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BAT SURVEY AT

**Todber Caravan Park
Clitheroe**

BAT/12/1465



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BAT SURVEY

Instructions

Investigate for the presence or absence of bat species as part of a planning application for the demolition on an existing storage and workshop warehouse building and its subsequent replacement with a swimming pool development to service the caravan park.

Professional responsibility

This report has been commissioned and the actions of the surveyor have been made in accordance with the Code of Professional Conduct for the Institute of Ecology and Environmental Management. (www.ieem.org.uk) and the Royal Institution of Chartered Surveyors (www.rics.org.uk)

Accuracy of report

This report has been compiled based on the methodology as detailed and the professional experience of the surveyor. Whilst the report reflects the situation found as accurately as possible, bats are wild and can move freely from site to site. Their presence or absence detailed in this report does not entirely preclude the possibility of a different past, current or future use of the site surveyed.

We would ask all clients acting upon the contents of this report to show due diligence when undertaking work on their site and or in their interaction with bat species. If bats are found during a work programme and continuing the work programme could result in their disturbance, injury or death either directly or indirectly an offence may be committed.

Bats may only be disturbed, injured or killed under license. This report does not convey the authority to undertake work which may disturb, injure or kill bats of any species.

If in doubt, stop work and seek further professional advice.

Quality and Environmental Assurance

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1 Introduction

1.1 Site Description

The site lies 2km to the South of Gisburn, Lancashire. The building subject to the application is a large warehouse building, currently used as a workshop and storage area for materials and machinery, which is open to the roof. It is of breeze block construction, with stone fronting on the Northern elevation, under a fibre-cement roof.

1.2 Proposed Works

An application is to be submitted for the demolition of the existing warehouse building and subsequent construction of a swimming pool development which is to service the existing caravan site.

1.3 Aims of Study

To ensure that the proposed development does not affect any bat species which is listed under the Conservation (Natural Habitats, &c) Regulations 2010 which implements the EC Directive 92/43/EEC in the United Kingdom the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000.

The survey will:

- ⇒ Identify the past and/or current use of the site by bat species
- ⇒ Assess the likely impact of the proposed development on these species
- ⇒ Provide a basis upon which to propose mitigation (if required) for bat species affected by the development

2 Methodology

The methods used comply with those described in BCT (2012). This is a progressive assessment starting with a broad habitat assessment then increasingly more thorough survey methods, until a level is reached at which additional survey effort is unlikely to provide additional useful information about the site.

2.1 Methodology

- ⇒ Records search via NBN dataset.
- ⇒ Field assessment of adjacent bat feeding and roosting sites made following a review of aerial photography. This allows us to cross check our interpretation of aerial photography with actual habitat on the ground. Satellite and aerial photography does not always reveal landform and or changes in land cropping and buildings.
- ⇒ Inspection of the walls and eaves using a torch, binoculars and ladders to locate potential bat roosts.
- ⇒ Inspection of the roof using a torch and binoculars to locate potential bat roosts. Evidence of bats utilising roof structures is often evident in the form of droppings, staining, grease or scratch marks. If the angle of inspection is correct, a torch and binoculars can be used to illuminate and inspect gaps under roof coverings. Uneven

lichen or moss growth over a roof due to differential nutrient inputs from bat droppings and urine are also sometimes indicators of the presence of bats.

⇒ Search of walls, sills, doors and items stored on and in the building for the presence of bat droppings deposited as bats fly inside the internal spaces or as they exit and enter their roosts to forage.

⇒ Search for detritus associated with bat feeding perches and roosts: These roosts are usually associated with Brown Long-eared (*Plecotus auritus*) bats in roof voids and under eaves.

2.2 Timing

Date of Visit	Site/ Local area Inspection	Emergence Survey
21 st November 2012	15:30 - 16:30	N/A

2.3 Personnel

The survey was carried out by

Mr Andrew Gardner BSc(Hons), MSc, MIEEM, CEnv
Natural England Bat License - All species, All counties

Miss Kate Statham BSc(Hons), AIEEM
Natural England Registered Trainee Roost Visitor

3 Results

3.1 Desk Study

A records search via the National Biodiversity Network (NBN) database returned a single record for a Daubenton's (*Myotis daubentoni*) bat approximately 2.2km North of the site (SD8349) from 1991.

Having visited the area we are of the opinion that the records on the datasets are likely to be under representative of the species of bats in the local area.

From the pre-existing records, a review of aerial photography, a field assessment of the area adjacent to the site and the experience of the surveyor, bat species which may occur adjacent to the site are:

- Common Pipistrelle (*Pipistrellus pipistrellus*)
- Soprano Pipistrelle (*Pipistrellus pygmaeus*)
- Whiskered (*Myotis mystacinus*)

- Brandt's (*Myotis brandtii*)
- Noctule (*Nyctalus noctula*)
- Daubenton's (*Myotis daubentonii*)
- Alcathoe (*Myotis alcathoe*)
- Brown Long-Eared (*Plecotus auritus*)
- Natterer's (*Myotis nattereri*)

This assessment has been made on the following basis:

Landscapes can be divided into four categories for use by bats; open, closed, edge and water. Each type of landscape category is suitable for use by a different combination of bat species. We would classify the landscape immediately adjacent to the site as "open", within 1km of the site the landscape could be described as "edge", "water" and "open".

There were no distinct commuting routes immediately adjacent to the site, though hedgerows running along the A682 to the West of the site would provide a suitable feature along which bats could commute.

A narrow beck runs along the Northern boundary of the caravan site, approximately 190m to the North of the affected building, with several other narrow becks within the wider landscape. These features may be favourable for bats which feed in "water" landscapes such as Soprano Pipistrelle and Daubenton's. These species are not always confined to landscapes including water bodies, although they have a strong preference for them. In addition, Alcathoe bats have a preference for foraging in tree canopies over water bodies, though this environ does not appear to be present here.

Both Natterer's and Brown Long-eared bats prefer to roost or fly inside enclosed spaces before emerging. There are no darkened roof voids in the surveyed building and no sufficiently closed habitat in the local landscape. The nearest suitable habitat is a small patch of woodland scrub 430m to the South West of the site. As such, it is thought that these species are only likely to occur in the local area in very low numbers, perhaps only a few individuals.

Noctule are rarely found roosting in buildings but have been known to do so. These species of bat disperse widely from their roosts, which tend to be in trees, to feed. We would judge it unlikely they would roost in a building such as that surveyed but are likely to be found in the wider area.

Whiskered, Brandt's and Common Pipistrelle are likely to make use of the treelines and hedgerows in the vicinity of the site. They may also use the open pasture in the surrounding landscape, although foraging is likely to be concentrated on previously noted features.

3.2 *Field Survey*

3.2.1 *Habitat Description*

The site lies to the South of Gisburn, Lancashire. Habitat immediately adjacent to the site is predominantly open pasture with boundary hedgerows and stone walls.

The affected building is situated on the South Western corner of Todber Caravan Park. The main caravan area is located to the North of the building, with a narrow beck running along the Northern boundary of the caravan park. The River Ribble also flows approximately 3km to the North West of the site. The habitat corridors surrounding these becks are likely to have a high value for bats in the local area, with anecdotal accounts from site staff of bats being seen along the Northern edge of the site.

Areas of woodland are limited within the local landscape. A small patch of woodland/scrub is located to the South West of the site (430m), with a slightly larger area of mature woodland situated to the North East (1.4km) of the site.

Though the landscape is predominantly open, there is a good deal of connectivity via the hedgerows which run both along field boundaries and roadsides. In addition, there are numerous lines of mature trees acting as boundary features, such as that to the South East (750m) of the site, which are likely to have value to bats in the local area.

Many of the boundary features in the local area would facilitate commuting routes for bats around the local area. The surrounding habitat is judged to be of **medium** quality for bats, offering high foraging potential.

An annotated satellite image of the surrounding habitat is shown on Figure 1.

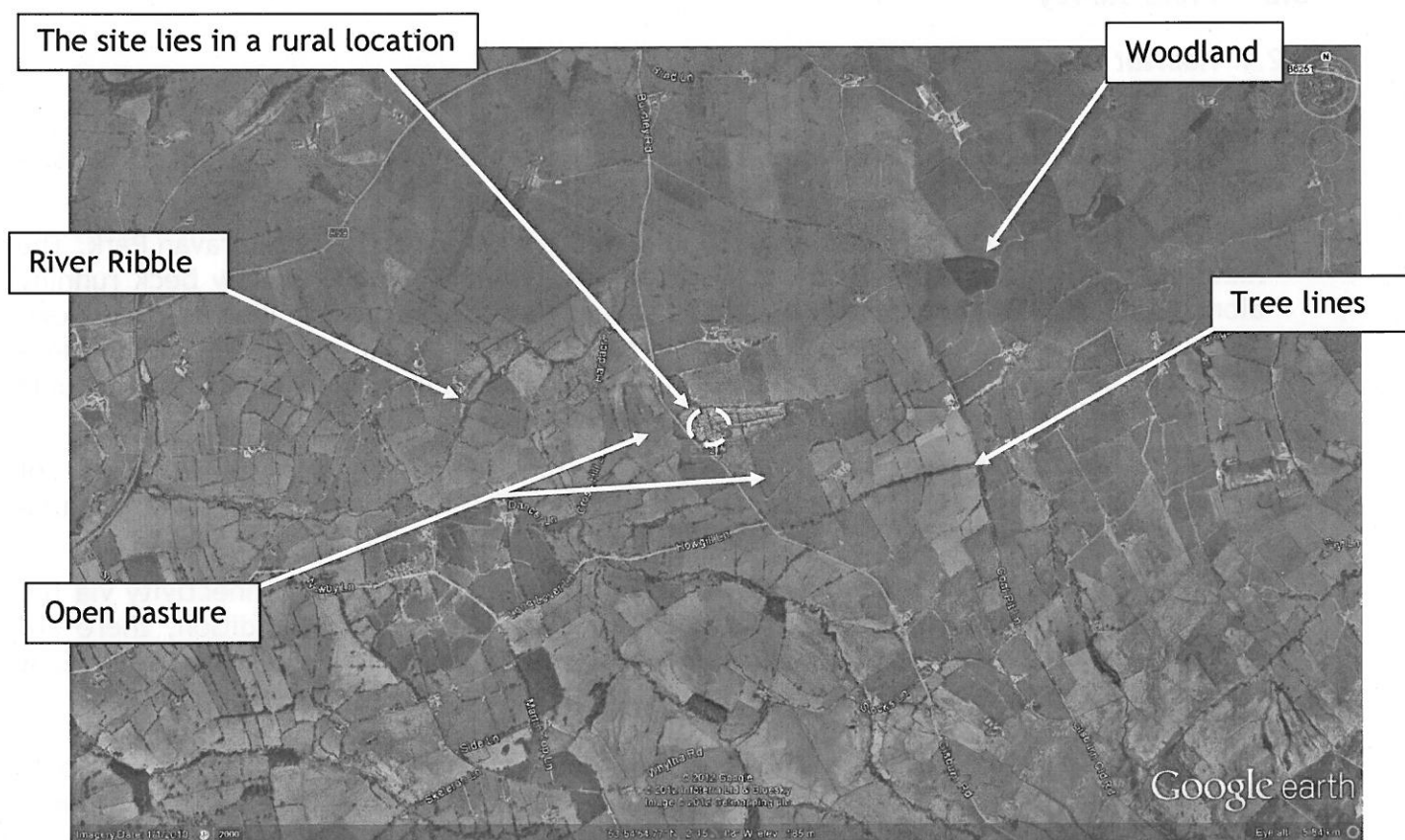


Figure 1. Satellite Image of surrounding area



Figure 2. Satellite Image of site

3.2.2 Bat Roost Survey

The exterior walls of the building were inspected for gaps, cracks, areas of rotten wood and or signs of bats such as grease marks, bat droppings and feeding detritus. Where appropriate, ladders, binoculars and an endoscope were used to inspect areas above head height. The building is two story height but open to the apex of the roof internally. The building slopes to single storey height on its Eastern elevation.

The external walls were well sealed and in excellent condition. The Southern elevation is of breeze block construction with fibre cement cladding. The brick work is well pointed with no gaps or cracks suitable for use by crevice dwelling bats. The Northern elevation is natural stone fronted and is also well pointed, with no gaps or cracks between the stonework. No signs of bats such as droppings, urine staining or lichen build up from increased nutrients could be seen on the walls.

Though there was potential for bats to access the the wall tops on the Southern elevation due to the corrugated shape of the cladding, these gaps would be very draughty and unfavourable for use by bats. On the Northern elevation a single gap was located under the wooden soffit on the single storey section of the building. The gap would be suitable for crevice dwelling species such as Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Whiskered/Brandt's (*Myotis brandtii/mystacinus*) bats. The gap was partially cobwebbed with no signs of recent use such as droppings or grease marks apparent.

The roof is of corrugated fibre cement panel construction and is in good order. It has numerous large skylights making the internal space very light and unfavourable for bats.

Internally, the walls are bare breeze block construction to 1.5m, followed by fibre cement cladding, and are generally well pointed. The South Eastern internal corner of the warehouse was found to be damp with some mortar missing between the blocks. This was at a low elevation and was judged to have a low suitability for bats. Two areas of natural stone wall were present internally, on the South Western internal corner and one on the Western internal elevation. The stonework was in good condition and well pointed with no gaps or cracks suitable for bats.

A thorough search was undertaken for signs of use by bats, including droppings. No bat droppings were identified on the floor or on surfaces, materials or machinery.

The building is currently utilised as a workshop and as a storage location for machinery. As such it is subject to high levels of noise and disturbance during working hours, as well as fumes from tractors and other processes. This coupled with the high levels of both natural and artificial lighting and lack of sufficient roosting locations would make this building highly unfavourable for use by bats.

Overall it was considered there is a low risk to bats at the site.

3.2.5 Emergence Survey

Due to the time of year, an emergence survey would have resulted in data that would not accurately represent the levels of bat activity in the local area.

The site is also judged to be low risk and as such in accordance with BCT (2012) no emergence survey was considered necessary.

4 Assessment

4.1 Constraints

The survey was carried out at a time of year when bat activity is low as most have moved into winter hibernation roosts. We judge that the site inspection is sufficient to address the minimum risk to bats at the site. The level of survey effort accords with the recommendations of BCT (2012) for low risk sites.

4.2 Interpretation

4.2.1 Presence/ absence

There was no past or current evidence of bats found at the site during the survey.

We consider that the building is unlikely to be used by bats for roosting.

4.2.2 Population size class assessment

From a review of adjacent habitat the maximum number of bats that are likely to use the area around the site is of the magnitude 10-100 (Medium).

4.2.3 Site status assessment

Whilst the site itself is unlikely to be used as a roost by bats, there is likely to be use of the adjacent landscape. Bats are likely to rely on a number of roost sites in buildings and trees in the local area. It is therefore likely that the site has a low significance for bats.

4.3 Potential Impacts

4.3.1 Bat Roosts

4.3.1.1 Pre and mid-activity impacts

A worst case scenario will be considered in addressing potential impacts at the site without mitigation.

No signs of past maternity or gathering roosts were found at the site during the survey. The potential for a maternity or gathering roost in the building is judged to be very low due to the absence of highly suitable roost sites. Evidence of past use of the site by large numbers of bats such as would occur in a maternity or gathering roost, such as staining on the roof or walls, was absent. We judge there is no risk to a maternity colony or gathering roost at this site from the proposed work.

We judge there is a low risk of disturbing bats in or loss of transitional, bachelor or non breeding female roost sites. We judge that on balance it is unlikely this site will be used by bats. There are likely to be numerous other more suitable sites in other buildings and trees in the wider area.

In our experience lek sites are commonly found in proximity to the main feeding and commuting routes. The main potential commuting route near to the site is the hedgerow adjacent to the A682.

There were no potential lek sites identified in the building facing potential commuting and foraging areas which are also close enough to them to be used by male bats for leks. It is therefore unlikely there will be a disturbance to bats in or loss of lek sites by the proposed work. A disturbance to bats at lek sites is rarely significant due to the transient nature of use of such roosts by individual bats.

There are no areas of rotten wood in the building which offer crevices which could be suitable for hibernating Pipistrelle species bats. There are no areas of the building which are sufficiently damp and cool which would be ideal for hibernating Myotis species bats. There is very little evidence and limited potential for hibernation at the site; it is therefore unlikely there will be loss of hibernation sites.

There is unlikely to be any loss of a swarming site. Swarming sites are generally found at or near hibernation sites. We judge that the site is unlikely to be used by Myotis species bats and Brown Long-eared (*Plecotus auritus*) which have been known to swarm as there are no hibernation sites for these species in the building.

Without mitigation, there is considered to be only a very low potential for the alteration or loss of occasional, unconfirmed roost sites for bats at the site and this is unlikely to have a significant impact on their local distribution. There is little potential for hibernation at the site.

4.3.1.2 Long term impacts

There is on balance a low risk of the disturbance of roost sites for bats.

It is the opinion of the surveyor that the loss or creation of any other occasional roosts for crevice dwelling bats will not have a significant long term impact on the local population of the species.

4.3.1.3 Post activity interference impacts

There is unlikely to be disturbance to feeding bats during the demolition and construction phases of the project. There is already significant noise and disturbance at the site from the workshop and machinery as well as the continued movement of vehicles on and around the site. Bats utilising the local area to forage are likely to be accustomed to such disturbance.

4.3.1.4 Other impacts

It is our opinion that there will be no significant other negative impacts relating to the proposed work which may affect bat species.

4.3.2 Bat Foraging and Commuting Habitat

There is unlikely to be a disruption to any commuting routes at the site.

There is unlikely to be a disturbance to feeding bats during the building and refurbishment

phase of the project. The site is adjacent to a road subject to light spill from streetlights, surrounding buildings and headlights.

4.4 Legislation and Policy Guidance

4.4.1 Legislative context - Bats

All bat species are protected under Section 39 of the 2010 Conservation (Natural Habitats, &c.) Regulations the 1981 Wildlife and Countryside Act (as amended) and the 2000 Countryside and Rights of Way Act.

Annex IV of the *Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora* (EC Habitats Directive) lists animal and plant species of Community interest in need of strict protection; this includes all bat species.

In the UK, the EC Habitats Directive has been transposed into national laws by means of the Conservation (Natural Habitats, &c.) Regulations 2010 (as amended). These are commonly and collectively known as the 'Habitats Regulations' and they give bats, their breeding sites and resting places a high level of strict protection.

In summary, it is a criminal offence to:

- ⇒ capture or kill a bat;
- ⇒ disturb a bat whilst in a place of shelter or rest; or
- ⇒ damage or destroy a bat's breeding site or resting place.

The breeding sites and resting places of bats are usually known as 'roosts' and resting places also include, for example, feeding perches where a bat consumes its prey. Bat roosts are protected even when bats are not present.

Prosecution could result in imprisonment, fines of £5,000 per animal affected and confiscation of vehicles and equipment used.

It is essential that all contractors are instructed to work with particular care in order to avoid disturbing or harming bats. All those working at the site must be aware of the procedures to be followed if bats are found during works. Project Managers must commission surveys and expert advice as required to minimise the risk of reckless harm to bats.

Natural England advises that, if possible, any works at bat roosts should be undertaken so as not to affect the bats and/or their roosts.

With careful working, it is judged that no significant disturbance to bats will occur at the site and no offence will be committed.

5 Recommendations and Mitigation

5.1 Further Survey

We consider that the risk to bats in the building will remain low and no additional survey work is required.

5.2 Mitigation Measures

5.2.1 Mitigation for Roost Sites

Natural England requires that mitigation addresses the impacts picked up by the site assessment, as follows:

- Quantitative characteristics: There should be no net loss of roost sites, and in fact where significant impacts are predicted there will be an expectation that compensation will provide an enhanced resource compared with that to be lost. The reasoning behind this concept is that the acceptability of newly created roosts by bats is not predictable
- Qualitative characteristics: the plans should aim to replace like with like. As an extreme example, it would be unacceptable to replace maternity roosts with hibernation sites.
- Functional characteristics: compensation should aim to ensure that the affected bat population can function as before. This may require attention to the environment around the roost.

Natural England also recommends that precautions are taken to avoid the deliberate killing or injury of bats during development work at the site.

The site survey found no evidence of use of the building by roosting bats.

As a precautionary approach the following guidelines will be adhered to.

1. Work should ideally be undertaken in the period October - February inclusive. Work outside this time frame is possible but additional care should be taken as below.
2. All contractors on the site will be made aware of the possible presence of bats prior to the commencement of work.
3. Contractors will be provided with the contact details of an appropriately qualified individual who can provide advice in relation to bats at any time during work. In the event that bats are found during work, unless the action has already been cleared by a suitably qualified individual, **all work will cease** and an appropriately qualified individual will be contacted for further advice.
4. Contractors will be observant during demolition and construction work for bats which may use the buildings if new areas of the roof are exposed and left open over night. Bats are opportunistic and may make use of gaps opened up during work overnight.
5. If it is necessary to remove a bat to avoid it being harmed, gloves should be worn. It should be carefully caught in a cardboard box and kept in the dark in a quiet place until it can be released at dusk near to where it was found, or moved to an undisturbed part of the building, with outside access, and placed in a location safe from predators.
6. **If bats or bat roosts are found during work, all work should cease** as per point 2. The site will need to be re-assessed in regard to its use by bats. A Natural England

license may be required if continuing work is, on balance, likely to result in the disturbance, killing or injury of bats or the alteration, destruction or obstruction of roost site.

7. No pointing of any wall crevices shall be undertaken to which the full extent of the crevice cannot be seen. This minimises the risk of entombing bats in the pointing between the stonework.
8. **Remove roofing coverings by hand only.**

Following English Nature (Natural England) guidance Mitchell-Jones (2004), if these guidelines are followed we would consider that on balance, a disturbance to bat species which could be contrary to the 2010 Habitat Regulations and Wildlife and Countryside Act 1981 (as amended) is unlikely. **If bats are found prior to or during work a license application may be required.**

5.2.2 Mitigation for Foraging and Commuting Habitat

No specific mitigation for foraging and commuting habitat is necessary. The habitat surrounding the site does not change.

5.3 Requirement for Habitats Regulations (EPS) Licence

At this stage, we judge that a Natural England license will not be required to cover work on the building. No bats were confirmed as roosting at the site, the loss of potential roost sites will be avoided and no significant disturbance to bats will occur, so long as the recommendations at paragraphs 5.1 and 5.2 of this report are followed.

If bats are disturbed or bats are found as a result of work, **all work must cease** and the site will need to be re-assessed by a suitably qualified person with regard to its use by bats. A **Natural England license** may be required if continuing work is, on balance, likely to result in the disturbance, killing or injury of bats or the alteration, destruction or obstruction of a roost site.

6 Summary

An application is to be submitted for the demolition of an existing warehouse building and the subsequent construction of a swimming pool development to service the caravan park.

A bat survey was requested following guidance under Regulation 39 of the Conservation (Natural Habitats, &c.) Regulations 2010, the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000.

The survey was led by a licensed surveyor following a methodology which would be likely to identify past or current use of the site by bat species.

The site survey found no evidence of bats roosting in the building.

It is judged that the work can take place without affecting bats, **so long as the recommendations in paragraphs 5.1 and 5.2 of this report are followed.**

On the basis of survey information, specialist knowledge of bat species and the mitigation that has been proposed, it is considered that on balance the proposed activity is reasonably unlikely to result in an offence under regulation 39 of the Conservation (Natural Habitats, &c.) Regulations 2010. We do not consider there to be a need for a Natural England licence at this time.

I certify that this report reflects my objective opinion of the facts found in relation to the instruction received and information available based upon the methodology, assumptions and constraints detailed within this report.

Signed



Andrew Gardner BSc (Hons), MSc, MIEEM, MRICS, CEnv, Dip NDEA

Director

Friday, 30 November 2012

7 References

Information from the following sources has been used in preparing the survey report.

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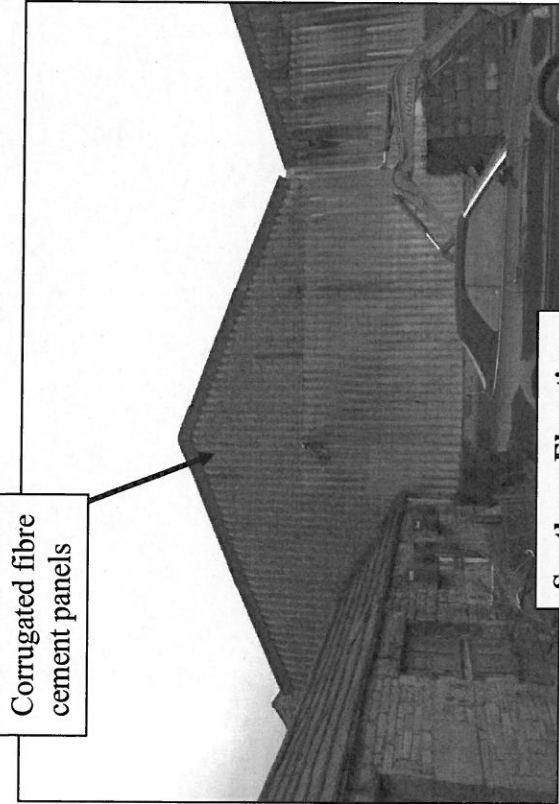
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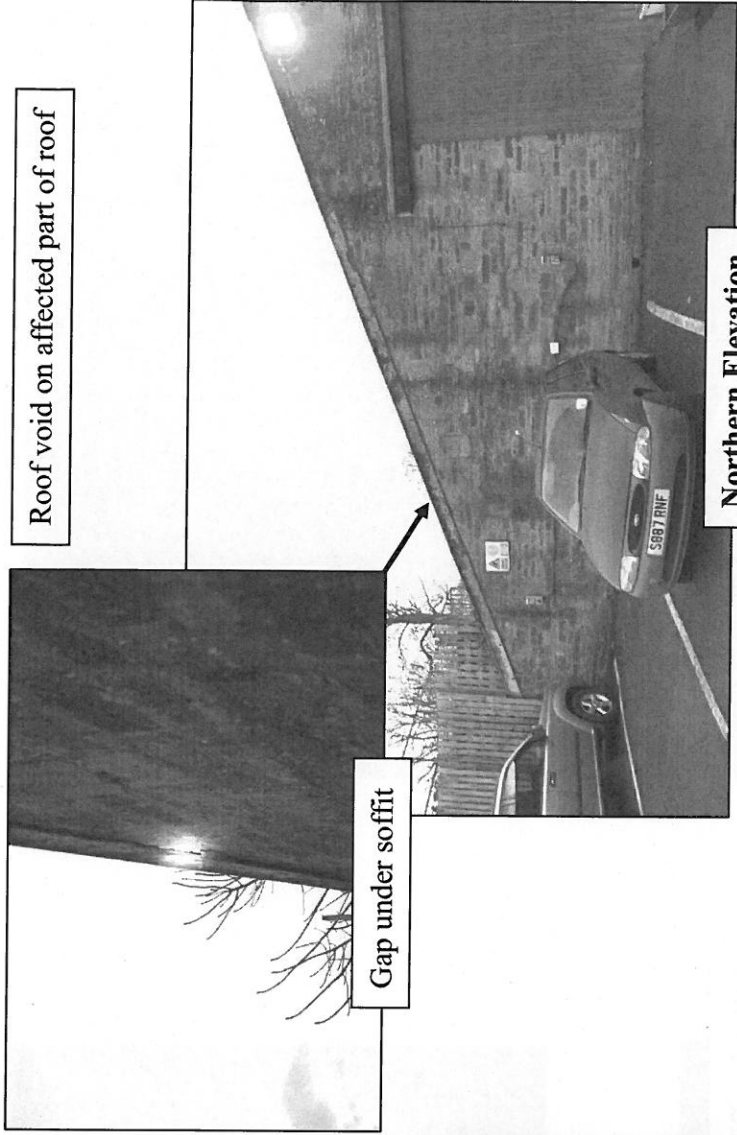
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Appendix 1 Photographs



Corrugated fibre
cement panels

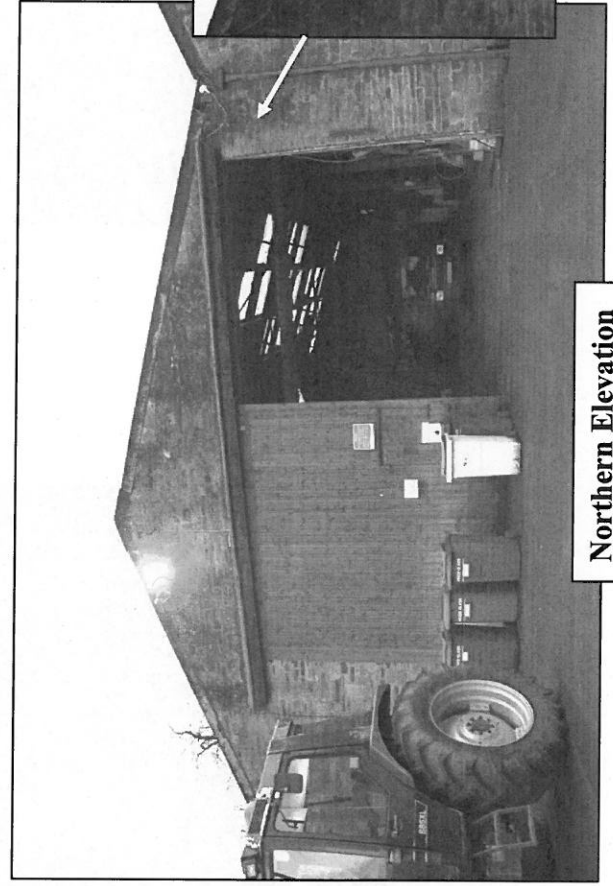
Southern Elevation



Roof void on affected part of roof

Gap under soffit

Northern Elevation

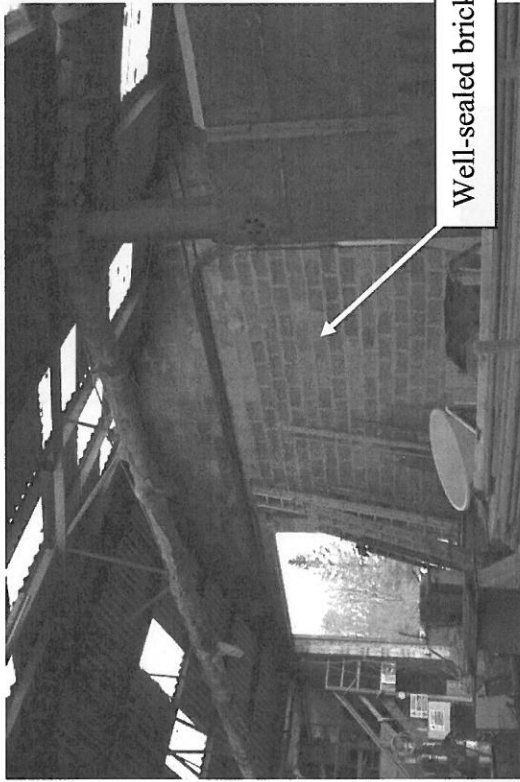


Well-sealed stonework

Northern Elevation

Appendix 1 Photographs

Internal Elevations



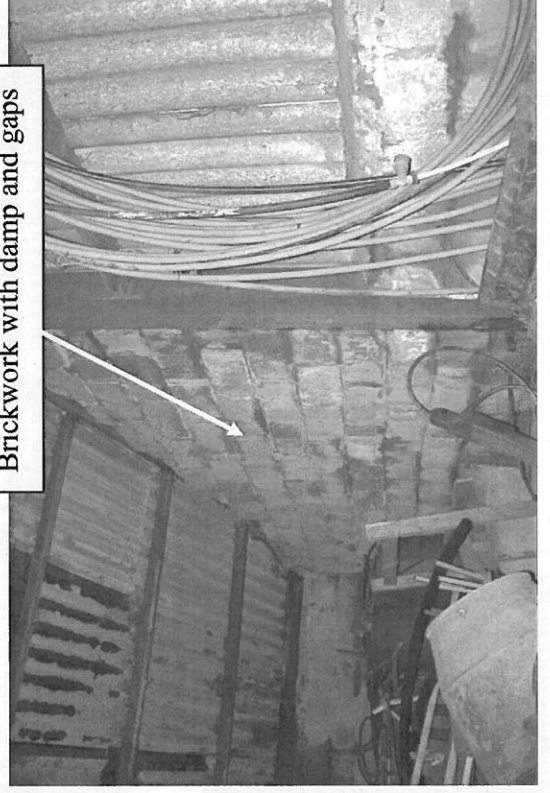
Well-sealed brickwork



Numerous skylights



Well-sealed internal stonework



Brickwork with damp and gaps