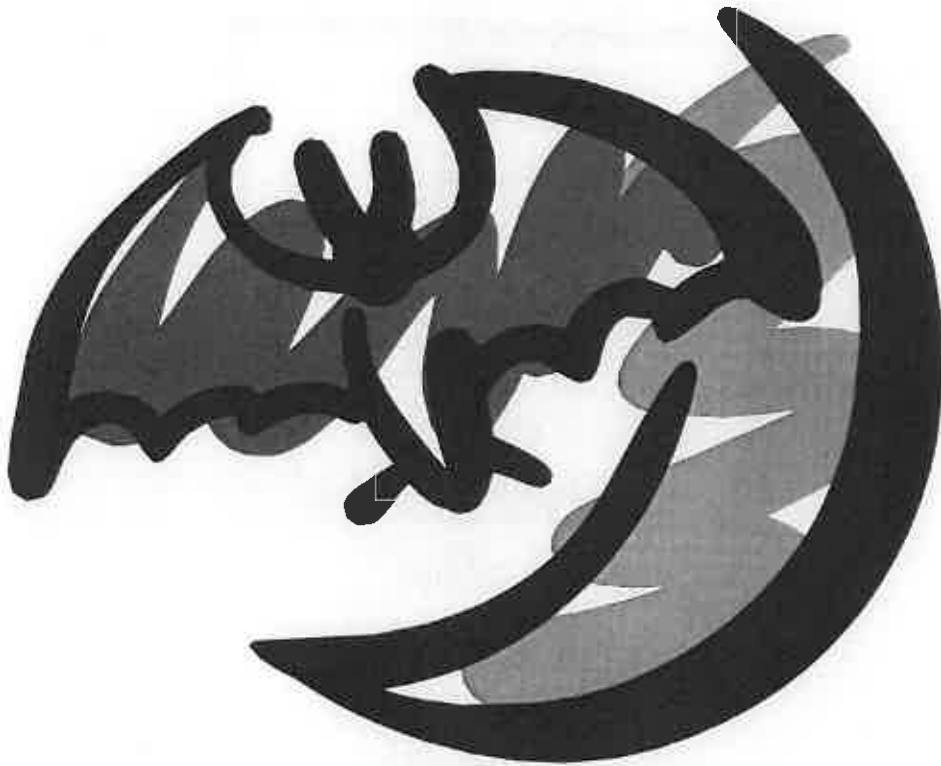


WILDLIFE SURVEY FOR

BATS AND OWLS

320140055 p Leagram Barns
Leagram
Chipping
Preston
Lancs



Document no

1497

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BAT SURVEY & REPORT

Commissioned By:

Mr J. Weld-Blundell

e-mail

johnweldblundell@homecall.co.uk

Address:

Leagram Hall
Leagram,
Chipping,
Lancs.

Tel No:

01995 61581

Instruction Method:

Written

Bat Survey Address:

Leagram Barns,
Leagram,
Chipping,
Lancs.

Visit Dates / Times:

17th Sept 2012 at 18.30 hours

25th July 2013 at 20.00 hours

20th August 2013 at 20.00 hours

16th September 2013 at 18.30 hours



BAT SURVEY & REPORT

Survey Brief

To inspect buildings, assess the value of the site for bats, and compile a report prior to a planning application being submitted or works being undertaken.

The report should identify if bats have used the buildings at any time or not as the case may be.

If bats have used the buildings, assess the importance of the site for bats and bat conservation.

Objectives of the report:

The purpose of the survey is to look for evidence confirming that bats use, or have used the buildings for resting, feeding, roosting or winter hibernacula.

When evidence of bats is found, the report will include recommendations and mitigation to prevent disturbance to bats.

Survey Guidelines

This survey follows guidelines recommended by:

Bat Conservation Trust, Conservation of Habitats and Species Regulations 2010.

Natural England (Survey objectives, methods and standards- Bat Mitigation Guidelines, 2004)

JNCC Bat Workers Manual

Daytime Survey Methods

The size of the site or the complexity of the buildings may make daytime searches for bats very difficult.

Photographs will be taken of the outsides and insides of all buildings and structures.

Ladders will be used to access all parts of buildings for detailed inspection.

An endoscope camera with an LCD monitor will be used to examine niches and cavities in structures with limited access.

BAT SURVEY & REPORT

Signs of Bat Use

Evidence of use by bats will include one of the following;

Presence of live or dead bats.

Bat droppings.

Moth and insect wings.

Faint scratch marks on roof timbers.

Grease staining marks on roof timbers.

Odour of bats.

Evening Survey Methods

Detection of the presence of bats is often undertaken at bat emergence time on evenings when bats are likely to be flying.

Bat emergence time may start half an hour before sunset, to one hour after.

On larger buildings the survey is normally conducted by a minimum of two persons to give better coverage and scope.

A bat detector is used to detect ultra-sound emitted by bats into sounds audible to the human ear especially where human access is limited or impossible in confined roof areas.

Species may be identified by the frequency on which they 'transmit' and by the sonargraph of their sounds.

Up to three evening and one dawn swarming survey may be necessary on evenings during summer months when bats are flying to confirm the presence or absence of bats.

Analysis of results

Negative results from the bat detector may only indicate that bats are not present at the time of the survey.

If the bat detector detects sonar but the source of the noise remains unidentified, further inspection of the site may be needed.

Bat habits

Bats frequently use the shelter of buildings and trees for feeding.

The presence of feeding bats does not indicate that the roost is close by.

Insects are found at most sites, and their presence attracts bats, which may travel up to five kilometres or more, to feast in insect rich habitat.

BAT SURVEY & REPORT

Adverse weather

Adverse weather conditions may affect the ability to collect data on night visits.

Cold nights, strong wind or heavy rain may prevent bats from flying, and numbers of insects may be likewise very limited.

Subsequent visits should provide sufficient data and prove positive or negative results.

Surveying Equipment

Petzl headlamp torches.

A variety of folding aluminium ladders.

10 x 43 Hawke binoculars.

Bat box 'duet' bat detector, a heterodyne type sonar receiver.

Bat Scanner, a heterodyne type instrument which actively scans ultrasound for bats.

Telescopic inspection mirrors, large and small.

Handheld Endoscope camera with LCD colour monitor

FLIR thermal imaging binoculars and camera

Limitations of the report

The aim of the survey is to prove use by bats, but does not guarantee their absence.

Surveys undertaken when bats are hibernating will have to be re-assessed during summer months when bats are most active.

Roof voids, attics and lofts will only be inspected when safe access is possible.

Building's whose structure is unsafe in any way, will only be inspected from a safe distance with the use of a pair of binoculars.

A bat detector will be used in all cases but daytime visits may only produce limited success.

When buildings are inspected during winter months, a bat detector will have very limited results.

Buildings with no signs of bats on the date of the survey may be used by individuals or small numbers of bats, in subsequent months or years.

Small bats, like pipistrelles, may leave evidence of occupation in small inaccessible crevices which may be extremely difficult to detect if the bats are not present when the survey is being conducted.

With changing climatic conditions, surveys and reports are only valid for one year.

EXTERNAL SURVEY REPORT

BARN 1

Photographs

Attached in zip file 1

Property type

Barn
Extension:
Other

YES	NO
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

The structure is two story and forms an "L" shaped building.

Construction

Stone
Brick
Timber
Bat access places

<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments:

Build quality is good with only a few places where mortar is missing from the outside walls, possibly giving access points for bats

Roof

Slate
Tile
Corrugated sheets
Bat access places

<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments:

Bat access points were identified at the end of ridge tiles where a small amount of mortar was missing. All other pointing is in good condition.

Bat Signs

Bats seen
Droppings
Bat detector results
Endoscope results

<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

An endoscope with a colour screen was used to examine all niches and cavities that had the potential to be used by bats.

Spider's cobwebs covered most of the holes and cavities.

No clues or evidence of bats were found to the outside of this property.

External Conclusions:

No evidence of bats using or having used the building could be found

INTERNAL SURVEY REPORT

Building use: The building is used for storage.

Construction

Stone
Brick
Other/plaster
Bat access places

YES	NO
✓	
✓	
	✓
✓	

Comments:

There is open access into the building through open doors and windows.

Roof space, attic or loft

Beams
Cracks in beams
Lined roof: Underfelt
Bat access places

✓	
	✓
✓	✓
✓	

Comments:

One half of the building has a second floor with access into the attic up the wooden stairs. This roof has underfelt and is in good condition. The roof of the other half can be observed from ground level and though in good condition has no underfelt

Bat signs

Bats seen
Droppings
Bat detector results
Endoscope results
Staining on beams
Moth + insect wings present
Suspect summer roost
Suspect winter hibernacula

	✓
	✓
	✓
	✓
	✓
	✓
	✓
	✓

Comments:

An endoscope with a colour screen was used to examine all niches and cavities that had the potential to be used by bats.

Spider's cobwebs covered most of the holes and cavities.

No evidence of occupation by bats could be found inside the attic or roof space.

Evening surveys at bat emergence time may provide further clues as to whether bats are occupying the building or not.

Internal Conclusions:

No signs of bat use could be found.

EXTERNAL SURVEY REPORT

BARN 2

Photographs

Attached in zip file 2

Property type

Barn
Extension:
Other

YES	NO
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

The main barn is two story structure with a single storey extension added to one side.

Construction

Stone
Brick
Timber
Bat access places

<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments:

Build quality is good with only a few places with missing mortar from the outside walls, possibly giving access points for bats.

Roof

Slate
Tile
Corrugated sheets
Bat access places

<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments:

Pointing around the roof is in good condition, with no obvious bat access points.

Bat Signs

Bats seen
Droppings
Bat detector results
Endoscope results

<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

An endoscope with a colour screen was used to examine all niches and cavities that had the potential to be used by bats.

Most cavities were covered with spider's cobwebs.

No clues or evidence of bats were found to the outside of this property.

External Conclusions:

No evidence of bats using or having used the building could be found

INTERNAL SURVEY REPORT

Building use: This building is also used for storage.

Construction

Stone
Brick
Other/plaster
Bat access places

	YES	NO
Stone	✓	
Brick	✓	
Other/plaster		✓
Bat access places	✓	

Comments:

Like the other barn, there is open access into the building through open doors and windows.

Roof space, attic or loft

Beams
Cracks in beams
Lined roof: Underfelt
Bat access places

Beams	✓	
Cracks in beams		✓
Lined roof: Underfelt	✓	
Bat access places	✓	

Comments:

The roof is lined with underfelt and is in good condition. Bat access places could be where the walls and roof meet or any cavities discovered during the survey.

Bat signs

Bats seen
Droppings
Bat detector results
Endoscope results
Staining on beams
Moth + insect wings present
Suspect summer roost
Suspect winter hibernacula

Bats seen		✓
Droppings		✓
Bat detector results		✓
Endoscope results		✓
Staining on beams		✓
Moth + insect wings present		✓
Suspect summer roost		✓
Suspect winter hibernacula		✓

Comments:

An endoscope with a colour screen was used to examine all niches and cavities that had the potential to be used by bats.

No evidence of occupation by bats could be found inside the attic or roof space.

Evening surveys at bat emergence time may provide further clues as to whether bats are occupying the building or not.

Internal Conclusions:

No signs of bat use could be found.

BAT EMERGENCE SURVEY & REPORT

Date: 17th September 2012

Start Time: 19.00 hours

End Time: 20.45 hours

Sunset at Preston 19.21 hours

Weather:

The evening was bright with high cloud and a light easterly breeze and a temperature of 9.5^oC.

Bat Suitability Evening:

The evening was excellent for foraging bats, with flying insects and midges annoying the surveyor.

Survey Details:

The survey was conducted by Denis Lambert using two 'bat detectors' set at 45 Khz and 55 Khz

Continuous observation of the buildings was achieved by looking towards the evening sky and moving around the outside of the buildings

Survey Findings:

At 19.28 hours, a pipistrelle bat emitting sonar on 45 khz flew over the site from the west and proceeded to fly and forage around the buildings for 30 seconds before moving back to the west.

A second pipistrelle appeared at 19.32 hours following the same flight path and proceeded to forage around the buildings before moving away.

As the evening progressed, a steady stream of pipistrelle bats emerged from a nearby building but none from the buildings under surveillance.

Fine tuning of the bat detectors confirmed all the bats to be Common Pipistrelle, echo locating on 45 khz.

A total of 18 bats were recorded during the evening and the survey concluded at 22.45 hours

No bats were seen or detected emerging from any of the buildings under surveillance.

Evaluation of the Survey Results:

There was no evidence of bats emerging from any of the buildings under surveillance

Pipistrelle bats were located, observed and identified emerging from a nearby building, some of which proceeded to forage around the buildings and yard.

The survey confirmed a pipistrelle roost in a neighbouring building

BAT EMERGENCE SURVEY & REPORT

Date: 25th July 2013

Start Time: 20.00 hours

End Time: 22.25 hours

Sunset at Preston 21.20 hours

Weather:

The evening was 50% overcast with a light breeze and a temperature of 18°C.

Bat Suitability Evening:

The evening was excellent for foraging bats, with flying insects and midges annoying the surveyor.

Survey Details:

The survey was conducted by Denis Lambert and P James using two 'bat detectors'.

The bat detectors were tuned to 45 Khz and occasionally re-tuned to 55 Khz to allow for different species of bat sonar.

Continuous observation was achieved by each person being positioned at either side of the buildings and looking towards the evening sky.

Survey Findings:

At 21.42 hours, a pipistrelle bat emitting sonar on 45 Khz flew onto the site from the adjacent building where they were recorded emerging in September 2012.

Pipistrelle bats continued to emerge from the same access point and proceeded to forage around the barns and yard before moving away.

Bat emergence and counting ceased at 22.03 hours when bats were observed returning to the roost site.

During the evening, a total of 22 bats were counted emerging from the adjacent building.

No bats were detected, seen, or recorded emerging from any of the buildings under observation.

Evaluation of the Survey Results:

There was no evidence of bats emerging from any of the buildings.

Pipistrelle bats were located, observed and identified emerging from a nearby building.

The roost identified the previous year is still in use with a slight increase in bat numbers.

BAT EMERGENCE SURVEY & REPORT

Date: 20th August 2013

Start Time: 20.00 hours

End Time: 21.30 hours

Sunset at Preston 20.29 hours

Weather:

The evening was clear with no clouds or wind and a temperature of 14^oC.

Bat Suitability Evening:

The evening was good for foraging bats, with insects and midges observed.

Survey Details:

The survey was conducted by Denis Lambert and P James using two 'bat detectors'.

The bat detectors were tuned to 45 Khz and occasionally re-tuned to 55 Khz to allow for different species of bat sonar.

Continuous observation was achieved by each person being positioned at either side of the buildings and looking towards the evening sky.

Survey Findings:

At 20.08 hours, a pipistrelle bat emitting sonar on 45 Khz was identified roosting behind the westerly facing bargeboard on Barn 1.

A further 5 pipistrelle bats were located and observed at different positions along the length of the same bargeboard.

These bats started flying at 20.18 hours and were joined by others emerging from the previously identified roost site in the adjacent building.

During the evening, a total of 27 bats were counted.

The survey concluded at 21.30 hours when it became too dark to collect further information.

Evaluation of the Survey Results:

Six pipistrelle bats were discovered roosting behind the westerly bargeboard of Barn 1.

Pipistrelle bats were also observed emerging from the known roost with a slight increase in total numbers at the site

The bats found roosting behind the bargeboard were likely to be free flying juveniles learning to fend for themselves during a spell of warm weather.

They were found as separate individuals, not together as in a normal roost group.

BAT EMERGENCY SURVEY & REPORT

Date: 16th September 2013

Start Time: 18.30 hours

End Time: 20.00 hours

Sunset at Preston 19.24 hours

Weather:

The evening was cloudy with no wind and a temperature of 9°C.

Bat Suitability Evening:

The evening was average for foraging bats, with insects and midges observed.

Survey Details:

The survey was conducted by Denis Lambert and P James using two 'bat detectors'.

The bat detectors were tuned to 45 Khz and occasionally re-tuned to 55 Khz to allow for different species of bat sonar.

Continuous observation was achieved by each person being positioned at either side of the buildings and looking towards the evening sky.

Survey Findings:

At 19.14 hours, a pipistrelle bat emitting sonar on 45 Khz was detected and observed emerging from the roost in the neighbouring building.

A further 25 pipistrelle bats were observed emerging from the same roost site.

During the evening, a total of 26 bats were counted.

The survey concluded at 20.00 hours when it became too dark to collect further information.

Evaluation of the Survey Results:

Twenty six pipistrelle bats were counted emerging from the roost in the nearby building.

There was no evidence of bats emerging from any of the buildings under surveillance.

All the bargeboards were checked for bats but none were found.

Bat numbers counted from the roost indicated that those individuals previously found behind the bargeboard had returned to the roost.

This also identifies that the bats presence behind the boards was a temporary situation, possibly due to the warmer weather and the need for the young to become independent.

BAT SURVEY & REPORT

Survey Summary, Barns 1 and 2

Proposed Development

The proposal is to develop the buildings.

Site Description

The barns were originally part of the farm and are surrounded by agricultural land with mature woodland and parkland nearby.

Residential properties occur nearby with many in the local village

Survey Results

The thermal imaging camera and endoscope survey found no evidence of bats using cracks or cavities accessible from the outside or inside of the buildings.

Four bat emergence surveys were conducted over a period of one year, and found juvenile bats roosting behind a westerly bargeboard on Barn 1 on one occasion only

No other use of the barns by bats could be identified.

A pipistrelle bat roost was identified in a nearby property which was not part of this survey.

Wildlife Importance of the Site

Individual bats have been found between the wall and the west facing bargeboard of Barn 1.

Mitigation and Enhancement

Mitigation will be necessary to retain and maintain the gap used by bats on the wall of Barn 1.

Additionally, two bat houses should be erected in suitable positions on the outside of the building to create enhanced bat roosting habitat at the site.

Author: Denis Lambert

Signed: *Denis Lambert*

Dated: 26th September 2013

SURVEYOR'S DETAILS

Denis Lambert is a registered and licensed Bat Warden No. 20130275 for Natural England since 1981, and a voluntary Bat Warden for the Bat Conservation Trust.

Dedicated to conservation and environmental issues, he has been a keen bird watcher and mammal specialist all his life and was involved with the formation of the Lancashire Badger Group and acted as its chairman for ten years.

Working as a qualified arborist (tree surgeon) he has been actively involved in protecting many species of flora and fauna over the years.

R Bowden and P James assist on projects when evening surveillance assistance is needed.

BAT LEGISLATION AND RECOMMENDATIONS

Bats and the Law

Deliberate disturbance of bats during the breeding season, the exclusion of bats and the destruction of a bat roost is now a criminal offence under the Conservation (Natural Habitats &c.) (Amendment) Regulations 2007.

The onus lies on the applicant to satisfy him/her that no offence will be committed if and when the development goes ahead.

Natural England now advises, *"Operations to known breeding sites should be timed to avoid the months of June, July and August if possible, the best times for building or re-roofing operations are spring and autumn"*.

The Need for a Survey

Bats are protected by European Legislation and a survey of the building due for change or development may identify the presence of bats and prevent a criminal offence occurring.

Survey Types

The external and internal fabric of any building due for change or development must be examined for the presence of bats.

Evening emergence and dawn swarming surveys during summer months when bats are active may confirm the presence of bats and access points used.

Additional survey work may be necessary, especially in the evenings or early morning to determine the exact extent of use by bats.

How to proceed if bats are found

When bats are present and the works have to be done at a time when bats are resident, a Licence will be required.

If the proposed work can be timed to not affect or disturb the bats in any way, and bats are not present, then the work may possibly be done without a licence.

Each site has different requirements and Natural England, the Licensing Authority have the final say.

As a licensed bat person, I can apply on your behalf for a licence to enable the works to proceed. Natural England requires a minimum six weeks to process any licence application.

The granting of a license is not guaranteed, but when the application is a matter of health and public safety and supporting mitigation enhances the habitat for continued use by bats, a license may be approved.

Mitigation will include detailed information for the retention, enhancement and preservation of the population of European Protected Species in the locality.

How to proceed if bats are not present

The report may conclude that bats are not present at the time of the survey, and work may proceed without a licence, mitigation or habitat enhancement.

BAT LEGISLATION AND RECOMMENDATIONS

General recommendations:

Being aware of how bats move from site to site, and the possibility that bats may occur in any building at any time of year, the following points should help developers.

Bats may use buildings at any time of the year for feeding or refuge.

Work to the roof should be undertaken when bats are free flying between April to early May and September to October.

Care must be taken when removing slates, tiles, ridge tiles, roof beams and associated stonework.

During completion of roof works, bat access points may be built into the new structure.

Pointing of walls should not be carried out between mid November to early March to avoid entombing bats, which may be hibernating within.

When hibernating, bats become torpid and appear lifeless but do not assume they are dead.

During very cold weather, it may take up to two hours before a bat has "warmed up" sufficiently for it to be able to move or fly.

Handling and rescuing of bats must be done by a bat consultant, with thick leather gloves worn by the rescuer to avoid being bitten.

If any timber treatment is carried out, only chemicals safe for bats must be used.

New timbers used in new build or the renovation of older properties must be treated with preservatives using the CCA method (Copper, Chrome Arsenic), which is safe for bats.

Tool box talks can be given to operatives engaged in roof works, to make them aware of their legal obligations to European Protected Species, and their responsibilities to wildlife.

I am available to offer further advice if any of the above needs an additional explanation.

In the unlikely event that bats are found during building operations, work must cease immediately in that area and then please contact your bat consultant **Denis Lambert** on **07813 140682** for advice.

BARN OWL SURVEY & REPORT

Survey Brief:

To inspect buildings, assess the value of the site for barn owls, and compile a report prior to a Planning Application being submitted.

The report will identify if barn owls have ever used the buildings at any time, or not as the case may be.

Barn owls are protected under the Wildlife and Countryside Act 1981, Habitats and Species Regulations 1994 and Countryside & Rights of Way Act, 2000.

Objectives of the report:

To thoroughly inspect all structures, and record findings which indicate that barn owls are or have been using them.

When evidence of use by barn owls is discovered, make appropriate recommendations to enhance and protect the species.

Limitations of the report:

External walls and internal rooms are inspected from ground level only.

Roof voids, attics and lofts will only be inspected when safe access is possible.

Building's whose structure is unsafe in any way, will only be inspected from a safe distance with the use of a pair of binoculars.

Survey Details

The purpose of the survey is to look for evidence that barn owls use, or have used the buildings for resting, feeding or nesting, or not, as the case may be.

Evidence of use by owls will include the following;

- White streaks down roof timbers and walls
- Barn owl pellets, new and old
- Barn owl feathers
- Signs of nest
- Access for barn owls

SURVEYING EQUIPMENT

10 x 43 Hawke binoculars,

Petzl headlamp torches.

A variety of folding aluminium ladders.

Survey Methods

The buildings were inspected, looking for signs of use by barn owls, as mentioned above, using ladders for access and torch and binoculars when required

BARN OWL SURVEY & REPORT

Site description:

The barns were originally part of the farm and are surrounded by agricultural land with mature woodland and parkland nearby and could create a rich feeding habitat for owls.

Open access is available to all the outbuildings.

Survey results

YES	NO
-----	----

External:	White streaks down roof timbers + walls		✓
	Owl pellets		✓
Internal:	White streaks down walls		✓
	Owl pellets new		✓
	Owl pellets old		✓
	Owl feathers		✓
	Signs of nest		✓
	Access for owls		✓

	✓
	✓
	✓
	✓
	✓
	✓
	✓
	✓

Comments:

White bird droppings, similar to those deposited by barn owls were found beneath one of the beams in Barn 1, but no pellets.

With a lack of pellets or other identifying criteria, the droppings could be from other bird species.

Importance of the site

The survey could find no other evidence of barn owls using the building.

Conclusion:

Barn owls are not using the buildings at present

Recommendations:

There are no recommendations necessary, but providing nest boxes erected in suitable locations for barn owls to use in future years is always good practice.

Author: Denis Lambert

Signed: Denis Lambert

Dated: 26th September 2013