

Bat Survey Report

Proposed Development at:

Debden Village Hall Pavilion

Debden, Essex

OS 1945-19 Doc 2


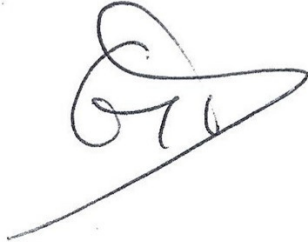
June 2020

Open Spaces

Landscape Architects

LANDSCAPE ARCHITECTURE – TREES – ECOLOGY

Bat Survey
for
Proposed Development at:
Debden Village Hall
Debden
Essex
CB11 3LB

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EXECUTIVE SUMMARY

Open Spaces Landscape & Arboricultural Consultants Ltd (Open Spaces) was commissioned by Debden Village Hall Trust to undertake a bat survey of the sports pavilion building located at Debden Village Hall and Sports Pavilion, Debden, Essex, CB11 3LB (Grid Ref: TL 55540 33479).

The three dusk/dawn activity surveys recorded no Brown Long-eared Bats roosting in the pavilion, and no bats were observed to emerge from or return to the building at any point during the surveys.

At the time of the surveys, no bats were observed to be using the roof void nor any other section of the building. The majority of activity related to the tree line on the southern boundary. It is concluded that since the droppings previously found in the building were old and three surveys in good survey conditions found no evidence of bats using the building, bats are absent from the building.

Appropriate recommendations have been made in Section 5.0.

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1.0 INTRODUCTION

1.1 Survey Brief

Open Spaces Landscape & Arboricultural Consultants Ltd (Open Spaces) was commissioned by Debden Village Hall Trust to undertake a bat survey of the sports pavilion building located at Debden Village Hall and Sports Pavilion, Debden, Essex, CB11 3LB (Grid Ref: TL 55540 33479).

The survey was undertaken in line with the recommendations of the Open Spaces Preliminary Ecological Appraisal (PEA) ref: OS 1945-19-Doc 1 December 2019. Section 4.2 of the PEA states:

“With regards to the pavilion, given the evidence of bat droppings noted, two evening and one dawn bat activity and emergence surveys should be conducted in the bat survey season which runs from mid-May to the end of September to ascertain whether are bats using the building for roosting purposes.

These surveys should be undertaken in suitable conditions, and should be at least two weeks apart and carried out with a licenced bat worker. The results of these surveys will determine whether a European Protected Species Licence is required, and what level of mitigation will be required to satisfy Natural England that the bat population can be maintained or enhanced at the site”.

Bats are a strictly protected species under European Legislation. In this regard, given presence of a building where works are proposed, the survey was undertaken in order to meet the specific requirements of the legislation to inform design, mitigation and if appropriate, inform European Protected Species (EPS) License Applications.

The purpose of the survey was to investigate for signs indicating the presence of bat colonies and their roosts. The identification of protected species is vital in the proposed development of a site to comply with existing legislation and also allows any work that may otherwise be detrimental to bats to be appropriately scheduled.

1.2 Development Proposals

Proposals are for the demolition of existing buildings and construction of a replacement village Hall with associated car parking & landscaping.

The following plan has been viewed:

- Block Plan/Site Development Plan – 1905/11 – Plater Claiborne

Given availability of proposal plans and descriptions, it was possible to undertake an assessment of any potential impacts resultant from the consented proposal and recommend further works/appropriate mitigation as appropriate in section 4.2 of this report.

1.3 Scope of Survey

The purpose of this report is to describe any evidence of bat activity on site at the time the surveys were undertaken, and therefore represents a snapshot in time. This report can be utilised to draw conclusions as to the likely presence or absence of bats on a site and the potential impact of proposed development. In this regard, the report describes the bat activity found, with recommendations as considered appropriate in respect of further works and/or mitigation.

Every effort has been made to provide an accurate assessment. However, it should be noted that bats are an active, transient and highly mobile species and therefore attention is drawn to the specific recommendations made within Section 5 of this report, and action taken where appropriate.

1.4 Copyright

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2.0 LEGISLATION AND POLICY IN RELATION TO BATS IN THE UK

All bat species in Britain are protected under the Wildlife and Countryside Act 1981 through inclusion on Schedule 5. They are also protected under the Conservation (Natural Habitats &c.) Regulations 1994 (which were issued under the European Communities Act 1972), through inclusion on Schedule 2. On 1st November 2017, these Regulations, together with subsequent amendments, were consolidated into the Conservation of Habitats and Species Regulations 2017.

European protected animal species and their breeding sites or resting places are protected under Regulation 39. It is an offence for anyone to deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs. It is an offence to damage or destroy a breeding or resting place of such an animal. It is also an offence to have in one's possession or control, any live or dead European protected species.

The threshold above which a person will commit the offence of deliberately disturbing a wild animal of a European protected species has been raised. Now, a person will commit an offence only if he deliberately disturbs such animals in a way as to be likely significantly to affect (a) the ability of any significant groups of animals of that species to survive, breed, or rear or nurture their young, or (b) the local distribution of abundance of that species. However, please note that the existing offences under the Wildlife and Countryside Act (1981) as amended which cover obstruction of places used for shelter or protection (for example, a bat roost), disturbance and sale still apply to European protected species.

This legislation provides defences so that necessary operations may be carried out in places used by bats, provided the appropriate Statutory Nature Conservation Organisation (in England this is Natural England) is notified and allowed a reasonable time to advise on whether the proposed operation should be carried out and, if so, the approach to be used. The UK is a signatory to the Agreement on the Conservation of Bats in Europe, set up under the Bonn Convention. The Fundamental Obligations of Article III of this Agreement require the protection of all bats and their habitats, including the identification and protection from damage or disturbance of important feeding areas for bats.

Paragraph 98 of Circular 06/2005 states that *'the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat'*.

Section 9 of the National Planning Policy Framework 2012 (NPPF) states that *'the planning system should contribute to and enhance the natural and local environment byminimising impacts on biodiversity and providing net gains in biodiversity where possible.'*

Since August 2007, building development that affects bats or their roosts needs a Protected Species Licence under The Conservation (Natural Habitats &c.) (Amendment) Regulations 2007 administered in England by Natural England.

3.0 METHODOLOGY

3.1 Survey

This report has been compiled in accordance with the Bat Conservation Trust's Bat Survey Guidelines for Professional Ecologists: Good Practice Guidelines.

Ref: Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

However, the first page of all three editions includes the following:

“The guidelines should be interpreted and adapted on a case-by-case basis according to site-specific factors and the professional judgement of an experienced ecologist”.

Where examples are used in the guidelines, they are descriptive rather than prescriptive.

3.1.1 Survey Date & Personnel

The survey was undertaken by Licenced bat worker and trainer John Dobson and by Consultant Ecologist Peter Harris BSc (Hons) MCIEEM on the 14th May 2020 (evening), 28th May 2020 (evening) and 12th June 2020 (dawn).

John Dobson, is a bat worker and trainer licensed by Natural England (Licence No. 2015-15258-CLS-CLS) and author of *Mammals of Essex* (Essex Field Club, 2014). John Dobson has been elected a Fellow of the British Naturalists' Association and received the David Bellamy Award for natural history in 2015.

Peter Harris is a full member of the Chartered Institute of Ecology & Environmental Management (**CIEEM**) and subject to the CIEEM Professional Code of Conduct. The surveyor is licensed by Natural England for surveying great crested newts. The surveyor is an ecologist with over 13 years of experience. He has been involved in a wide range of projects from single dwelling developments to large strategic urban renewal schemes subject to full Environmental Impact Assessment (**EIA**).

As an ecologist for over 13 years, Peter has obtained significant experience in respect of a wide range of protected and priority species. Species worked with include reptiles (surveys/mitigation), great crested newt (surveys/mitigation), badger (surveys/mitigation/licencing), dormouse (surveys) and bat, encompassing a wide range of survey and monitoring techniques. These include internal/external inspections/Preliminary Roost Assessment (PRA), in addition to involvement with successful bat mitigation license applications working in conjunction with specialist organisations.

3.2 Internal/External Inspection of Building(s)

The exterior surfaces of the building were examined for any signs of use as bat roosts, such as the presence of droppings on walls, windows or staining around roost entrances. The use of a crevice by a colony of bats produces droppings on brickwork and adjacent surfaces close to the crevice, together with an accumulation of droppings beneath the roost entrance. However, upon examination, many surfaces will have one or two droppings, randomly placed, caused by bats seeking out new roost sites.

The internal survey was conducted using a powerful torch. The roof of the building was searched for evidence of roosting, the floor areas for droppings and the beams for crevices and staining indicative of the presence of roosting bats. An Xtend & Climb Pro Ladder and a ProVision 300 endoscope were available to inspect crevices in brickwork and around beams.

3.3 Bat activity survey

The weather conditions for the survey, at which time there was visible flying insect activity, were as identified in Table 1:

Table 1:

Date	Sunset Time	Temperature	Weather	Cloud cover
14 th May	20.46	12°C	mild and still	0%
28 th May	21.05	15°C	mild and still	10%
12 th June	04.38 (sunrise)	14°C	light E breeze	100%

During the surveys, one surveyor was located to the east and one to the west of the pavilion. The surveys were conducted until ninety minutes after sunset and from two hours before sunrise.

Bat activity was recorded using BatBox Duet frequency division bat detectors connected to a digital recorder and Batbox Batton XD. Recordings were later analysed using Bat Sound analysis software (Bat Scan 9).

4.0 RESULTS

Building Survey

The survey building is a detached, single-storey building with a tile and felted roof and pale, rendered walls. The roof area was accessed via a door in the eastern wall and the loft floor boarded throughout. The survey found old droppings of Brown Long-eared Bats on the floor of the loft at the western end of the building. Externally, there was no evidence such as droppings or staining on the pale walls where the presence of bats would have been readily apparent.

- On **14th May**, the inspection of the building found that no bats were observed in the building and no new droppings were found on the floor of the roof void. The droppings were the same as those observed in December 2019, as discussed in the 2019 PEA.
- On **28th May**, no evidence of bats was found on the external walls of the building.
- On **12th June**, no evidence of bats was found on the external walls of the building.

Activity Survey 14th May 2020

The first visit was undertaken on **14th May 2020**. No bats were observed in the roof void and no new droppings were found on the floor of the loft. During the activity survey, bat activity was first recorded at twenty-one minutes after sunset when a Common Pipistrelle (*P. pipistrellus*) arrived from the north-west and flew eastwards along the tree-lined southern boundary. Subsequently, up to two Common Pipistrelles were regularly recorded, mostly in trees to the west of the pavilion or along the southern tree line. During the survey, no bats were observed to emerge from the pavilion.

During the survey on 14th May, bat activity was recorded as follows:

- at 21.07 (twenty-one minutes after sunset), a common pipistrelle arrived from the north-west and flew eastwards along the tree-lined southern boundary
- at 21.11, a common pipistrelle recorded foraging over road to the west
- at 21.12, a common pipistrelle recorded foraging over pond to the west
- at 21.12, a common pipistrelle recorded foraging in trees in garden to south
- at 21.13, a common pipistrelle recorded in trees to the west
- at 21.14, a common pipistrelle heard to east of the pavilion
- at 21.14, a common pipistrelle recorded in trees to the west
- at 21.15, a common pipistrelle flew E-W along southern tree line
- at 21.16, a common pipistrelle recorded briefly in trees to the west
- at 21.17, a common pipistrelle flew E-W along southern tree line
- at 21.17, a common pipistrelle recorded in trees to the west
- at 21.18, a common pipistrelle flew E-W along southern tree line
- at 21.18, two common pipistrelles in trees to west
- at 21.18, a common pipistrelle flew W-E along southern tree line
- at 21.22, a common pipistrelle recorded in trees to the west
- at 21.23, a common pipistrelle flew E-W along southern tree line
- at 21.23, two common pipistrelles flew W-E along southern tree line

- at 21.24, a common pipistrelle recorded briefly in trees to the west
- at 21.25, a common pipistrelle flew E-W along southern tree line
- at 21.25, a common pipistrelle recorded in trees to the west
- at 21.27, a common pipistrelle flew E-W along southern tree line
- at 21.30, a common pipistrelle recorded in trees to the west

After this time, no bat activity was recorded. During the survey, no bats were observed to emerge from the pavilion.

Activity Survey 28th May 2020

A second visit was made to the site on **28th May 2020**. During the activity survey, bat activity was first recorded at twenty minutes after sunset when a Common Pipistrelle arrived from the west and foraged in trees to the west of the pavilion. Subsequently, up to two Common Pipistrelles were regularly recorded, mostly in trees to the west of the pavilion or along the southern tree line. During the survey, no bats were observed to emerge from the pavilion.

During the survey on 28th May, bat activity was recorded as follows:

- at 21.25 (twenty minutes after sunset), a common pipistrelle arrived from the west and foraged in trees to the west of the pavilion
- at 21.26, a common pipistrelle recorded briefly in trees to the west
- at 21.30, a common pipistrelle recorded briefly in trees to the west
- at 21.30, a common pipistrelle heard briefly at eastern end of the site
- at 21.31, a common pipistrelle heard briefly at eastern end of the site
- at 21.31, a common pipistrelle arrived from east and flew into trees to west
- at 21.32, a common pipistrelle foraging in trees to the west
- at 21.33, a common pipistrelle foraging in trees to the west
- at 21.33, a common pipistrelle heard briefly at eastern end of the site
- at 21.34, a common pipistrelle flew N-S past pavilion at eastern end
- at 21.34, a common pipistrelle flew E-W along southern tree line
- at 21.34, a common pipistrelle flew W past pavilion along southern tree line
- at 21.35, a common pipistrelle recorded briefly in trees to the west
- at 21.35, a common pipistrelle flew E-W along southern tree line
- at 21.36, a common pipistrelle flew W-E along southern tree line
- at 21.36, a common pipistrelle heard briefly at eastern end of the site
- at 21.37, a common pipistrelle foraging in trees to the west
- at 21.38, a common pipistrelle flying eastwards at eastern end of the site
- at 21.39, a common pipistrelle heard briefly in trees to the west
- at 21.40, two common pipistrelles heard to the east of the pavilion
- at 21.40, a common pipistrelle heard briefly in trees to the west
- at 21.41, a common pipistrelle foraging in trees to the west
- at 21.41, two common pipistrelles heard to the east of the pavilion
- at 21.42, one common pipistrelle heard to the east of the pavilion
- at 21.42, one common pipistrelle heard to the east of the pavilion
- at 21.43, a common pipistrelle foraging in trees to the west

After this time, single common pipistrelles were intermittently recorded until the end of the survey. During the survey, no bat activity was recorded within the building, and no bats observed to emerge from it.

Dawn Survey 12th June 2020

The dawn survey was undertaken on **12th June 2020**. During the activity survey, bat activity was first recorded at 02.40am when a Common Pipistrelle was recorded in trees to the west of the pavilion. Subsequently, single Common Pipistrelles were regularly recorded flying to the east and west of the building. During the survey, no bats were observed to return to or emerge from the pavilion. For this survey, a bright spotlight on the adjacent Village hall illuminated the western side of the pavilion and much of the car park. This would have been a deterrent to bats foraging in the area. As a result, bat activity was confined to the trees bordering the southern side of the car park.

During the dawn survey on 12th June, bat activity was recorded as follows:

- at 02.40, a common pipistrelle heard briefly in trees to the west
- at 02.41, a common pipistrelle heard briefly in trees to the west
- at 02.43, a common pipistrelle heard briefly in trees to the west
- at 02.44, a common pipistrelle heard briefly to the east
- at 02.45, a common pipistrelle heard briefly in trees to the west
- at 02.50, a common pipistrelle heard briefly to the east
- at 02.51, a common pipistrelle heard briefly in trees to the west
- at 03.05, a common pipistrelle heard briefly in trees to the west
- at 03.06, a common pipistrelle heard briefly to the east
- at 03.11, a common pipistrelle heard briefly in trees to the west
- at 03.13, a common pipistrelle heard briefly in trees to the west
- at 03.15, a common pipistrelle heard briefly in trees to the west
- at 03.19, a common pipistrelle heard briefly in trees to the west
- at 03.19, a common pipistrelle heard briefly to the east
- at 03.20, a common pipistrelle heard briefly in trees to the west
- at 03.22, a common pipistrelle heard briefly in trees to the west
- at 03.25, a common pipistrelle heard briefly in trees to the west
- at 03.25, a common pipistrelle heard along tree line to east
- at 03.30, a common pipistrelle heard briefly in trees to the west
- at 03.31, a common pipistrelle heard briefly to the east
- at 03.38, a common pipistrelle heard briefly in trees to the west
- at 03.39, a common pipistrelle heard briefly to the east
- at 03.42, a common pipistrelle heard briefly to the east
- at 03.43, a common pipistrelle heard briefly in trees to the west
- at 03.43, a common pipistrelle flew E-W along tree line
- at 03.53, a common pipistrelle heard briefly in trees to the west
- at 03.53, a common pipistrelle heard briefly to the east
- at 03.54, a common pipistrelle heard briefly in trees to the west
- at 03.56, a common pipistrelle heard briefly in trees to the west
- at 03.57, a common pipistrelle heard briefly to the east
- at 03.59, a common pipistrelle heard briefly in trees to the west

After this time no bat activity was recorded.

5.0 DISCUSSION AND CONCLUSION

Bats are inquisitive, highly mobile animals, which constantly investigate their surroundings, evaluating good feeding areas and potential roosting opportunities. Where suitable habitat such as woodland, woodland edge or sheltered pasture occurs, bats will travel up to several kilometres to take advantage of this resource. To reach favoured sites, small bats will follow linear landscape features such as hedgerows, streams and lanes etc. The absence of such features can make an otherwise suitable site inaccessible to bats. In addition, new roosts will become established in such areas - examples being the rapid colonisation of artificial roost boxes placed in conifer forests or the occupation of new houses by nursery colonies of pipistrelle bats within a year or two of their completion.

The three dusk/dawn activity surveys recorded no Brown Long-eared Bats roosting in the pavilion, and no bats were observed to emerge from or return to the building at any point during the surveys. Whilst it will never be possible to determine, it is considered theoretically possible that in the past, the door in the eastern wall was partly open and bats were opportunistically able to enter the roof space. At the time of the surveys no bats were observed to be using the roof void nor any other section of the building. The bat droppings observed in 2020 were old, and no additional droppings were noted over and above those originally noted in December 2019.

The majority of activity related to the tree line on the southern boundary. It is concluded that since the droppings previously found in the building were old and three surveys in good survey conditions found no evidence of bats using the building, bats are absent from the building.

The following actions are recommended:

- 4x Schwegler 2F bat boxes are to be erected on trees bordering the sports field along the southern boundary. In this way, the site will be enhanced for bats.
- In order to minimise risk of disturbance to potential features that may provide bat commuting and foraging habitat (southern boundary tree line) during the construction phase and as part of the completed development, a low impact lighting scheme is to be used:
 - a) Brightness of lights should be as low as possible, and in accordance with British Standard Institute (BSI) and Bat Conservation Trust (BCT) guidance. Where possible, low pressure sodium lights are advised.
 - b) Lighting should not be directed at features that may be utilised by bats such as tree lines, hedgerows and water bodies/water courses.
 - c) Directional lighting and/or fittings with hoods and cowls should be utilised.
 - d) Where possible, security lighting should be motion sensitive and timers to minimise the amount of time that lights are on.
 - e) Where possible, directional low impact solar bollard lighting should be used to illuminate roads, paths and parking areas.

6.0 REVIEW OF EXISTING RECORDS OR BATS IN THE AREA

Since the early 1980s, the Essex Bat Group has monitored the status and distribution of bats in this area. Records occurring within a 2km radius of the site are as follows:

TL554335	20 May 2008	Common Pipistrelle recorded foraging
TL526354	15 Jun 2005	Soprano Pipistrelle recorded foraging
TL526354	15 Jun 2005	Common Pipistrelle recorded foraging
TL551331	11 Jun 1995	Pipistrelle roost in church
TL551331	11 Jun 1995	Brown Long-eared bat roost in church
TL549341	02 Jul 2008	Common Pipistrelle recorded foraging
TL541341	10 Oct 1999	Pipistrelle recorded foraging
TL544343	10 Apr 2010	Common Pipistrelle recorded foraging
TL525355	26 Aug 2006	Soprano Pipistrelle recorded foraging
TL525355	26 Aug 2006	Common Pipistrelle recorded foraging
TL552333	27 Aug 1996	Soprano Pipistrelle recorded foraging
TL543341	28 Jun 2006	Soprano Pipistrelle recorded foraging
TL543341	24 Apr 2006	Brown Long-eared Bat roosting in barn
TL549333	30 Jun 2009	Brown Long-eared Bat recorded foraging
TL549333	18 Jul 1997	Daubenton's Bat recorded foraging
TL549333	30 Jun 2009	Natterer's Bat recorded foraging

Appendix 1 – Photographs



Photo 1: Front (northern) elevation



Photo 2: Western elevation



Photo 3: Eastern elevation. The door provides access to the loft



Photo 4: Southern elevation



Photo 5: Looking westwards in loft



Photo 6: Looking eastwards in loft



Photo 7: Bat droppings at western end of roof void