wider areas cumulatively with other garden areas and the wider agricultural landscape immediate to the site.

In view of the results of the bat survey the site is not considered to currently support bat roosts and the site is considered to be of low value for bats in the local context (Mitchell-Jones, 2004).

In view of the evidence of potential nesting birds it is recommended that demolition works are undertaken outside of the nesting bird season (taken to be March-August inclusive). This is recommended to avoid conflict with nesting birds which cannot be disturbed whilst nesting.

It is recommended that Bat roost features should be designed into the development, to enhance the site for bats.

In view of the above, where the above recommendations are followed, it is considered the appropriate level of assessment has been completed (as per Collin, J (Ed) 2016), and the favourable conservation status of bats will not be adversely affected by the proposed development

1. INTRODUCTION

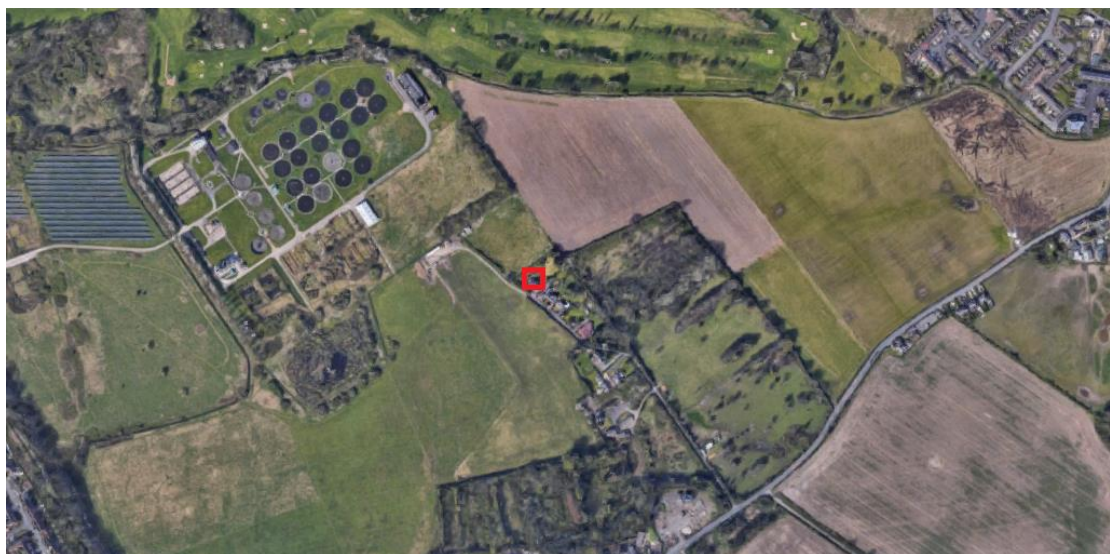
A Bat survey was commissioned in May 2021 by Mr & Mrs Dickson of Valleyfield, a detached residential property on North End Lane in Halewood, Liverpool. The survey was commissioned to support a planning application for demolition and re-build of the property.

An existing Ecological Survey and Assessment report (WeKnow Services, 2021) indicated no evidence to suggest the presence of a bat roost in association with the building. However, due to the presence of a number of features with potential to support crevice dwelling bats such as Pipistrelle species (*Pipistrellus* sp.), the building was assessed as being of “Moderate potential” to support bat roosts and two emergence and re-entry surveys was recommended to be under taken (May- September inclusive) in line with current professional bat survey guidelines (Collins et al, 2016).

1.1. Site Description

The site is located on North End Lane, Halewood (Grid Reference: SJ 44144 87272) and consists of an existing detached residential property and separate garage, which are currently in-use. The immediate surrounding area is characterised by agricultural fields and occasional residential properties. In the wider context there is a water treatment works located 275 m north-west beyond which lies Lee Park Golf Club.

Figure 1. Site and surrounding landscape character



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1.2. Proposed Works

It is understood that the proposals are for the demolition of the existing building, clearance of the site and construction of a replacement residential property within the exiting site footprint.

1.3. Personnel & Quality Assurance

Rob Nicholson BSc (Hons) MCIEEM is a Class 2 Bat licence holder (Natural England), has over 10 years' relevant experience as an ecologist and is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). All field work and assessment was undertaken in accordance with current best practice guidelines (Collins, J. (Ed) 2016).

2. LEGAL STATUS

In England, all British bats and their roosts are protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife & Countryside Act 1981 (as amended).

These pieces of legislation combine to give substantial protection to bats and their roost sites, making it an offence to:

- Deliberately or intentionally kill, injure or take a bat;
- Damage, destroy or intentionally or recklessly obstruct access to any place that a bat uses for shelter or protection (this is taken to mean all bat roosts whether bats are present or not);
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection.

Section 40 of the NERC Act 2006 places a statutory duty on public bodies such as local authorities that *“every public body must, in exercising its functions have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity”*. Section 41 of the NERC Act requires the Secretary of State to draw up a list of Habitats and Species of Principal Importance which should be used to guide decision-makers (which include local authorities) in implementing their duty under Section 40 (see below for relevant bat species).

3. METHODOLOGY

3.1. Desk Study

To inform the survey, a desk study was conducted using available ecological information relating to bats for the area surrounding the site.

The existing Ecology Survey and Assessment report (WeKnow Services, 2021) for the site was used to inform the emergence survey.

Online resources, including Multi-Agency Geographic Information Centre (MAGIC), were consulted in relation to the presence of sites and habitats of importance for bats in the wider context.

A data request to the Local Records Centre (LRC) or the local Bat groups was made as part of the Ecology Survey and Assessment report (WeKnow Services 2021) and reference is made to this existing information as part of this assessment.

3.2. Pre-development Bat Survey

3.2.1. Habitat Survey

A broad habitat survey was conducted of the site to inform the assessment of the suitability of the site for bats. Broad habitat descriptions were assigned and their values with respect to bats at site level and in the wider context assessed.

3.2.2. Emergence Survey

One dusk emergence survey was undertaken on 27th May 2021 followed by one Dawn re-entry survey on 5th June 2021 (in line with current Bat Survey Guidelines for buildings assessed to be of 'Moderate potential' for supporting bat roosts).

The dusk survey commenced 15 minutes before sunset and continued for 1.5hrs after sunset. The dawn re-entry survey commenced 1.5 hours before sunset and 15 minutes after.

During the surveys, the two surveyors were strategically positioned, focusing on features identified in the Ecology Survey and Assessment (WeKnow Services, 2021) to ensure observations could be made of any bats leaving or entering potential roost locations.

All observed bat passes were recorded; noting the time, the location and, where possible, the direction of flight, species and behaviour of the bat (i.e. commuting, foraging, social calling).

After completion of each survey session, digital recordings of bat echolocation taken during the survey were analysed using Bat Sound sonogram analysis software for recordings taken using Batbox Duet Heterodyne and Frequency Division detectors linked to digital external recording devices (Tascam DR-05).

During the surveys, the following details were noted as appropriate:

- Weather and temperature;
- Time bat detected/observed;
- Frequency at which the bat was detected;
- Location within the survey area;
- Whether bats emerged from/re-entered a potential roost location;
- Direction of flight;
- Number of bats observed; and
- Whether the bats appeared to be foraging or commuting.

Temperature, wind speed and cloud cover were recorded at the beginning and end of the survey, along with any significant weather changes during the survey.

3.3. Evaluation Methods

The 'Bat Surveys for Professional Ecologists: Good Practice Guidelines' (3rd edition) (Collins, J. (Ed) 2016) are used as a basis to evaluate the value of features for their potential to support bats. In addition, the Bat Mitigation Guidelines (Mitchell-Jones, 2004) was referred to.

The potential impacts on bats, bat habitat or their roosts as a result of the proposals are assessed within this report using the above criteria, together with an ecological judgement by an experienced bat surveyor.

4. CONSTRAINTS

This survey does not cover every month of the active and hibernation seasons.

The interior of the property was not accessed at this stage of the survey, having already been completed during the previous survey (WeKnow Services, 2021).

5. RESULTS

5.1. Desk Study

Online Resources

According to the Natural England online mapping resource MAGIC there are no statutory designated sites for which bats are a qualifying feature within 2 km of the site.

There are no granted European Protected Species Licences relating to bats within 2 km of the site.

Existing Survey Information

An Ecology Survey and Assessment which included a Preliminary Roost Assessment (PRA) was undertaken of the site by WeKnow Services (April, 2021). This PRA concluded that:

“It is considered that the dwelling is of moderate suitability to support roosting bats in accordance with the criteria listed in Table 4.1 of Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn) (Collins, J. (ed.), 2016) as the buildings have the potential to support one or more roost sites but unlikely to support a roost of high conservation status.”

The following records of bats were provided by Merseyside Biobank (April, 2021):

Group	Species and Designation	Notes
Terrestrial mammal	Daubenton's Bat (<i>Myotis daubentonii</i>) – EPS, WCAs5	One record from 2017 on Lee Park Golf Course
	Red Squirrel (<i>Sciurus vulgaris</i>) – WCAs5	Two records from 2008 within one km
	European Water Vole (<i>Arvicola amphibius</i>) – WCAs5	Five records between 1996 and 2000 the nearest being at Netherley Brook
	Noctule (<i>Nyctalus noctula</i>) – EPS, WCAs5	One record from 2017 at Lee Park Golf Course
	Common Pipistrelle (<i>Pipistrellus pipistrellus</i>) – EPS, WCAs5	Five records between 2007 and 2015 the nearest on Lee Park Golf Course
	Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>) – EPS, WCAs5	One record from 2017 at Lee Park Golf Course
	West European Hedgehog (<i>Erinaceus europaeus</i>) – S41	A total of 20 records between 1993 and 2019 the nearest being North End Farm
Key: EPS – European Protected species under <i>The Conservation of Habitats and Species Regulations 2010</i> (as amended) WCAs1 - Protected under Schedule 1 of the <i>Wildlife and Countryside Act 1981</i> (as amended). WCAs8 - Protected under Schedule 8 of the <i>Wildlife and Countryside Act 1981</i> (as amended). S41- Species of principal importance for conservation, as listed under Section 41 of the <i>NERC Act 2006</i> . and LBAP – North Merseyside Priority Species		

The building was assessed to be of 'Moderate potential' for supporting bat roosts. It was considered that the building may be suitable for supporting nesting birds, but no specific evidence of nesting birds (e.g. species, locations) was provided.

5.2. Field Survey

5.2.1. Broad Habitat Survey

The site is relatively small and comprises of single detached residential property and detached garage, currently in use, with associated gardens.

The site is situated in the suburban area of Halewood, although the immediate vicinity of the site is predominantly agricultural.

5.2.2. Emergence Survey Results

The emergence survey was conducted with the aim of recording any bat activity associated with features identified upon the building, in order to identify any bat roosts if present.

The survey was undertaken under suitable weather conditions with temperatures greater than 10°C.

A plan indicating the locations of the surveyors in relation to the tree is provided in Appendix 1 and full results of the survey are provided in Appendix 2.

Emergence Survey – 27th May 2021

The emergence survey commenced at 21.08hrs, sunset was at 21.23hrs and the survey ended at 22.53hrs. The survey lasted 1 hours 45 minutes in total and was uninterrupted.

No bats were recorded emerging from the building throughout the survey.

During the survey the first bat, a Common Pipistrelle, was recorded by the surveyors at 21.56hrs, commuting west-east from outside the site into the site to forage along boundary hedgerows and trees. This was followed by a second at 22.04hrs.

Bat activity throughout the survey was limited to 1-2 Common Pipistrelle occasionally passing through the site, foraging. See Appendix 2 for details of further activity recorded.

Dawn Re-Entry Survey – 5th June 2021

The emergence survey commenced at 03.24hrs, sun rise was at 04.54hrs and the survey ended at 05.09hrs. The survey lasted 1 hours 45 minutes in total and was uninterrupted.

No bats were recorded re-entering the building throughout the survey.

During the survey, no bat activity was recorded in association with the site. Occasional distant bat passes were observed indicating conditions were suitable for bat activity in general.

5.2.3. Nesting Birds

During the survey on bird (Great Tit *Parus major*) was observed exiting and re-entering a roof vent at an apex to the north-eastern aspect of the building. As such there is potential birds' nest in the building during the breeding season.

6. EVALUATION AND INTERPRETATION

6.1. Roosts and Habitat

The desk study did not identify any roosts or site of importance for bats in close proximity to the site.

The survey conducted did not identify any notable bat activity in association with the site, with all activity limited to low numbers of Common Pipistrelle foraging and commuting through or past the site. No bat roosts were identified during the survey.

Whilst the surrounding habitat provides good foraging resource, the site is not considered to be of significant value for bats, though will contribute to habitat in wider areas cumulatively with other garden areas and the wider agricultural landscape immediate to the site.

6.2. The Value of the Site for Bats

In view of the results of the bat survey the site is not considered to currently support bat roosts and the site is considered to be of low value for bats in the local context (Mitchell-Jones, 2004).

7. IMPACTS

The proposed development consists of the demolition of the building, clearance of the site and construction of an alternative property within the footprint of the existing site.

In view of the low levels of bat activity associated with the site and negative result of the emergence survey, the scale of impact upon the conservation status of the species as a result of the proposed development is considered likely to be negligible (Mitchell-Jones, 2004).

8. ADVICE AND RECOMMENDATIONS

It is advised that bats and their roosts are protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife & Countryside Act 1981 (as amended).

It is advised that it is illegal to deliberately/intentionally or recklessly: kill, injure or take a bat; damage, destroy or obstruct access to any place that a bat uses for shelter or protection (this is taken to mean all bat roosts whether bats are present or not); and disturb a bat while it is occupying a structure or place that it uses for shelter or protection.

Where possible, in order to enhance the potential biodiversity value of the site, the proposed development should seek to include planting of small trees or shrubs that might contribute to bat foraging habitat locally. Native species should be used.

Artificial lighting should be sensitive to wildlife (including bats) and should therefore avoid illumination of trees and shrubs. Directional, motion sensor or timer-based lighting should be incorporated, avoiding upward light-spill that may deter bats from the area.

In view of the evidence of potential nesting birds it is recommended that demolition works are undertaken outside of the nesting bird season (taken to be March-August inclusive). This is recommended to avoid conflict with nesting birds which cannot be disturbed whilst nesting.

It is recommended that Bat roost features should be designed into the development, to enhance the site for bats. This should incorporate bat bricks such as “the “Habibat S3” integrated bat brick range or similar (these can be faced to match the exterior finish of the building and are built in ‘flush’ to the brickwork).

8.1. Further Survey

In view of the results of assessment no further bat survey is considered necessary where demolition is commenced prior to May 2023. Where works take place beyond this date, the results of this assessment should be reviewed accordingly.

Where any vegetation clearance and/or demolition works are scheduled to coincide with the nesting bird season (March-August inclusive), it is recommended that a survey for nesting birds is undertaken to ensure no active nests have established prior to any works being undertaken.

9. CONCLUSIONS

In view of the above, where the above recommendations are followed, it is considered the appropriate level of assessment has been completed (as per Collin, J (Ed) 2016), and the favourable conservation status of bats will not be adversely affected by the proposed development.

10. REFERENCES

Bat Conservation Trust (2000). *Distribution atlas of bats in Britain and Ireland 1980-1999*. Bat Conservation Trust, London.

Collins, J (Ed). (2016). *Bat Surveys for Professional Ecologists - Good Practice Guidelines*, 3rd edition. Bat Conservation Trust.

Bat Conservation Trust website: <http://www.bats.org.uk/>

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

Multi-Agency Geographic Information Centre: <http://magic.defra.gov.uk/>

Stone, E.L (2013) Bats and Lighting: Overview of current evidence and mitigation.

WeKnow Services (2021) Ecology Survey and Assessment: Valleyfield, North End Lane, Halewood.

11. APPENDICIES

APPENDIX 1 – EXISTING SITE LAYOUT & SURVEYOR LOCATION



Red line = site boundary

Blue dot = surveyor locations

APPENDIX 2 – SURVEY DATA

<i>Date</i>	<i>Start /End</i>	<i>Structure Reference / Location</i>	<i>Equipment Used</i>	<i>Weather Conditions (Start /End temps, precipitation, Beaufort wind-scale.</i>
27/05/2021	21.08 – 22.53	Valleyfield SJ 44144 87272	Batbox Duet, Tascam recorder.	20C – 14C. Precipitation nil, Wind 1
Comments (to include # of surveyors used for each visit): 2 Surveyors				

<i>Date</i>	<i>Start/End</i>	<i>Species/Activity</i>	<i>Roost Type</i>	<i>Structure Reference</i>	<i>Roost Location</i>	<i>Access Points</i>	<i>Dimension of existing roosts/ Explanation of where the roost is</i>
27/05/2020	21.08 – 22.53	Common Pipistrelle 21.56 1 x Commuting into site from west and foraging. 22.04 1 x Commuting into site from west and foraging. 22.09 2 x Foraging around tree to north west corner of site. 22.10 1 x Commuting into site from west and exit to east 22.12 1 x foraging amongst scrub. 22.42 1 x commuting through site west-east.	n/a	n/a	n/a	n/a	n/a
05/06/2021	03.24 – 05.09	Nil	n/a	n/a	n/a	n/a	n/a

Notes/observations: Bats (C.pip) in the vicinity of the site but were not associated with roosting on site. No indication of bat roost associated with the site was recorded. Bats arrived to site from the west approximately 30 minutes after sunset indicating a roost in the vicinity of the site to the west.