120909

Assessment of Ecological Survey Report

Survey Site:	The Cider Mill, Lower Court, Putley. Ledbury, Herefordshire. HR8 2QP
Grid reference:	SO645376
Survey Dates:	13th July to 23rd August 2010 24th August 2011 26th January 2012
Report Reference:	072/11

Site investigation undertaken by:
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Executive Summary

Shropshire Wildlife Surveys were commissioned by Chris Knock on behalf of the owners:-
Mr & Mrs Bradley to carry out an ecological assessment for Bats, Great Crested Newts and nesting birds of The Cider Mill, Lower Court, Putley, Ledbury, Herefordshire, HR8 2QP, grid ref:SO645376 in relation to the conversion of the building into a separate residential dwelling.

This assessment was based on previous survey and initial draft report dated September 2010 carried out by Wildways Ecology and Countryside, with comparison to any evidence found during a site visit on 26th January 2012.

A previous survey and report of the site carried out on 24th August 2011 by Shropshire Wildlife Surveys in connection with a single storey extension, roof works and slurry coating the east wall, was also taken into consideration.

Species included in the assessment were Bats, nesting birds and Great Crested Newts.

The assessment was carried out on the 26th January 2012 by John Morgan an experienced wildlife surveyor and licensed bat worker (EN Licence No: 20112516) and Great Crested Newt surveyor (EN Licence No:20112514)

Bats.

The surveyor is of the opinion that with suitable mitigation there will be no net loss for roosting opportunities for the species of bat recorded within or roosting in the Cider Mill. The conversion of one of the farmhouse loft spaces to a dedicated bat loft would be a significant improvement over the current Cider Mill, giving a net gain over the present situation.

Nesting Birds.

Suitable mitigation in the form of open fronted nestboxes for Spotted Flycatcher and ledges for Barn Swallows within the Pole Barn should ensure there is no net loss of nesting opportunities for these species around the site. It must also be taken into consideration that there are several large modern barns adjacent to the site that would also be used by these species.

Great Crested Newts.

The surveyor is of the opinion that there will be no loss in habitat with the conversion of the Cider Mill and it is unlikely that any Great Crested Newts will be found within the building. There is a small likelihood of individual newts seeking shelter beneath building materials stored around the site. Providing these materials are stored off the ground on pallets or similar, it is unlikely that any would be injured or killed during the conversion process.

If any protected species are found at any stage of the development then work in that area must stop and the surveyor (01952416307) or Natural England contacted (0845 600 3078) for advice.

JMorgan.

John Morgan
February 2012

1.0 INTRODUCTION

Shropshire Wildlife Surveys were commissioned by Chris Knock on behalf of the owners:-
Mr & Mrs Bradley to carry out an ecological assessment for Bats, Great Crested Newts and nesting birds of The Cider Mill, Lower Court, Putley, Ledbury, Herefordshire, HR8 2QP, grid ref: SO645376 in relation to the conversion of the building into a separate residential dwelling.

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The area and buildings investigated are highlighted in red on the appended documents:

Ordnance Survey map abstracts (Appendix 1)
Aerial photograph (Appendix 2)

In accordance with the guidance given in Planning Policy Statement No. 9. evidence was sought of the presence or absence of protected species as defined in:

The Wildlife and Countryside Act 1981 - as listed in:
Schedule 1. Birds protected by special penalties at all times,
Schedule 5. Protected animals
The Conservation [Natural Habitats, &c.] Regulations 1994 - as listed in:
Schedule 2. European protected species of animals
The Conservation of Habitats and Species Regulations 2010.

Species which might be associated with such a building in its given settings would be Bats and nesting birds.

2.0 Site Description

Lower Court is a former farmhouse that is surrounded by predominantly orchards to the North and East. To the west is a modern working farmyard and associated modern farm buildings. To the south is a church and small pond. Surrounding farmland is mixed orchard, arable and pasture.

The Grade II listed farmhouse is a mixture of designs joined to form a cross dating from possibly from C16 or earlier, remodelled in C17 and C18 and extended in early C19. It has a timber-framed brick-cased main range, coursed sandstone rubble projecting south wing with hipped tiled roofs. The west wing is a brick cider mill with a pitched unlined tile roof with a sunken north wing, probably used for storage of cider or fruit. The North wing is currently subject of conversion to domestic use.

3.0 Methodology

Following the examination of the Wildways Ecology & Countryside Report (appendix 12), the surveyor visited the site on 26th January 2012 to asses the earlier findings and to advise Mr Bradley on the way forward to address the concerns raised by Bridgit Symons the Senior Ecologist for Herefordshire Council in her memo DMN/113274/F dated 05/01/2012.

The Cider Mill and adjacent buildings including the main house were closely examined for a practical approach for mitigation in respect of the Long-eared bats that had been observed within

the roof of the structure and the small number of Common Pipistrelle bats discovered roosting within the wall near the north-east corner.

A search was carried out for any signs that might indicate the location of the Long-eared bat roost or any other bat species activity.

The signs included droppings, urine stains, feeding signs, colouration of access points or perches by rubbing and scratch marks.

Ladders, a Medit PF9-13 fibrescope, mirror, bright torches and binoculars were used to examine parts which were otherwise inaccessible.

The building and surrounding land was assessed for potential disturbance and / or injury to Great Crested Newts during its conversion. The nearby pond and lake were visited and assessed for their potential for breeding Great Crested Newts and scored using the Habitat Suitability Index [1] scoring methodology.

Weather conditions during the visit were Temp: 6^0C. Wind: F1 South east. Cloud: 7/8 Ac

A selection of photographs describing the Cider Mill, surrounding land and water bodies is shown at appendix 3.

4.0 Constraints.

4.1 Bats.

Survey carried out on 26th January 2012 restricted to consideration for Cider Mill for mitigation purposes and to possibly identify existing roosts and potential areas to be used for mitigation for any perceived losses for roosting bats.

4.2 Nesting Birds.

There were no constraints.

4.3 Great Crested Newts.

Sub-optimal timing required best judgement by the surveyor in formulating some scoring for Habitat Suitability Index table.

5.0 Results.

5.1 Bats
5.1.1 Existing information.

Wildways Ecology & Countryside report stated that that a maximum of two Long-eared bats were observed on one occasion within the first floor of the cider mill during three activity surveys, with an individual Long-eared bat observed on another visit only, this was always after Long-eared bats were observed either feeding in the Pole Barn or flying around the area before the sightings. Another unidentified bat was observed flying within the first floor of this building.

The report also states that small numbers of droppings were observed both large and small were found scattered within the first floor with emphasis being made to a window sill to the west of the stone access steps.

Two Common Pipistrelle bats were observed emerging from external brick work on the north wall.

[1] Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt *(Triturus cristatus)*. Herpetological Journal 10 (4), 143-155.

Further discussion within this report speculates about Maternity Roosts for these species being present but no definite conclusions seem to be formed.

5.1.2 Information from visit carried out in 2012.

A thorough search was carried out of the of the Cider Mill for any recent signs of bat activity, the ground floor had been recently cleared of stored items, but sufficient surfaces remained that would indicate bat activity.

Joints within the roof timber framework were generally tight, where gaps were observed that were of suitable size for bats they were found to be 'cobb webby' and undisturbed.

The first floor appeared to have been undisturbed for at least six to twelve months. Mr Bradley informed the surveyor that most of the items had been in place for over a year, the detritus and dust covering many items would appear to confirm this statement. No evidence of bats was found.

It is possible that small quantities of droppings and feeding remains would have deteriorated and been dispersed by air currents within the first floor, its roof is unlined and sufficient gaps around the walls could cause such dispersal, so it is not possible to discount limited activity by bats within this area.

The Pole Barn was checked for any obvious signs of bats, the structure was quickly discounted as being suitable for anything other than incidental roosting by individual bats, with potential as a feeding roost for Brown Long-eared bats. No evidence of bats was found within this structure. In the opinion of the surveyor, it had limited potential for conversion to a bat loft for Brown Long-eared bats.

The loft within the farmhouse adjacent to the Cider Mill was entered and assessed for potential for roosting bats. It was found to be suitable for Long-eared bats, no evidence from any bat species was found within this loft. It has thick insulation and a membrane sarking beneath the tiles.

Gaps around ridge tiles and under eaves gave potential access points for bats into this space as a potential bat loft.

5.1.2 Information from visit carried out in 2011.

Small numbers of Common and Soprano Pipistrelles and individual passes by Brown Long-eared bats were recorded around the site.

Full details of the activity survey are shown in Table 1 of appendix 5.

5.2 Nesting Birds.
5.2.1 Existing information

Wildways Ecology & Countryside report stated that a Spotted Flycatcher nest was observed adjacent to the Common Pipistrelle roost in the north wall and that no evidence of Owls nesting or roosting within the building.

5.2.2 Information from visit carried out in 2012.

Evidence of a Barn Swallow nest was found on the ground floor of the Cider Mill. No evidence of any other nests was found during this visit.

5.2.3 Information from visit carried out in 2011.

All crevices were closely examined, the remains of an old nest, identified as most likely Robin was found in one of the crevices within the stone dividing wall within the lean too. (East face of farmhouse)

A single House Martin nest was observed under the east eave of the south wing of the house.

5.3 Great Crested Newts.

The pond adjacent to the church and the nearby lake were assessed using the Habitat Suitability Index methodology. The pond and lake are some 48m (pond A) and 80m (pond B) to the south, no other ponds are indicated within 250m of the site.

5.3.1 Existing information

Wildways Ecology & Countryside report stated that HRBC data search revealed two separate records within 500m of the site with a neighbour describing a survey of the church pond (pond A) recording Great Crested Newts in 1999.

5.3.2 Information from visit carried out in 2012.

The pond and lake were visited and scored using H.S.I. methodology, table 1 below shows the results of this scoring.

It was noted that the nearest pond marginal vegetation had been grazed by wild fowl, only a solitary Moorhen was present during the visit,

Table 1

Habitat Suitability Index		
Pond ref	A	B
SI1 - Location	1.00	1.00
SI2 - Pond area	0.50	0.80
SI3 - Pond drying	0.50	0.90
SI4 - Water quality	0.67	0.67
SI4 - Shade	1.00	1.00
SI6 - Fowl	1.00	1.00
SI7 - Fish	1.00	0.33
SI8 - Ponds	0.97	0.97
SI9 - Terr'l habitat	0.67	1.00
SI10 - Macrophytes	0.60	0.80
HSI	0.76	0.81
Remarks	good	excellent

H.S.I.	Pond suitability
<0.5	Poor
0.5 - 0.59	Below average
0.6 - 0.69	average
0.7 - 0.79	good
>0.8	Excellent

The ground floor of the Cider Mill was assessed for the likelihood of being used by Great Crested Newts along with a cellar beneath the farmhouse which has restricted access from the Cider Mill.

The floor of the Cider Mill was a mixture of compacted earth and concrete and very dry giving unsuitable conditions for any amphibians.

The farmhouse cellar is used as a boiler room and was very warm at the time of the visit. Its modern concrete floor gave no shelter for any amphibians.

The stone wall across the parking area for the farmhouse would make a natural barrier for all but the most determined newt accessing the area from the south, the farmhouse prevents access from the east with the farmyard and associated buildings and concrete hard standings restricting access from the west and north west.

5.3.3 Information from visit carried out in 2011.

Pond A was observed as being almost dry on 24th August 2011. What water that was left was torched using a 1 million candle power Clulite torch by the surveyor during a walk over of the area for bats. (Something done more out of habit than actually surveying for Great Crested Newts at the time.) a single Smooth Newt was observed, with no Great Crested Newts observed. This observation must be taken into consideration that it was carried out in sub optimal timing conditions, more out of habit than actually formally surveying for this species.

6.0 Concluding remarks

6.1 Bats.

In the opinion of the surveyor, the small number of bats recorded during previous surveys do not point to there being a maternity roost of any species within the building. The fact that the Long-eared bats were observed after they had been recorded flying around the site gives a strong probability that they could have entered the building to feed and were not actually roosting within the building.

Based on the assumption of there being a small number of Long-eared bats roosting within this building then there is an argument for mitigation to be Bat boxes on the outside of the building, a draught free loft space above the farmhouse would provide a more suitable space for a maternity roost for this species if it is shown at a later date that this is the case.

The surveyor is of the opinion that with this suitable mitigation there will be no net loss for roosting opportunities for the species of bat recorded within or roosting in the Cider Mill. The secluded and draught free loft of the farmhouse would be a significant improvement over the current Cider Mill giving a net gain over the present situation.

An EPS Licence with respect for bats will be required for conversion of the Cider Mill, which will include timing constraints. The bat loft within the farmhouse can be carried out immediately with no constraints.

6.2 Nesting Birds.

Suitable mitigation in the form of open fronted nestboxes for Spotted Flycatcher and ledges for Barn Swallows within the Pole Barn should ensure there is no net loss of nesting opportunities for these species around the site. It must also be taken into consideration that there are several large modern barns adjacent to the site that would also be used by these species.

6.3 Great Crested Newts.

In the opinion of the surveyor, there is restricted access to the Cider Mill from all but one direction for Great Crested Newts.

Best access for the species would be from the north; curiously, Great Crested Newts did not appear to be a planning consideration for works in this direction when the sunken storage house

was converted during 2011.

The surveyor is of the opinion that there will be no loss in habitat with the conversion of the Cider Mill and it is unlikely that any Great Crested Newts will be found within the building. There is a small likelihood of individual newts seeking shelter beneath building materials stored around the site. Providing these materials are stored off the ground on pallets or similar it is unlikely that any would be injured or killed during the conversion process.

7.0 Bats - Legislation and Species Information

On the basis of the evidence found, a small number of two common species of bat will be affected by the development.

Any permitted work which may disturb or damage a 'breeding site or resting place' would constitute an offence under current legislation.

Therefore, in order to comply with current legislation, an EPS licence from Natural England will be required to legally carry out any conversion of The Cider Mill.

7.1 The basic protection afforded to bats is listed below:

It is illegal to:

- intentionally or deliberately kill, injure or capture (or take) bats;
- deliberately disturb bats (whether in a roost or not);
- recklessly disturb roosting bats or obstruct access to their roosts;
- damage or destroy bat roosts;
- possess or transport a bat or any part of a bat, unless acquired legally;
- sell (or offer for sale) or exchange bats, or parts of bats.

The word 'roost' is not used in the legislation, but is used here for simplicity.
The actual wording in law is 'any structure or place which any wild animal...uses for shelter or protection' or 'breeding site or resting place'.

Because bats tend to re-use the same roosts after periods of vacancy, legal opinion is that the roost is protected whether or not the bats are present at the time.

Appendix 6 (3 pages) outlines in more detail the legal status of bats in England, the fines that may accrue if an offence against bats and/ or their roost is committed, and the circumstances under which a Natural England licence is required in respect of bat species.

A flow diagram illustrates the steps it will be necessary to undertake in order to proceed with the permitted development. (Appendix 7.)

Appendix 8 illustrates 'The scale of main impacts at the site level that a development can have on bat populations'.

7.2 Scale of impact.

On the basis of the evidence found the surveyor is of the opinion that the scale of impact on the loss of the 'resting places' of a small number of roosting Common Pipistrelle bats and small numbers of Brown Long-eared bats would be **Low.**

Appendix 9 is a copy of Figure 4 taken from English Nature's "Bat Mitigation Guidelines", Jan. 2004, which indicates the type of mitigation/ compensation Natural England will expect any developer to provide, dependent upon the impact of that development.

8.0 Bats - Required Licensing and Mitigation / Compensation

On the basis of the evidence found the surveyor is of the opinion that **an EPS licence in respect of bats will need to be obtained before any development that may affect any roost at 'The Cider Mill' can commence.**

8.1 Licensing

Licences can be granted under regulation 44(2)(e) of the Conservation (Natural Habitats & c.) Regulations 1994 for the purpose of **preserving public health or public safety or other imperative reasons of overriding public interest including those of social or economic nature and beneficial consequences of primary importance for the environment,** to allow people to carry out activities which would otherwise be illegal.

Under the Conservation (Natural Habitats & c.) Regulations 1994 licences can only be issued if Natural England are satisfied that:

- There is no satisfactory alternative and
- The action authorised will not be detrimental to the maintenance of the population of protected species concerned at a favourable conservation status in their natural range.

If protected species are found at any stage of the development then work in that area must stop and Natural England contacted (0845 600 3078) for advice.

The developer and the licensed bat worker who will be responsible for overseeing the bat -related work should work closely together in filling in the Natural England application form.

This can only take place once Planning Permission has been received for the proposed development.

8.2 Mitigation / Compensation

Since the development most likely affects the resting places of 'common species' the developer will need to be able to show at the planning application stage that their loss / modification is compensated for by the following features and provisions. A full description of typical works required is shown in appendix 10. The recommended mitigation for this project is shown below.

- The provision of two Swegler type 1FQ bat boxes to be put up immediately to provide roosting opportunities when building work is underway and would remain in position to provide alternative roosting should mitigation not prove satisfactory to bats, who might take a couple of seasons to find and move in to any new bat loft. (Appendix 11)
- Access will be created to loft space in farmhouse.
- Within this loft space:
    - The roof will be maintained in good order.
    - The roof space runs the whole length of this loft and provides an unimpeded flight path for bats within this space.
    - The internal roof height will be a maintained at its present height when measured from the edge of the ridge board down to the 'floor' of this loft space.
    - Two suitable access points will be created beneath the eaves on the north and west faces of the building and at three ridge tiles within the roof.
    - The external and internal faces of the wall in the immediate vicinity of the access points will be roughened to facilitate landing by bats before they crawl into the roost.
    - Warm spots will be created within this loft and crevices created using timber to

simulate wooden joints

- Two secluded areas will be created within the roof space using suitable materials as directed by the licensed bat worker.
- A series of 1m long lengths of rafter attached to the side of roof timbers to create a series of half bridged over crevices 20-25mm wide.
- A trap door or similar giving restricted access to the loft space will be provided.
- Within the roof space a 'walkway' providing safe access to the whole of the roof space will be provided.
- It is recommended that the whole of the 'floor' of the roof space will be covered by heavy duty (2000 gauge) plastic or similar breathable fabric, to facilitate the future management of any accumulation of bat droppings which may occur.

- External lighting around the site will be of the 'down lighting' type and will not light up the sky around the buildings, or any bat access points.
- A programme of monitoring is recommended subsequent to the development being completed.

Any drawings submitted at the time of application should reflect the listed mitigation/ compensation mentioned above.

It would be expected that the EPS licence will stipulate timing conditions of when works can commence, most likely between early September and April.

A licensed bat worker will most likely be required to oversee the exclusion of bats prior to works commencing and ensuring the above recommendations are carried out.

Natural England will normally only accept reports up to two years old. Any delays in commencing work following the authorisation of planning consent will most likely require further surveys to update this report to satisfy EPS licensing requirements.

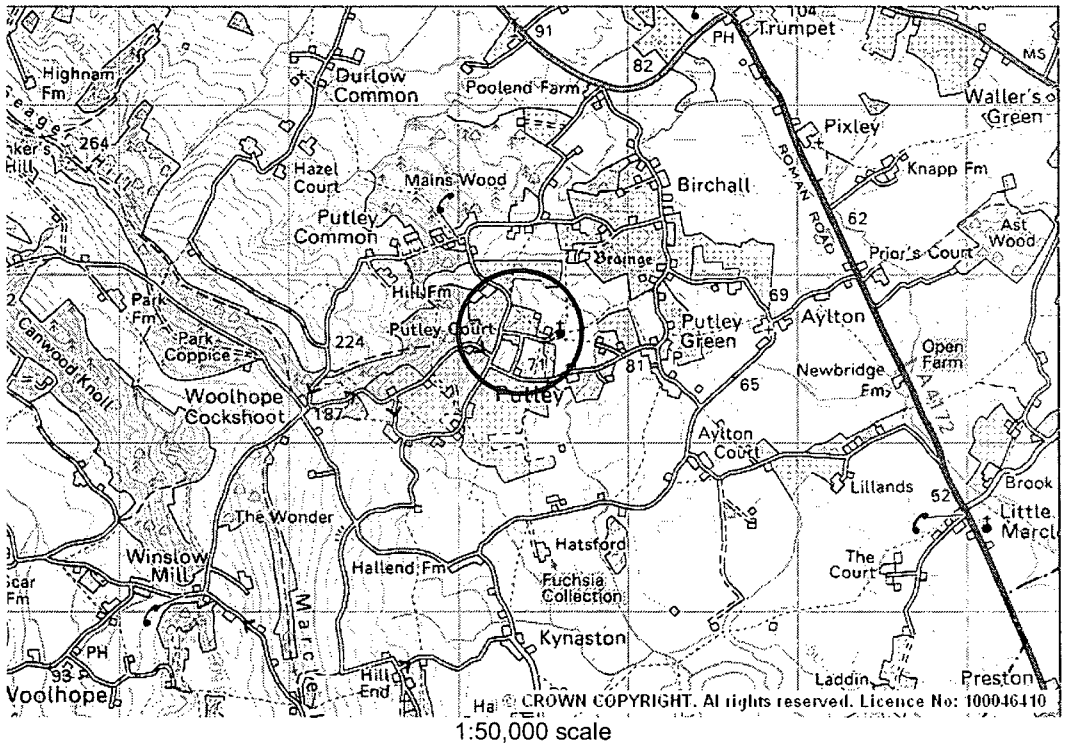
It is of note that the surveyor has been commissioned by Mr Bradley the owner of the site, to carry out a survey for Great Crested Newts of the nearby ponds in connection with proposed landscaping works at the site.

It is also the intension of the surveyor to update current information on bat activity during this period to augment present survey data in readiness for an EPS licence should planning permission be granted for the conversion of the Cider Mill.

If any protected species are found at any stage of the development then work in that area must stop and the surveyor (01952416307) or Natural England contacted (0845 600 3078) for advice.

JMorgan.

John Morgan.
February 2012



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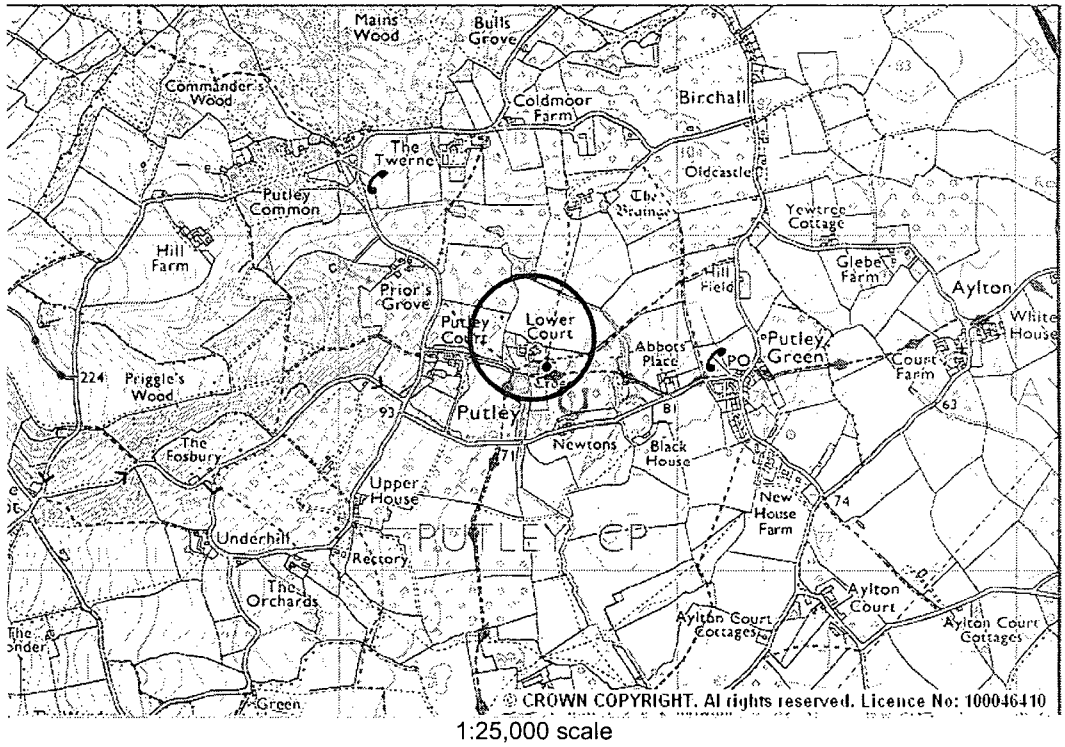

1:25,000 scale

Appendix 1


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Appendix 2

Fig 1. View of Cider Mill from west

Fig 2. View of Cider mill from north west

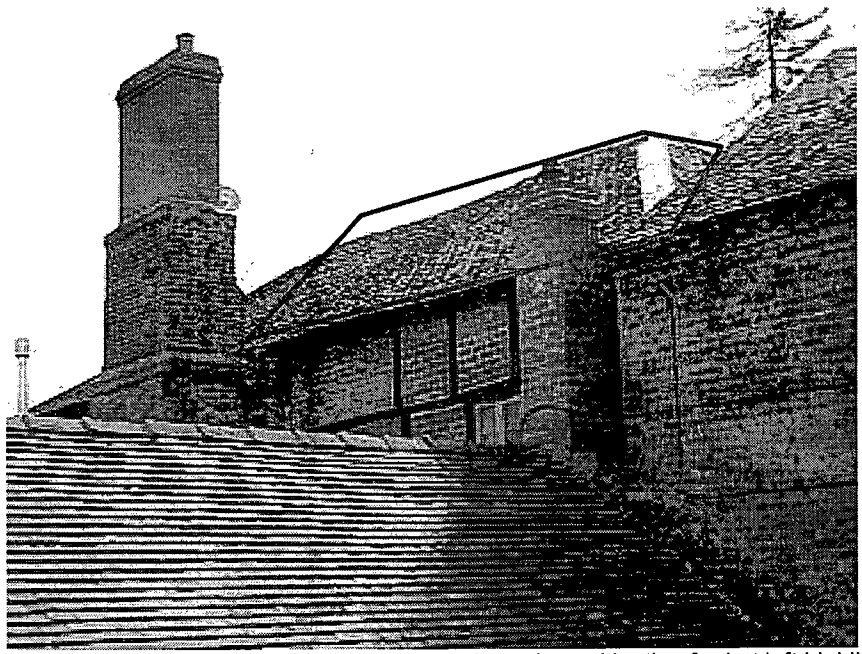


Fig 3. View from north. Roof area of farmhouse considered as mitigation for bat loft highlighted. Also describing the new roof above the north wing (cider / fruit storage)

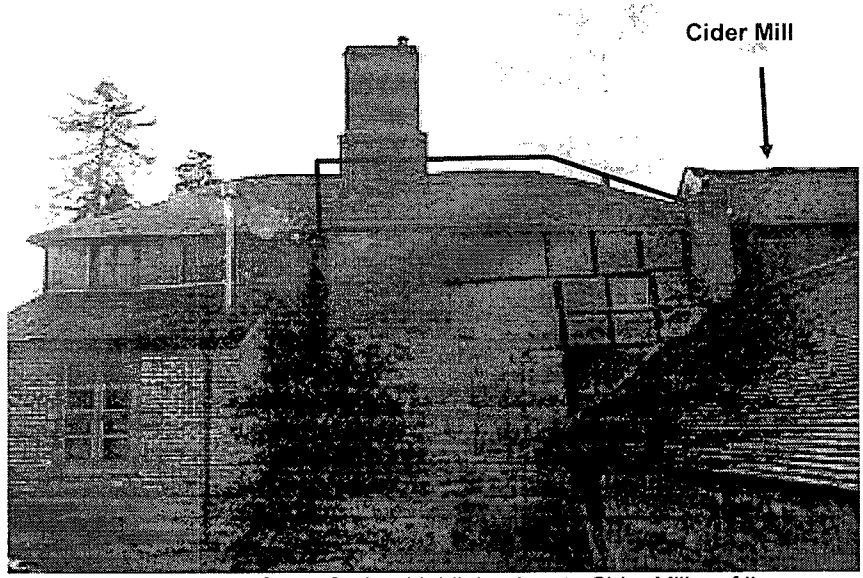


Fig 4. View from north east. Roof area further highlighted, note Cider Mill roof line.

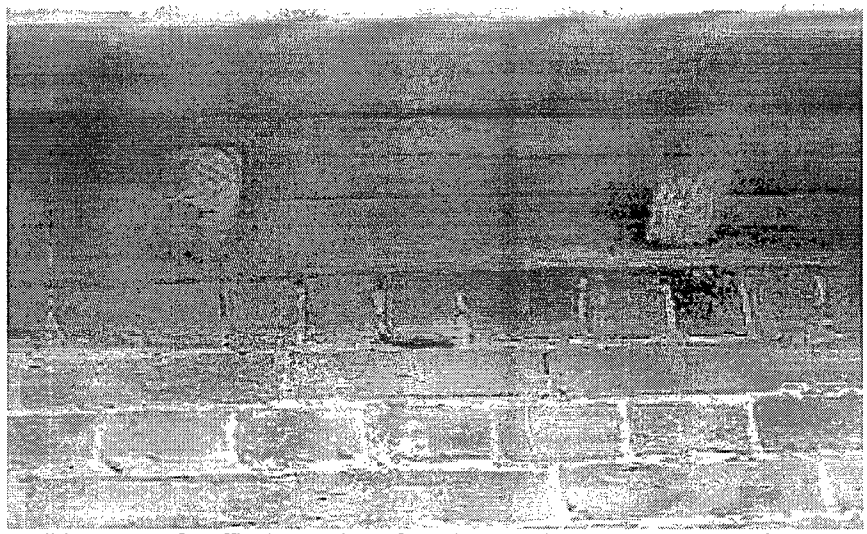


Fig 5. Describing eaves & soffits beneath roof section considered as mitigation for any loss of roost facilities within the Cider Mill.

Fig 6. West face of proposed bat loft.

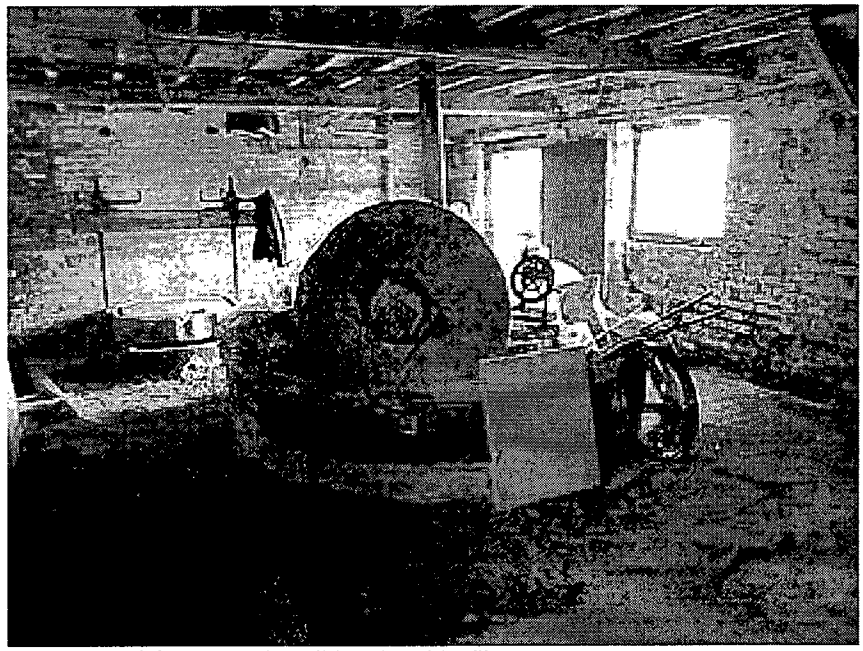


Fig 7. Ground floor of Cider Mill describing the old mill stone.

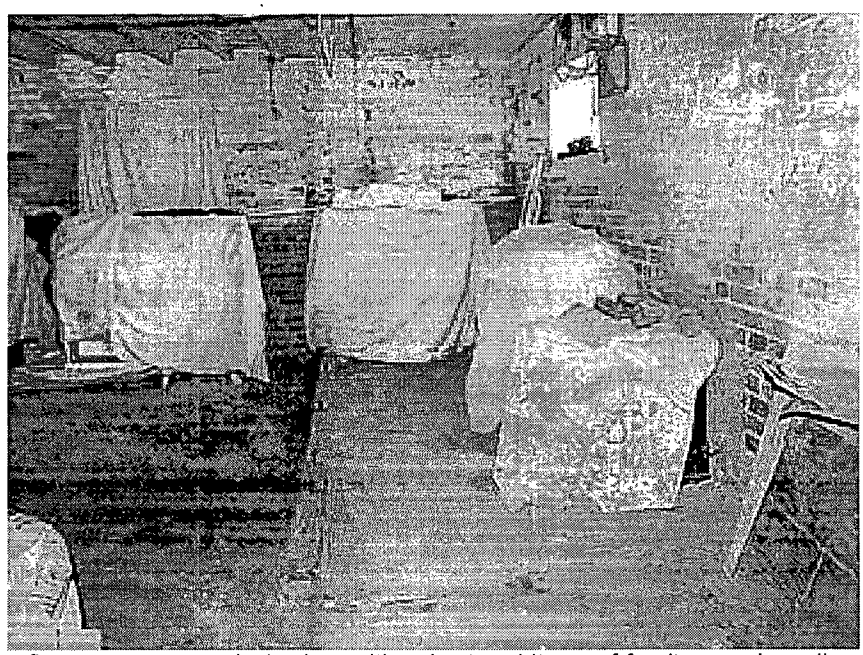


Fig 8. The floor was comparatively clear with only stored items of furniture and small amounts of building materials present. The floor was mainly compacted earth and concrete.

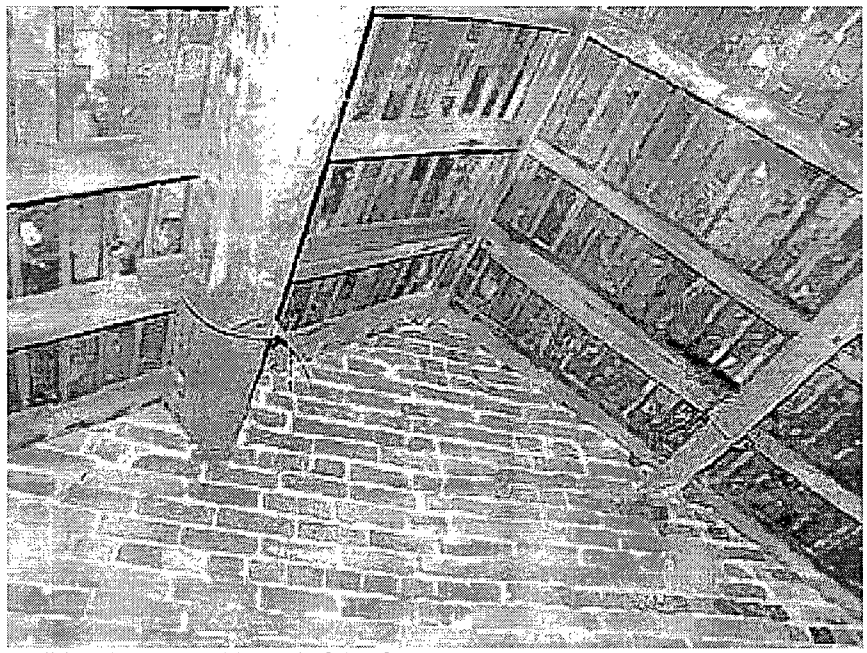


Fig 9. Describing the east gable wall of the Cider Mill.

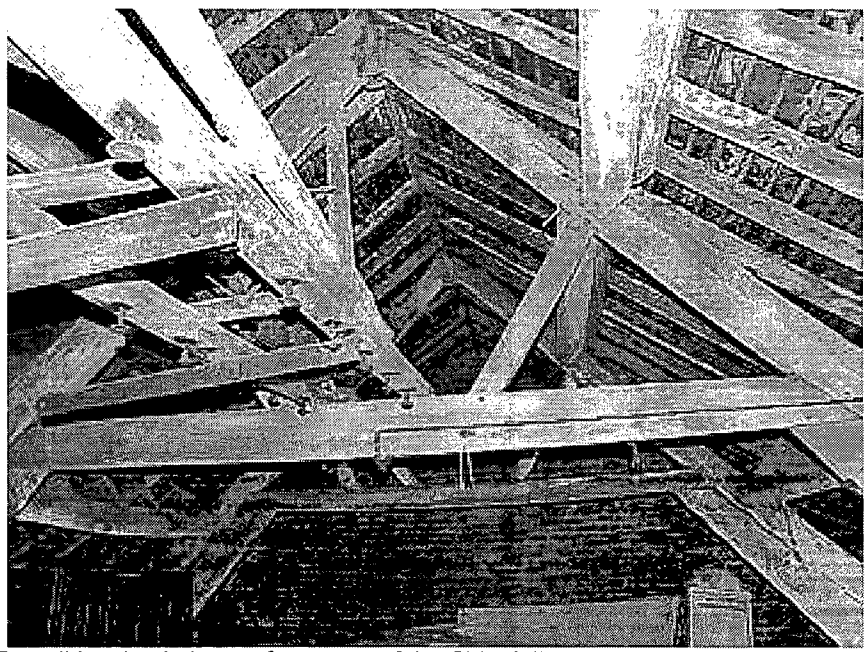


Fig 10. Describing the timber roof structure of the Cider Mill.

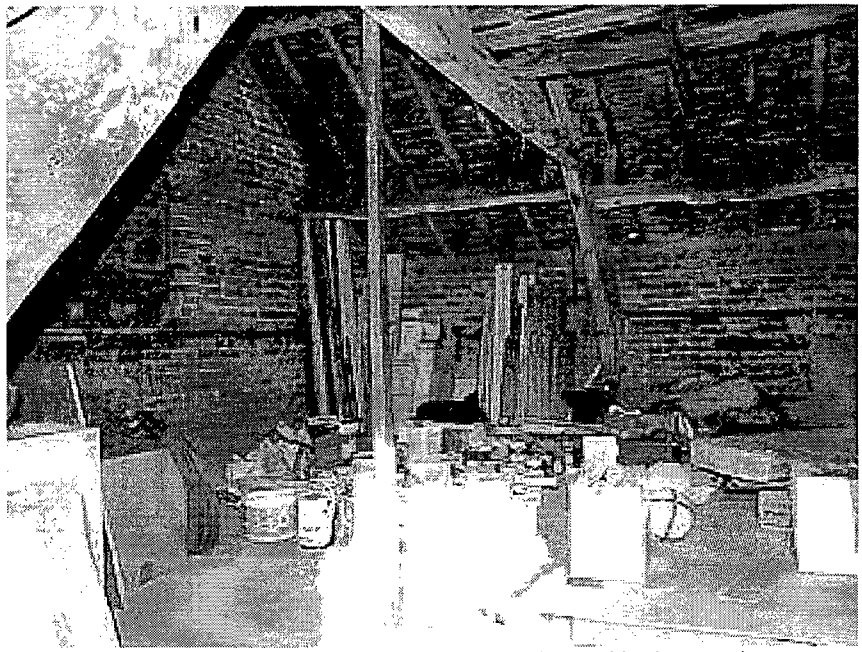


Fig 11. Within the first floor was a small quantity of materials used in the ongoing conversion of the north barn (former cider / fruit store).

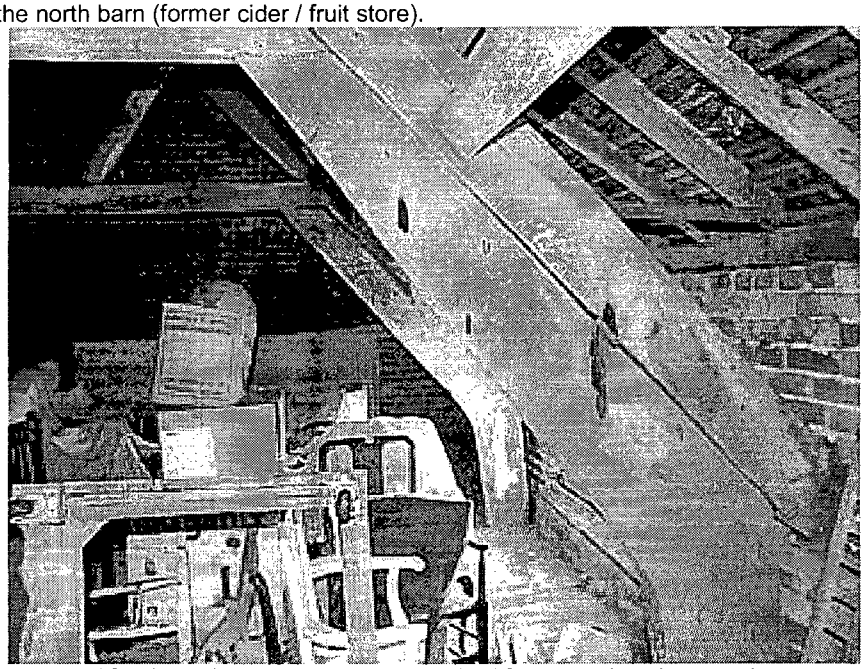


Fig 12. Boxes and furniture that has not been disturbed for around twelve months.

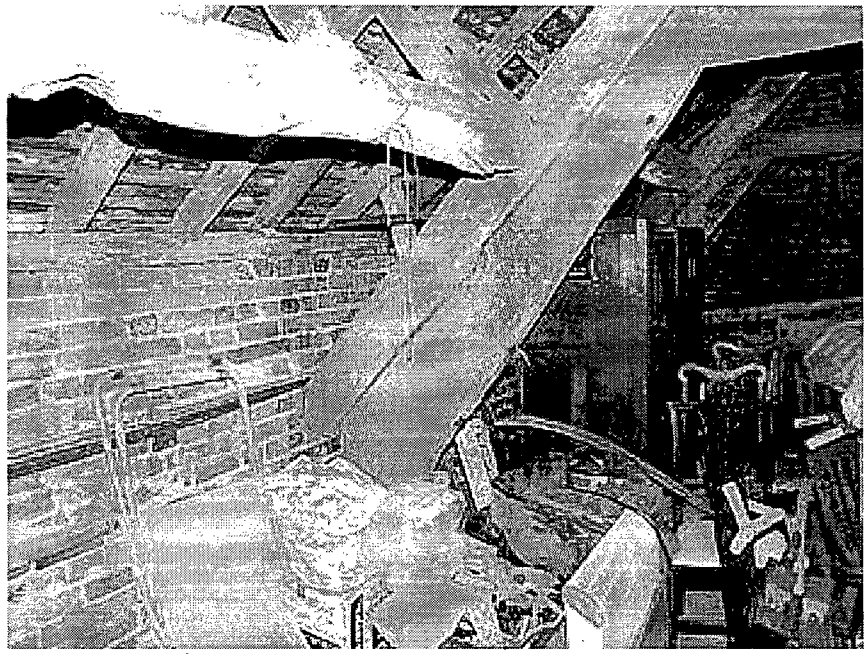


Fig 13. More examples of stored items.

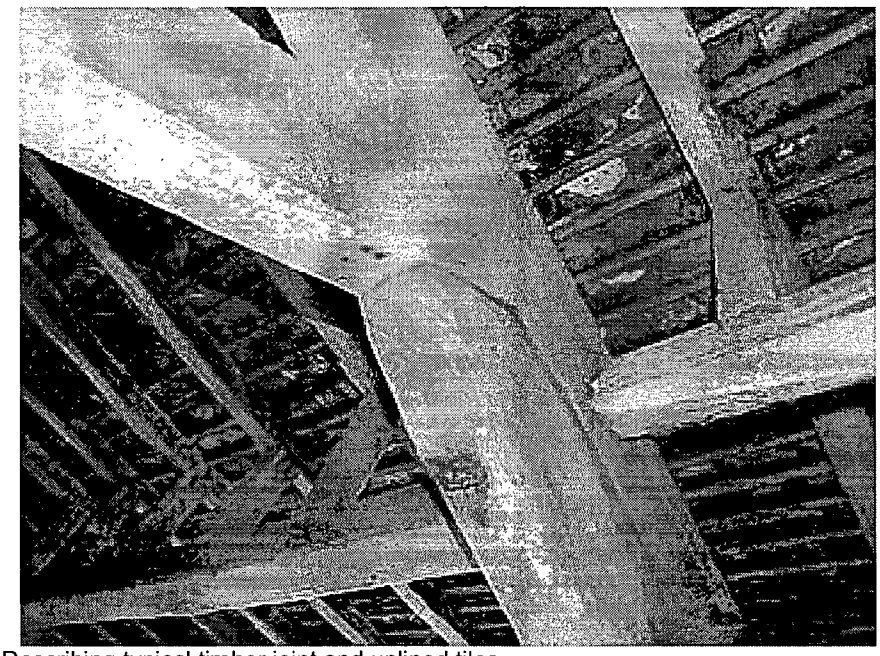


Fig 14. Describing typical timber joint and unlined tiles.

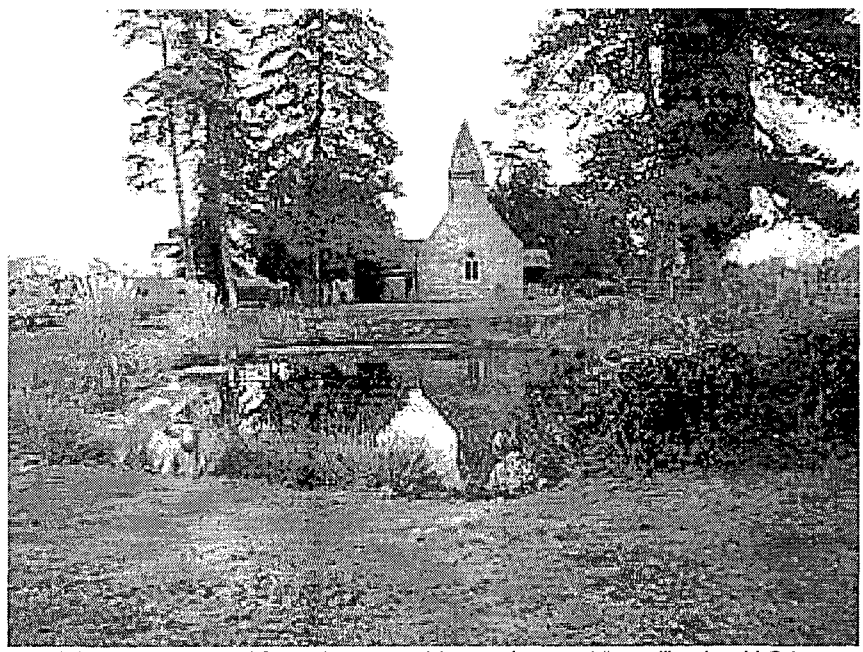
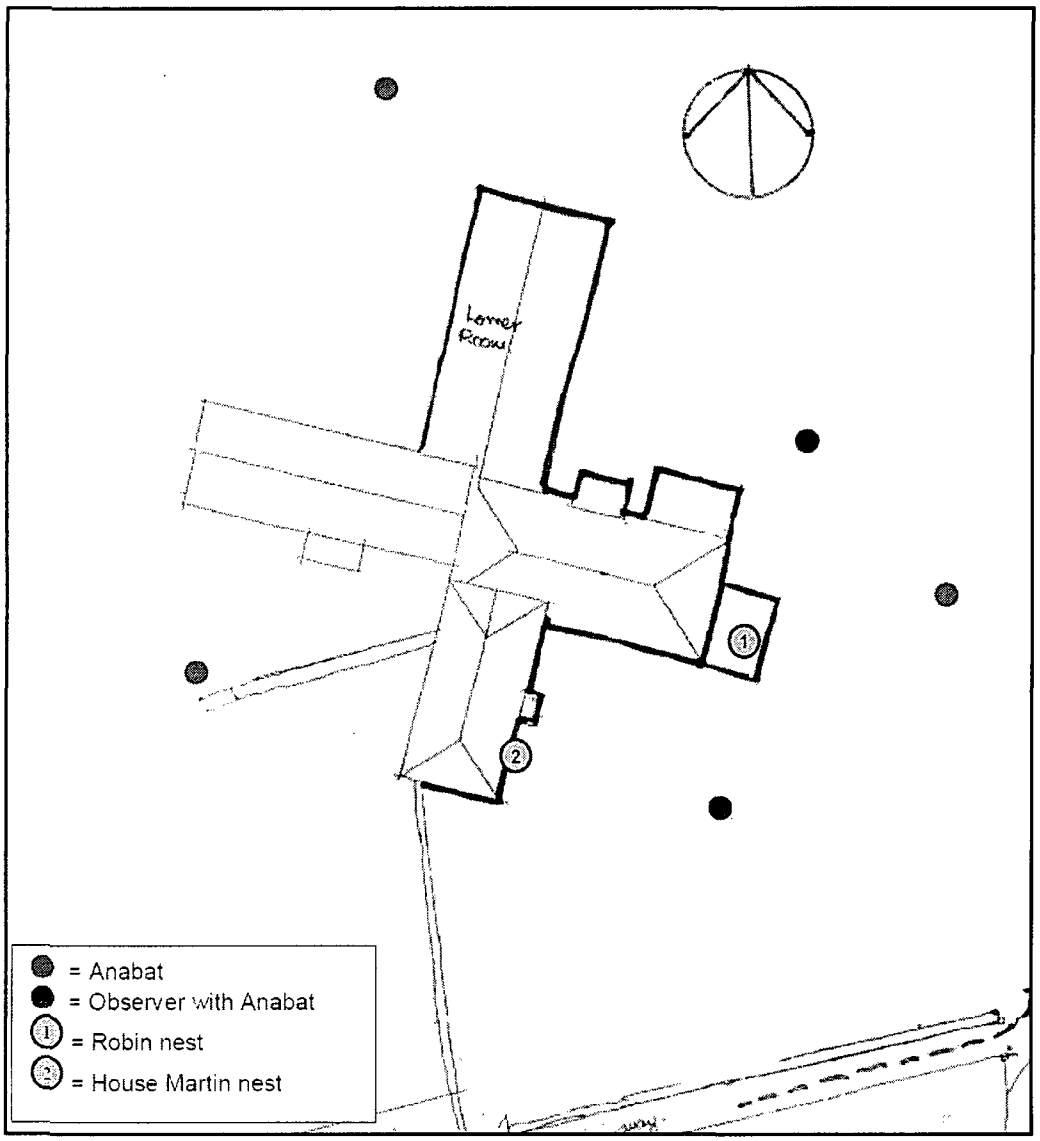


Fig 15. Describing Church pond from the west, this pond scored "good" using H.S.I.

Fig 16. Describing small lake nearby, this scored "excellent" despite presence of fish.

Fig 17. Route between church pond and Cider Mill

Fig 18. Describing parking area to south of Cider Mill, which is a continuation to previous photograph.



Schematic plan of house with approximate locations of observers, Anabats, and bird nests during 2011 survey.

Findings (Activity survey 2011)
Table 1
Abbreviations.
Ppip = Common Pipistrelle Ppyg = Soprano Pipistrelle Paur = Brown Long-eared

Date	24/08/2011
Time (start)	20:00hrs
Air Temp	15^{0}C
Time (Fin)	21:15hrs
Air Temp	15^{0}C
Weather	5/8 Cu: No wind
Personnel & Equipment	2 x Surveyor 5 X Anabat Yukon Ranger 5x42 digital night scope. Newton Image intensifier. Bright Torches, Binatone Trec100 Radios
Sunset / Sunrise	20:15hrs
Time & species first recorded	20:51hrs Paur to north east of house 20:54 hrs Ppip over pond next to church 20:55 hrs Ppyg over pond next to church 20:55 hrs Ppip north west of house 21:00 hrs Ppyg north east of house 21:07 hrs Paur north east of house
Species Recorded	Ppip, Ppyg, Paur
Finish Reason	Light Gone, no bats observed exiting area of house to be affected by proposed works
Remarks	Three Anabats were strategically placed around the house to record bat activity. The observers were positioned for best views of lean too and area of roof above. At around 20:50 hrs with the light gone, the surveyor moved from his observation point to the south of the house and patrolled the immediate surroundings which included the Church yard, pond and modern farm yard / buildings to the west of the site. Bat activity was generally restricted to the area around the church and pond to the south of the site with small amount of activity around west side of site amongst farm buildings.

Bats and the Law

Taken together, the Wildlife and Countryside Act 1981 (WCA) (as amended), the Countryside and Rights of Way Act 2000(CRoW), and the Conservation (Natural Habitats, &c.)Regulations 1994, make it illegal to:

- intentionally or deliberately kill, injure or capture (or take) bats;
- deliberately disturb bats (whether in a roost or not);
- recklessly disturb roosting bats or obstruct access to their roosts.
- damage or destroy bat roosts;
- possess or transport a bat or any part of a bat, unless acquired legally;
- sell (or offer for sale) or exchange bats, or parts of bats.

The word 'roost' is not used in the legislation, but is used here for simplicity.
The actual wording in the legislation is 'any structure or place which any wild animal...uses for shelter or protection' (WCA) or 'breeding site or resting place' (Habitats Regulations).

Because bats tend to re-use the same roosts after periods of vacancy, legal opinion is that the roost is protected whether or not the bats are present at the time.

Enforcement
The police are the main enforcement body for wildlife offences, and in some cases local authorities may also take action.
Section 24(4) of the 1981 Act gives English Nature the function of providing advice or assistance to the police in respect of alleged offences.

The maximum fine on conviction of offences under Section 9 of the 1981 and Regulation 39 currently stands at £5000.
The CRoW Act 2000 amended the 1981 Act to allow for a custodial sentence of up to six months instead of, or in addition to, a fine.

Note: Fines may be imposed in relation to each offence committed, so operations involving many animals or repeated offences can potentially accrue large fines.
In addition, items which may constitute evidence of the commission of an offence may be seized and detained.
The CRoW Act 2000 also amends the Police and Criminal Evidence Act 1984 to render Section 9 offences 'arrestable', giving the police significant additional powers.

The use of an EPS licence in respect of bat species
An EPS licence is a licence which permits an action that is otherwise unlawful,

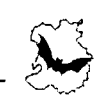
To ensure that no illegal activities are undertaken during the course of a development, it is recommended that a licence is applied for if, on the basis of survey information and specialist knowledge, it is considered that

- the site in question is demonstrably a breeding site or resting place for bats
- the proposed activity is reasonably likely to result in an offence

No licence is required if the proposed activity is unlikely to result in an offence.

Examples of works that are likely to need an EPS licence
Works that are likely to need a licence because they may result in the destruction of a breeding or resting place and/ or disturbance of bats include:

- Demolition of buildings known to be used by bats;
- Conversion of barns or other buildings known to be used by bats;
- Removal of trees known to be used by bats, when carried out as part of a development;
- Significant alterations to roof voids known to be used by bats.



Examples of works that may not need an EPS licence
Examples of works that, if carefully planned, may not need a licence include:

- Re-roofing, if carried out while bats are not present and the access points and roosting area are not affected
- Remedial timber treatment, carried out with the correct chemicals while bats are not present.

Conditions under which an EPS licence may be issued
Under the Conservation (Natural Habitats, &c.) Regulations 1994, DEFRA issues licences for the purposes of:

- preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance/or the environment [R. 44(2)(e)].

- Preventing the spread of disease [R. 44(20)9f)].

- Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other forms of property or to fisheries [R. 44(2)(f)].

In every case, a licence cannot be granted unless:

- There is no satisfactory alternative" [R. 44(3)(a)], and

- The action authorised will not he detrimental to the maintenance of the population of the species concerned at a favourable conservation status * in their natural range" [R. 44(3)(b)].

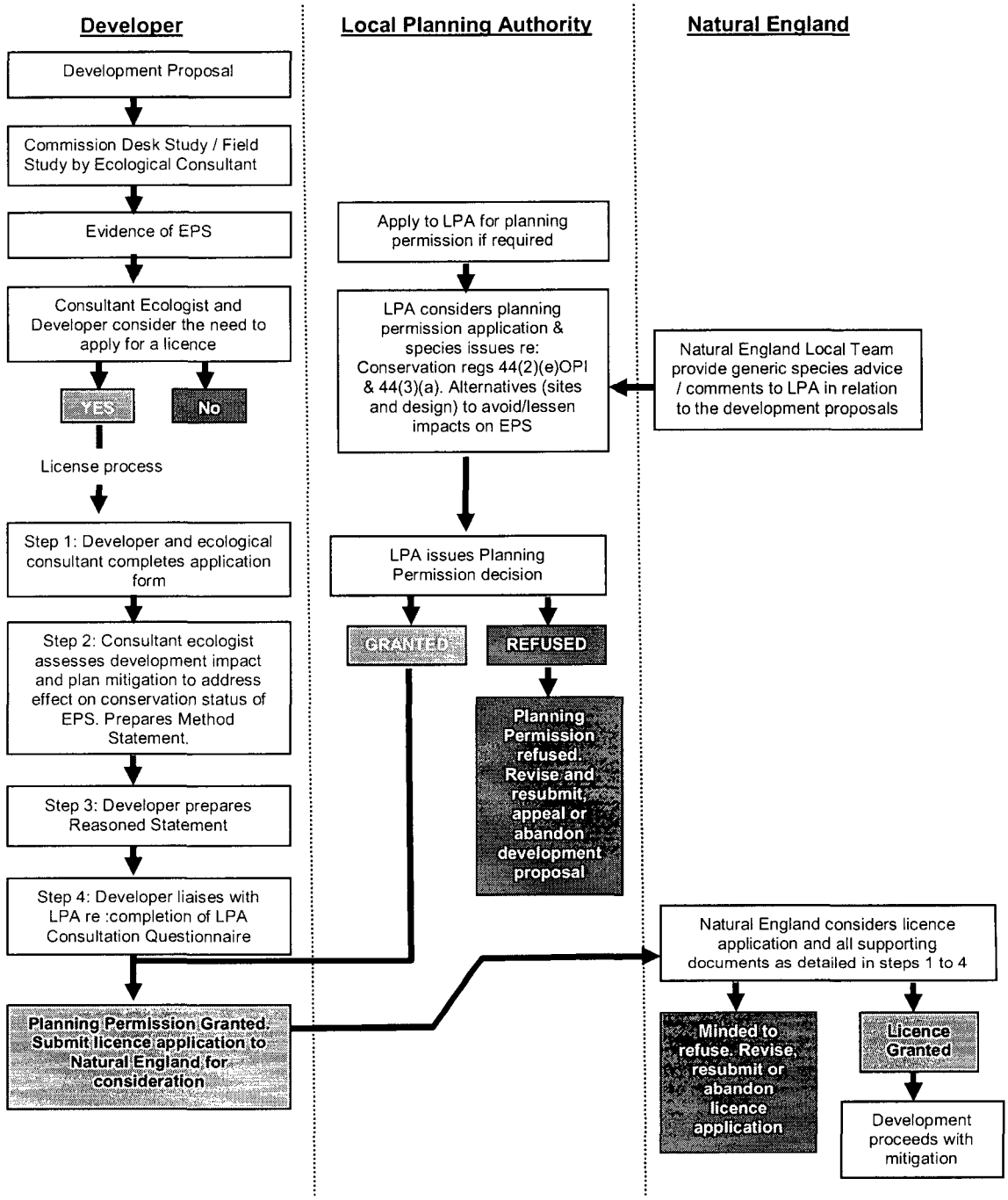
* Favourable conservation status' is defined in the Habitats and Species Directive (Article I(i)). Conservation status is defined as "the sum of the influences acting on the species concerned that may affect the long term distribution and abundance of its population within the territory".

It is assessed as favourable when:
"population dynamics data on the species concerned indicate that it is maintaining itself on a long term basis as a viable component of its natural habitats, and the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and there is, or will probably continue to he, a sufficiently large habitat to maintain its populations on a long term basis."

In order to obtain a licence to allow the destruction of bat roosts etc, in advance of any otherwise legitimate development which may impact on the favourable conservation status of bats, it must be demonstrated by the applicant that all reasonable steps have been taken to minimise the impact (to satisfy R. 44(3) (a)) and any remaining damage will be adequately compensated for (to satisfy R. 44(3)(b)).

Current Natural England advice is that there should be no net loss in local bat population status, taking into account factors such as population size, viability, and connectivity. Hence, when it is unavoidable that a development will affect a bat population, the mitigation should aim to maintain a population of equivalent status in the area.

The main steps involved in ensuring that EPS issues are properly considered in developments requiring planning permission are presented below:



The scale of main impacts at the site level that a development can have on bat populations
Source: Bat Mitigation Guidelines,
Jan 2004. English Nature.

Appendix 7

Roost type	Development effect	Scale of impact		
		Low	Medium	High
Maternity	Destruction			✓
	Isolation caused by fragmentation			✓
	Partial destruction; modification		✓	
	Temporary disturbance outside breeding season	✓		
	Post-development interference			✓
Major hibernation	Destruction			✓
	Isolation caused by fragmentation			✓
	Partial destruction; modification		✓	
	Temporary disturbance outside hibernation season	✓		
	Post-development interference			✓
Minor hibernation	Destruction			✓
	Isolation caused by fragmentation			✓
	Partial destruction, modification		✓	
	Modified management		✓	
	Temporary disturbance outside hibernation season	✓		
	Post-development interference		✓	
	Temporary destruction, then reinstatement	✓		
Mating	Destruction		✓	
	Isolation caused by fragmentation		✓	
	Partial destruction	✓		
	Modified management	✓		
	Temporary disturbance	✓		
	Post-development interference	✓		
	Temporary destruction, then reinstatement	✓		
Night roost	Destruction	✓		
	Isolation caused by fragmentation	✓		
	Partial destruction	✓		
	Modified management	✓		
	Temporary disturbance	✓		
	Post-development interference	✓		
	Temporary destruction, then reinstatement	✓		

NB This is a general guide only and does not take into account species differences. Medium impacts, in particular, depend on the care with which any mitigation is designed and implemented and could range between high and low.

Table 6.1. The scale of main impacts at the site level on bat populations.

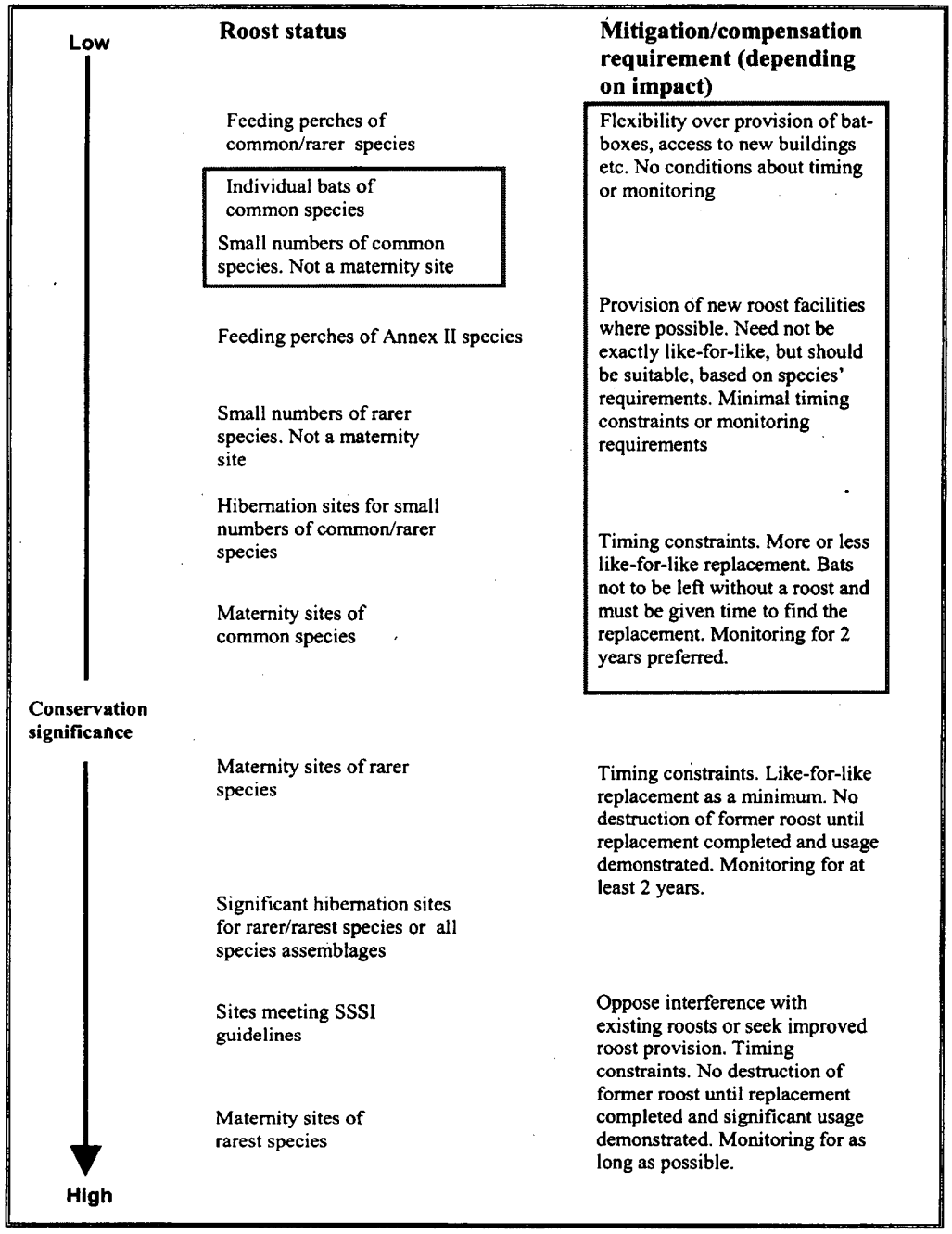


Figure 4. Guidelines for proportionate mitigation. The definition of common, rare and rarest species requires regional interpretation.

Examples of mitigation/ compensation.

(To be used should a bat loft be considered?)

Sources: English Nature's "Bat Mitigation Guidelines", Jan. 2004
Joint Nature Conservation Committee 'Bat Workers Manual' 3rd Edition, 2004

Walls

Walls can be faced with any type of brick or block, but if hanging tiles or weather boarding is not to be installed, then the face should be rough to facilitate landing by bats before they crawl into the roost.

Walls should be of standard hollow construction as these areas are used as roosts by most species. Part of the inner walls on the north, cool side of the building, should be thickened with an additional 220mm thick hollow block wall spaced 30mm away from the normal inner wall.

There will need to be various small gaps leading into the wall through the mortar lines to allow bats to crawl into crevices.

During construction, timber battens measuring 15x50mm should be inserted between blocks, both horizontal and vertical mortar lines and these battens can be withdrawn a few hours after laying the blocks to create access crevices into the hollows.

Roof structure

Bats tend to search for roost entrances around the apexes of gable ends. This is where most roost entrances are found.
The aim is to provide a number of gables (usually four for each roost) to give adequate opportunities for bats to adopt their preferred aspect. Also, by having gable ends there is the convenience of installing roosting space behind hanging tiles or weather boarding, both being favoured roosting sites for several crevice dwelling species.

Roofs should be constructed traditionally with a ridge board but not with trusses

Within the roof there should be unobstructed flying space. This should be a minimum of 2.5m high, when measured from the roof apex (ridge board) to the floor of the loft space.

Roofing felt should be traditional bitumastic and hessian which allows bats to hang from almost any point. Plastic or breathable membranes are can be unsuitable because bats have difficulty hanging up. If they (e.g. Tyvec, Klober or similar) are to be used wind break netting or Netlon 10x10mm hard plastic mesh stretched beneath membrane will be necessary.

Assuming the inside roof height is at least 1.5m, then internal partitioning of the apex allows a variety of secluded spaces to be created. Use a 50mm thick insulation board (many types), with a rough surface to facilitate bats landing, fitted to rafters and hanging down about one metre. These can be installed at about two metre intervals.

The top slate/tile batten needs to be placed 20mm from the ridge board.

At about two metre intervals along the ridge the roof felt should have 30x 100mm slots cut out beside the ridge boards to allow bats access to the ridge tiles (where most loft dwelling bats prefer to roost).

When the ridge tiles are laid it is important to ensure that the spaces within the ridge tiles remain unfilled with mortar and that there are lengths of tile which remain unobstructed.
Some blockages in the ridge are needed to prevent through draughts.

In addition it is useful to have a few small torn holes through the felt at several levels from apex to halfway down the roof slope to allow bats into the space between tile and felt (40x60mm holes torn on three sides and one end allowed to hang down).

Roofs often have double beams or rafters with small gaps between which provide crevices preferred by bats. One metre lengths of rafter can be added alongside the roof timbers spaced 20-25mm away with half bridged over to create a long enclosed cavity - It is always worth closing one

end completely and always the upper end if the roost is adjacent to a rafter.

Features such as these are most easily installed by the bat consultant after the roof has been constructed.

If timbers can be recovered from the structure being replaced, this is the ideal time to introduce them.
Before using treated wood in a roof where bats are expected to roost the wood should be placed on the ground in the open and vigorously brushed with a stiff yard broom. The purpose is to remove the loose deposits of copper, chrome and arsenic salts which remain on the surface and which are poisonous if ingested while a bat is grooming.

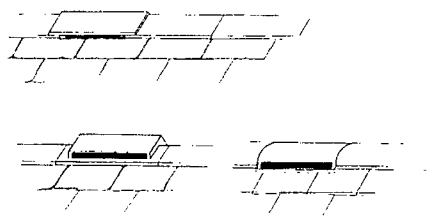
The gable ends should have an overhanging style with soffits to give bats a sheltered approach to the entrance.

When the roof felt is being placed over the end of the wall it should be supported by thin slate to ensure it does not fall by fatigue onto the brickwork, thus blocking the route bats gain access to the roof space. The work will need inspecting by the bat consultant before tiles are fixed.

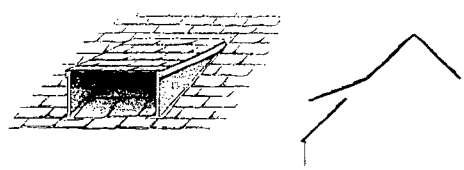
Roosts on walls
A variety of crevices can be provided on the walls at all heights from close to the floor (about 400mm above) to close to the ceiling. Indeed, some of the ceiling joists can have additional lengths added, with narrow gaps, similar to that described for the roof.

Narrow 'boxes' constructed of rough soft wood measuring 300mm deep and 450 - 600mm long with a narrow space about 30mm wide can be attached to the walls. The top and sides should be closed and, for longer boxes, some of the base. Such sites are used for hibernation by various species.

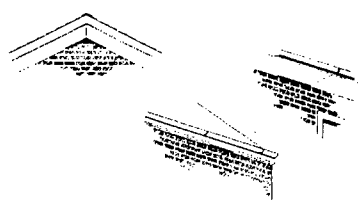
Entrances
Access can be both through crevice routes over walls and into the roof space as well as directly through a hole in the wall.
A range of entrance types is illustrated below:



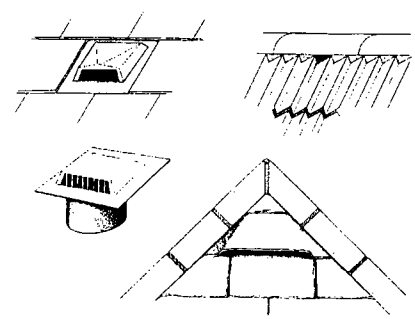
Ridge ventilators can be adapted as bat access points. It may be necessary to remove internal mesh or plastic mouldings.



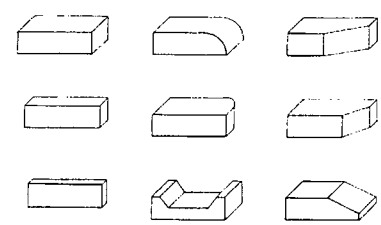
Dormer entrance, particularly suitable for horseshoe bats.



Access slits in soffits.



Lead saddle in place of a slate to allow bats access to ridge or roof void. Lead flashing around chimneys or other features can also be moulded to form bat access points.



Walling bricks for creating bat access points. A standard brick is shown top left. Purpose-made bat bricks can also be used.

Appendix 10b

Bat access holes.
Horseshoe bats prefer to fly into their roosts, but only small holes or slots are needed for other species and this also helps to deter colonisation by birds.
Note: The brick manufacturer Marshalls Clay Products, Howley Park, Quarry Lane, Woodkirk, Dewsbury, West Yorkshire WF12 7JJ,
Tel. 01132 203535, supply bat access bricks.

If hanging tiles and weather boarding are provided, small spaces should be created through the wall behind the coverings to give alternative routes into the cavity and building.
Waney edge boarding usually warps thus providing access crevices to the battening attached to the wall.

Access for monitoring and other purposes
One or more loft access points/trap doors should be provided.

Within the loft a walkway providing safe access to the whole of the roof-space should be provided.

The floor of the loft should be completely covered by a layer of heavy duty plastic to facilitate future management of any accumulations of bat droppings which may occur.

Light disturbance
Eternal lighting should be of the 'down lighting' type and should not light up the sky around the building or any bat access points.

Heating
Although the provision of heating is not essential, it seems to increase the probability of bats moving into a new roost.
Preferred alternatives are the use a remote heating system with appropriate heat transfer arrangement such as hot water fed by convection from the ground floor, or the use of a passive heating installation with solar panels on the lower part of the southerly facing roof and partially insulated water reservoir hung in the upper part of the roof. This set up also works by convection and should run without maintenance for at least 40 years.

Seeding the roost with droppings recovered from the roost being replaced
Droppings and any other materials impregnated with odours from the existing roost can be added to the completed building as these may encourage rapid colonisation. It is best to place these to one side of the roof in a line on polythene sheet, away from where an observer is likely to walk and clear of the apex where most roosting will occur and new droppings should be produced.

SCHWEGLER
Vogel- & Naturschutzprodukte GmbH
Heinkelstrasse 35
D-73614 Schorndorf / Germany
Telefon +49 7181 - 9 7745 0
Telefax +49 7181 - 9 7745 49
E-Mail: info@schwegler-natur.de
http://www.schwegler-natur.de

Bat Roost 1FQ

order no. 00 760/5

This is the ideal bat box for all types of bats that inhabit buildings. The bats may use it for roosting, to form a colony or to shelter their young.

Inside it has two main areas which can be viewed at any time by removing the front panel (see figure 1). The hole at the bottom provides the entrance and allows droppings to fall out. The box requires no maintenance or cleaning.

Bats search for and inhabit spaces which suit their own particular habits and requirements; their differing preferences have been carefully reflected in the design of this product. For example, the outside of the front panel has been roughened to enable the animals to land and hang on to it securely (see figure 2), and access is via a step-like recess to ensure that even inexperienced young bats quickly become accustomed to it.

Inside there are rough pieces of wood incorporated into the back of the box which are good insulators and are used by the bats as perches, and the inside front has a special porous coating which helps to maintain the ideal temperature inside the box. The internal layout means that there are three different areas from which bats can hang and which offer different degrees of brightness and temperature. There are also non-slip areas, gaps ranging from 1.5 to 3.5 cm in width, and places to hide (see figure 2).

Material:
The box is made in a special weather-resistant, air-permeable and rot-proof SCHWEGLER wood-concrete. Because this material is so long-lasting, and because the design of the box prevents water entering (see figure 3), the box will help bats for decades.

The front panel is painted during manufacture; if you wish to match an existing colour, it can be painted with an air-permeable wall paint. Note that the rear has been left untreated to provide better contact with the mortar if it is installed within the rendering on an outside wall. All metal parts with which the animals come into contact are made from rustproof material.

Installation:
Using the four screws and plugs provided (see figure 1), the box can be easily attached to most types of external brick, timber or concrete walls (see figures 3 and 4). It will also attract bats if it is placed inside a roof space or inside historic buildings. When it is fixed to timber we recommend that the gaps between the wall and the box are sealed with silicone to prevent moisture being trapped.

Installation height:
Position 3 metres or higher above the ground in a place where there is clear flight path for bats entering and leaving the box.

External Dimensions:
Height: 60 cm
Width: 35 cm
Depth: 9 cm.

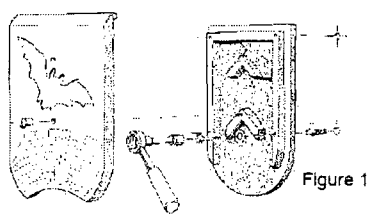


Figure 1

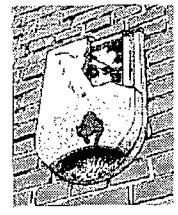


Figure 2

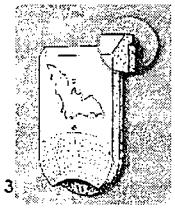


Figure 3

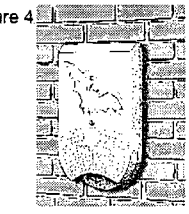


Figure 4

Appendix 12

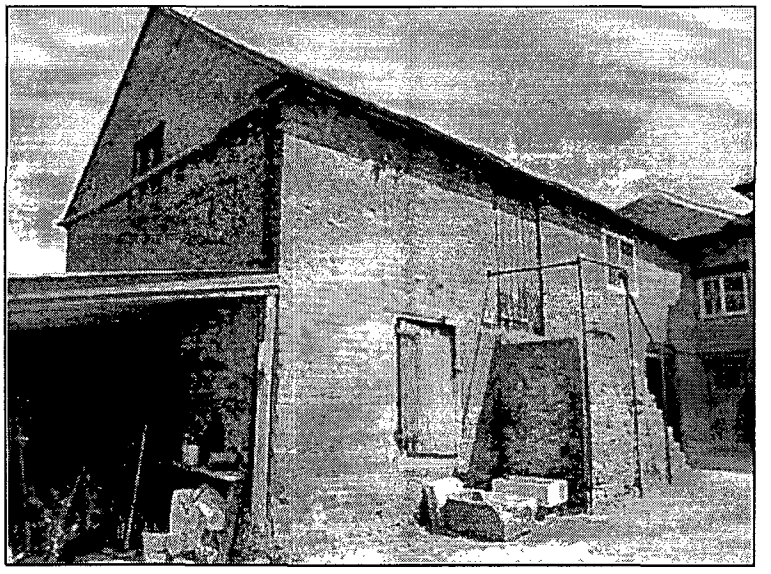
Wildways Ecology & Countryside Report

WILDWAYS
Ecology and Countryside

INITIAL DRAFT

ECOLOGICAL REPORT FOR CIDER MILL, LOWER COURT, PUTLEY, HEREFORDSHIRE.

September 2010



FOR Mr and Mrs Bradley, Lower Court, Putley, Herefordshire, HR8 2QP.

Architect:

Wildways: Martin Hales and Hilary Smith
39 Scotch Firs, Fownhope, Herefordshire, HR1 4NP.

ECOLOGICAL SURVEY REPORT FOR THE CIDER MILL, LOWER COURT, PUTLEY, HEREFORDSHIRE.

CONTENTS

ABSTRACT

- The proposal is to convert the Cider Mill into domestic accommodation. This will involve repairs to the roof and structure.

- The ecological assessment of the proposal concludes that the buildings are currently being used as bat roost and various species are present in the vicinity, and there are potential roost sites around the building.

- There are recent bird nests in the barn.

- The proposals would have a very low impact on wildlife if carried out at the optimum time of year, and with careful working practices.

- Habitat enhancements for bats and birds would be included in the development.

REPORT ON THE SURVEY FOR PROTECTED SPECIES AT LOWER COURT, PUTLEY, HEREFORDSHIRE.

1.0 INTRODUCTION

An application for planning permission will be submitted for the conversion of a cider mill at Lower Court, Putley, Herefordshire. A report on the presence of European Protected Species is required to support an application for planning permission.

1.1 GENERAL DESCRIPTION OF THE SITE

The proposed development will be the conversion of a farm building into domestic accommodation. At the time of survey two separate barns are being considered as likely candidates for this purpose.

The site is in a rural location approximately 10km east of Hereford, Herefordshire (SO 645376). To the west of the farmhouse lies an adjoining brick and timber-framed barn (Barn 1). To the north of the farmhouse is a second stone and timber-framed barn (Barn 2) which lies partially sunken in the ground. See appendix 1 for location map.

Barn 1 is in a reasonable state of repair, and contains the old cider mill stones on the lower floor. The lower and upper floors of the barn are used for storage. Barn 2 has exposed roofing timbers having had the tile covering recently removed because of the poor condition of the timbers supporting it.

Adjoining land use is agriculture dominated by orchard, with some of the nearby land in entry level Countryside Stewardship Agreements.

2.0 SURVEY AND SITE ASSESSMENT

2.1 PRE-EXISTING INFORMATION ON SPECIES AT SURVEY SITE

Herefordshire Biological Records Centre: a data search for protected species from records held by Herefordshire Biological Records Centre was requested, covering an area 2km from the survey site.

2.2 STATUS OF SPECIES IN THE LOCAL/REGIONAL AREA.

Herefordshire supports European Protected Species. All bats are Biodiversity Action Plan species in the county. There are reasonable records from between 1981 and 1995, and increasing numbers of records between 1999 and the present. Pipistrelle bats are the most common and numerous species present in the county. Brown long-eared bats are often found, in small numbers, in the roofs of older buildings during bat worker's visits.

2.3 OBJECTIVES OF THE SURVEY

- To determine whether bats are affected by the development proposals
- To determine species of bats, types of roost and numbers
- To determine the use of the buildings by birds
- To assess the impact of the development on the surrounding habitat, possibly being used by protected species.

2.4 SURVEY AREA

The buildings and surrounding field were surveyed as far as health and safety allowed.

2.5 FIELD SURVEY: METHODOLOGY

Habitat survey: a basic habitat survey of the immediate surroundings to the building and of the field was carried out to identify other roost sites, foraging areas or potential flight paths for bats and nesting/feeding habitat for birds.

Daylight search for evidence of use by bats, including droppings, feeding remains, carcasses and potential roost sites. This was done by close searching of the ground, walls, and roof with the aid of binoculars and torch. A survey of the buildings for birds was done, looking for owl pellets, roost and nesting sites.

Dusk surveys to watch for the emergence of any bats from the buildings. Two separate barns (Barn 1 and Barn 2) are being considered for development. Three surveys, consisting of two evening emergence surveys and one dawn roost survey, were carried out, each with two bat surveyors at each barn. A variety of bat detectors where used, including a Mini 3 bat detector, a Bat Box 3 detector and Pettersson D240x detectors. This provided a mixture of heterodyne and time-expansion detection capabilities. Time expansion recordings where made using an Edirol R-09 digital recording device and resultant sonograms where analysed using Wavesurfer and TF32 sound analysis software. The type of call can help to identify some bat species. The number of bats present and length of time they are within range of the detector affects the accuracy of this type of identification.

The table below gives details of the survey events:

Date	Survey type	Start time	Stop time	Start temp. C	Stop temp. C	Rain	Wind	Cloud	Number of surveyors
13.7.10	Initial day search	-	-	-	-	-	-	-	2
13.7.10	emergence	2107	2254	15.5	14.5	0	0	50%	2
12.8.10	dawn roost	0400	0543	9.5	8.5	0	0	10%	2
23.8.10	emergence	2022	2154	15.2	13.5	0	1	10%	2

3.0 RESULTS

3.1 ADJACENT HABITAT

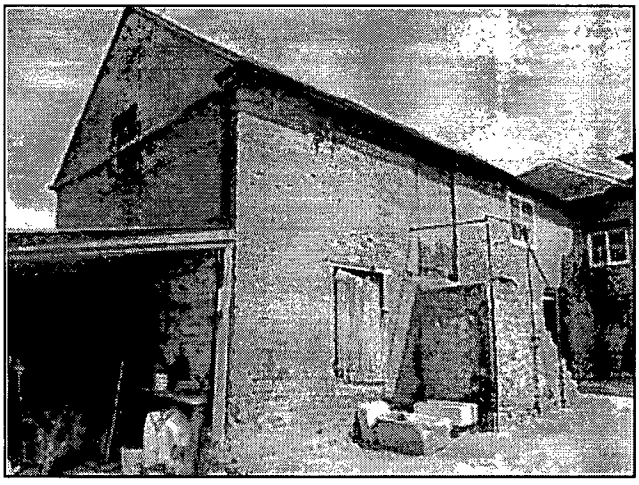
Lower Court farm lies at 80m above sea level and within an area of east Herefordshire known as the Woolhope Dome. It is generally agricultural land, under permanent orchard and pasture grassland (see appendix 2). There are several ancient semi-natural broad-leaved woodlands within 1.0km of the barn site, and several smaller broad-leaved secondary woodlands. Mature tree-lined hedgerows give good connectivity between the orchards and many of the surrounding woodlands.

There are numerous small ponds in the vicinity of the farmhouse, running along a small stream bordering the orchard to the north of the property, and larger ponds nearby, and adjacent to, the church and at Putley Court.

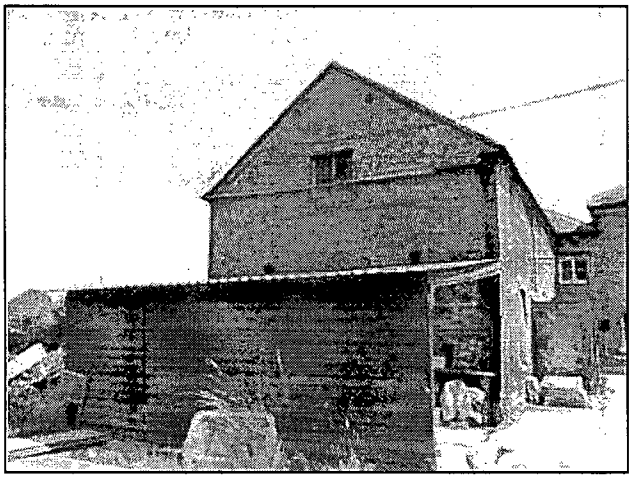
3.2 BUILDINGS:

The buildings surveyed are:- 1 Barn 1 – cider mill
2 Barn 2 – cider storage barn

1. BARN 1

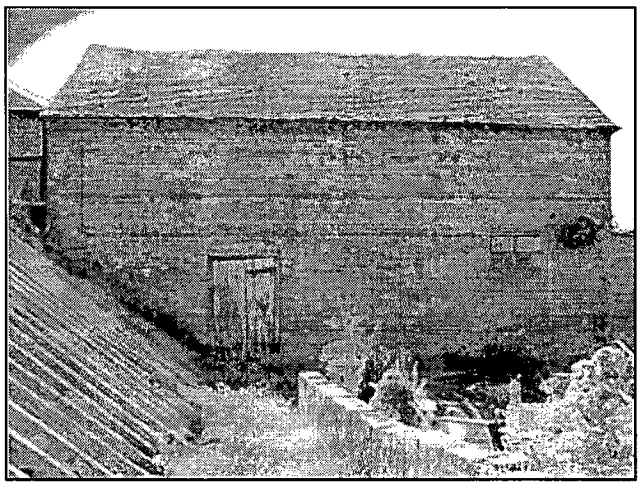


Cider Mill: south facing aspect showing brick work construction with stone access steps to upper floor. Tile roof.



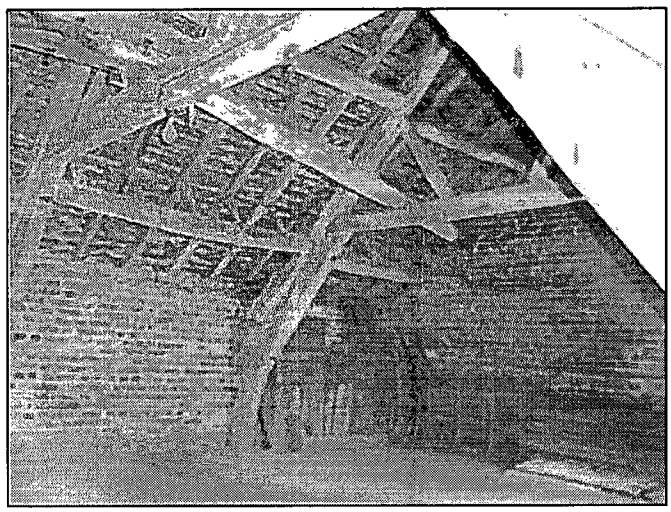
Cider Mill: west facing aspect showing brick work construction with boarded window to upper floor.

A lean-to provides garage space, used for storage, with an open front and corrugated panel roof. The walls are of timber construction.

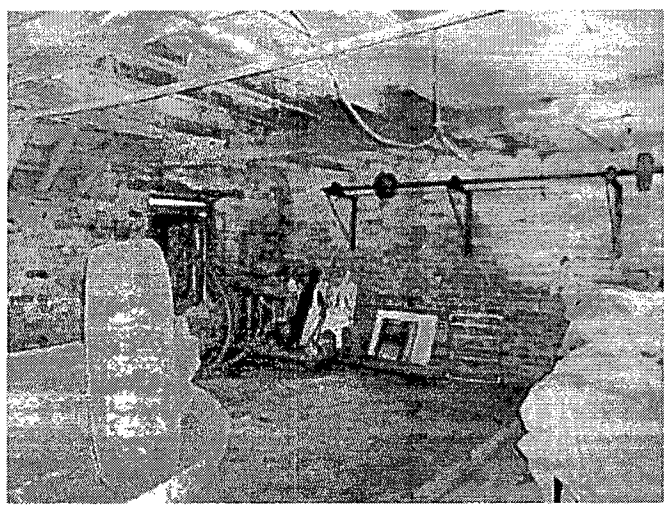


Cider Mill: north facing aspect showing brick work construction with door access to lower floor area.

The open roof timbers of barn 2 are shown adjacent and to the north of barn 1.



Cider Mill: upper floor showing exposed internal brick work construction with clay tiles mortared above a traditional timber frame.



Cider Mill: lower floor showing exposed internal brick work construction with exposed timber ceiling.

The old cider mill stones are still in position on the concrete and stone floor.

Barn 1 is under a clay tile roof with moss, with the occasional tile missing or loose. Externally, it is mostly of brick construction and loss of mortar and movement has given rise to crevices and cracks on the exterior of the wall. The west elevation has a lean-to shelter/garage space with an open frontage and corrugated sheeting roof. The east elevation directly connects with the main farmhouse.

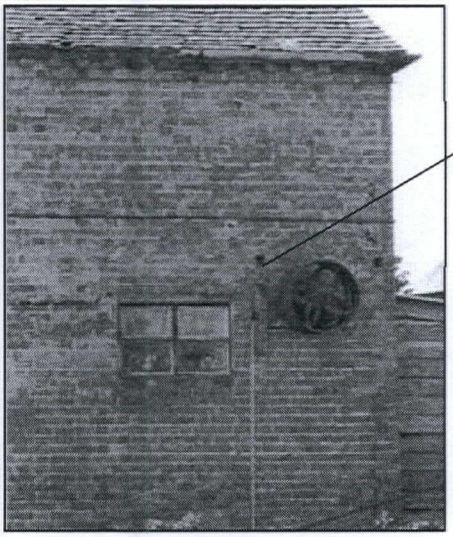
Internally, the barn is divided into 4 traditional timber framed bays. It is used as a storage area.

Daytime search:

Swallow, swift and house sparrow were noted in the vicinity of the barn but no active bird nests were noted internal to the property. An active spotted flycatcher nest was noted on the north external aspect of the cider mill, adjacent to an old pulley wheel, inside a brick wall cavity.

On the lower floor of the cider mill, a small number of bat droppings were noted. Small droppings typical of pipistrelle species were found on a wood panel in the south east corner, larger droppings more typical of long-eared bats were found on the window sill to west of the stone

access steps. Further large droppings were found scattered around the storage material of the lean-to structure on the west gable end of the cider mill. Reasonable bat access could be gained to the lower floor via gaps below the window aperture, and north aspect door aperture.



North aspect of Cider Barn: Spotted flycatcher nest active at time of site visit in July 2010.

Bat dropping were also noted on the upper floor of the cider mill. Bat droppings typical of pipistrelle and long-eared species were found scattered on the boarded floor of the barn (<50). There are gaps in the timber joints above the tie beams and bracing timbers. Potential bat access points were noted below the roof purlins at the west gable end, and above the window shutters, and above the length of the wall/roof plate.

External brickwork carried crevices in the west gable end, particularly above window height, and above windows and door in the south facing wall. Brick work crevices were also noted above the cellar area at the north east aspect of the barn.

Wasp nests were noted in the upper floor, and a hornet was noted flying in the upper floor space.

2. BARN 2

Cider storage barn: sub-terranean to wall plate height. Clay tiles have been removed from the weak roof timber structure and stacked nearby.

Barn 2 adjoins the farmhouse and Barn 1 on the north aspect of these buildings. The long walls of Barn 2 are in direct contact with the soil to their full height, and are of stone construction with internal mortar cracks evident. The brick gable end supports a few mortar crevices. The large roof structure is decaying and several joint crevices are apparent. There is a small flight of steps down to the floor in the south east corner and there is an access door to a cellar area which was blocked up and not accessible at the time of survey.

Daytime search:

The floor of Barn 2 was searched thoroughly for signs of bat use but no droppings were found.

3.3 BARN 1 CIDER MILL EMERGENCE/DAWN ROOST SURVEYS:

See table above for details of timings and weather conditions.

ACTIVITY SURVEYS

Survey 1: Two surveyors – one N of barn (MH) by Barn 2, one on SW corner (HS).

TIME	SPECIES	ACTIVITY
2148	1x Common Pipistrelle	Emerged from west aspect of farmhouse into yard
2201	1x Common Pipistrelle	Flew into yard from west towards farmhouse
2201	1x Common Pipistrelle	Emerged from west end of Barn 1, heading N
2207	1x Common Pipistrelle	Feeding activity in adjacent garden south of Barn 1
2207	1x Common Pipistrelle	W to E across north of Barn 1, continuous circling and feeding to 2252
2211	1x lesser horseshoe bat	South of barn1, not seen
2213	2x bats seen over house roof	Not seen, not heard, flying NE to SW
2214	1x Common Pipistrelle	Feeding activity in adjacent garden south of Barn 1
2215	1x long-eared bat	E to W across north of barn 1
2216	1x bat	Flyby over farmhouse roof then S, not heard
2220	1x long-eared bat	Feeding E of barn 2
2223	1x Common Pipistrelle	Feeding activity in adjacent garden south of Barn 1
2223	1x long-eared bat	Circling and feeding at E of farmhouse
2225	1x Common Pipistrelle	Feeding activity in adjacent garden south of Barn 1
2228	2x bats seen over house roof	Not seen, not heard, flying S to N
2235	1x lesser horseshoe bat	N of Barn 1 flying W to E
2255	1x long-eared bat	On timber frame inside upper storey of Barn 1
End		

(Long-eared bat presumed to be brown long-eared bat in Herefordshire)

Survey 2: Two surveyors – one N of barn (MH) by Barn 2, one on SW corner (HS).

TIME	SPECIES	ACTIVITY
0405	1x long-eared bat	Not seen, N of barn 1
0408	1x bat	Faint bat call in barn 1, upper floor
0416	1x long-eared bat	No to S across west gable end of barn 1
0417	1x long-eared bat	Not seen, N of barn 1
0425	1x long-eared bat	Not seen, S of barn 1

0428	1x long-eared bat	Not seen, N of barn 1
0435	2x long-eared bat	Flying W of barn 1 to modern barns
0443	1x SopranoPipistrelle	Faint call, N of barn 1
0450	1x long-eared bat	E to W across north of barn 1, seen
0455	2x long-eared bat	Feeding in adjacent modern barns
0456	2x long-eared bat	Feeding in adjacent pole barns and timber open fronted shed
0500	1x Common Pipistrelle	Feeding in yard, S to adjacent garden
End		

(Long-eared bat presumed to be brown long-eared bat in Herefordshire)

Survey 3: Two surveyors – one N of barn (MH) by Barn 2, one on SW corner (HS).

TIME	SPECIES	ACTIVITY
2047	1x Soprano pipistrelle	From W to E across north of barn 1, feeding
2050	1x Soprano pipistrelle	In adjacent garden, S of barn 1
2052	1x Soprano pipistrelle	Faint call
2052	2x Common Pipistrelle	Emerged from brickwork, top right of pulley wheel on north aspect of barn 1, flying W.
2059	1x noctule bat	Commuting, not seen
2101	1x Myotis bat	Entered yard from S, returned to garden
2101	1x Soprano pipistrelle	Not seen, N of barn 1
2105	2x Common Pipistrelle	Entered yard area from W, returned
2105	1x Soprano pipistrelle	Feeding W to E across north of barn 1 and over barn 2, circuits for further 3 minutes
2114	1x Common Pipistrelle	Feeding in yard area S of barn 1
2124	1x Soprano pipistrelle	Feeding N of barn 1
2128	1x Common Pipistrelle	Into yard and out, S of barn 1
2129	1x long-eared bat	Feeding N of barn 1 and over barn 2, for 2 minutes
2135	1x bat	Flying in upper storey of barn 1, no call
2137	1x Soprano pipistrelle	Feeding N of barn 1
2140	4 (+) bats	No calls, flying gable end and N of barn 1
2143	1x noctule bat	Commuting, not seen
2147	1x long-eared bat	Not seen
2201	2x long-eared bat	Seen in upper storey of barn 1, on ridge beam and partially under a roof tile.
End		

(Long-eared bat presumed to be brown long-eared bat in Herefordshire)

Fresh bat droppings noted on upper floor of barn 1

Tawny Owl calls noted during dusk survey.

3.4 HRBC DATA SEARCH

There are 134 records of priority or protected species found within 2km of the survey site. Kestrel was recorded close to the site in 2005. Tawny Owl (2010) and Barn Owl (2005) are recorded within 200m of the site. A lesser horseshoe bat roost (2008) is recorded within 200m of the site, and noctule bat (2008), Myotis bat (2008), Soprano pipistrelle bat (2008), Common pipistrelle bat (2008), and brown long-eared bat (1987) have all been recorded within 500m of the site.

Two separate sites have recorded great crested newt (2007) within 500m of the site, and a site neighbour described a 1999 survey of the pond adjacent to the church as recording great crested newt within 100m of the site. Great crested newts are also a European Protected Species and their future presence at the survey site should always be considered a possibility.

Several records exist for dormouse, the nearest in 1990 within 400m west of the site in ancient semi-natural woodland.

4.0 INTERPRETATION AND EVALUATION

4.1 PRESENCE/ABSENCE

The surveys concluded that at least six species of bat were present in the area of Lower Court barns. There is a small colony of Common pipistrelle *Pipistrellus pygmaeus* in the wall of the cider mill barn1, with an emergence point from a brick cavity adjacent to an old wheel pulley on the north west corner.

From the quantity of droppings and recorded presence at the dawn and dusk survey it is likely that Brown long-eared bat *Plecotus auritus* are also roosting inside the upper storey of the cider mill Barn 1. The exact location of the roost sites for these bats could not be ascertained during these surveys.

Noctule bat, Soprano pipistrelle, Lesser Horseshoe bat and a Myotis bat also use the local environment of the site to forage for insects.

Birds noted as nesting within the barns surveyed include spotted flycatcher. An active spotted flycatcher nest was noted adjacent to the same wheel pulley hosting a small colony of pipistrelle bats, but in a separate brick cavity. There was no indication of owls using the barns to roost.

4.2 POPULATION SIZE CLASS ASSESSMENT

From the evidence gained from the bat surveys it is possible to comment on the population sizes and roost status of the bats recorded. The Common pipistrelle *Pipistrellus pipistrellus* colony observed in the wall of the cider mill is not likely to be a maternity colony which usually has an average of 75 individuals. Males bats are known to roost singly or in smaller groups. There was no evidence of pipistrelle bats roosting in the barn although some of the smaller droppings on the upper barn floor suggest *Pipistrellus sp.* does have access to the interior and feeds there on an occasional basis.

Only small numbers of Brown long-eared bat *Plecotus auritus* are thought to occupy the cider mill. However, this species is known to support maternity colonies with low population numbers and given the difficulties of detecting this bat the possibility of a maternity roost should not be discounted.

The recording of Lesser horseshoe bat *Rhinolophus hipposideros* in the vicinity of the cider mill was not unexpected given the close proximity to a known roost site within 200m. there was no evidence of Lesser horseshoe bat *Rhinolophus hipposideros* within the cider mill. It is likely that the nearby farm buildings are used as temporary night roosts by Lesser horseshoe bat *Rhinolophus hipposideros* as they are well within the known foraging range for this species.

4.3 ADJACENT HABITAT

Much of the habitat which surrounds Lower Court is managed as modern orchard. As such the grass field margins, boundary trees, hedgerows and orchards will through normal management give nature conservation benefits. This is likely to have a positive effect on the bat species found on site by boosting insect levels locally.

Long-eared bats feed on moths and other large insects usually from around trees and shrubs, whilst Pipistrelle bats take small insects, caught in flight above hedgerows, trees and other

vegetation. The orchard and garden adjacent to the cider mill were obviously a foraging area for bats in the vicinity, and the presence of semi-improved grass to the east of the site with young trees and shrubs, and hedgerows provides a good food resource. The hedgerows are used as flight ways through the countryside to good feeding areas which will be found at nearby broad-leaved woodland and along the small streams and series of ponds. Ponds and wetland areas are also a good source of insect food, and the maintenance and creation of this type of habitat would be positive.

4.4 CONSTRAINTS OF THE SURVEY

Number of surveys: Only three survey visits, could be carried out within the brief for the survey.

Safety of building; Parts of the building, particularly the old cellar room once accessed from the sunken barn 2, was not accessible during the survey period.

Brown long-eared bats: These bats may have colony sizes from 10 – 30 bats, but part of the colony is often hidden in cracks or crevices in the roof and around timber beams. They emerge later in the evening, and together with very quiet echolocation call are hard to see and count. Therefore, it is hard to discount maternity colony presence on the basis of low numbers of bats observed.

Lesser horseshoe bat: these bats also have relatively quiet echolocation calls and the bat has to fly close to a bat detector in order for it to be heard, making it hard to note their presence.

5.0 SUMMARY OF SURVEY FOR BATS AND BIRDS

5.1 BATS

- This survey has identified that bats do use the Lower Court cider mill as a roost site.
- At this time of year the presence of only a small number of bats possibly roosting in the cider mill and the general state of the building, suggests that it is currently used as an occasional roost, and not a maternity colony. However, as stated above, all the bats present in the building may not have been able to be seen. Maternity roosts do move through the summer, and the possibility of a maternity roost cannot be ruled out.

All species of British bat are protected by the Wildlife and Countryside Act 1981 through inclusion in Schedule 5. The Conservation (Natural Habitats etc.) Regulations 1994 reinforces this Act and these acts make it illegal to:

- **Kill, injure, capture or disturb bats**
- **Obstruct access to bat roosts**
- **Damage or destroy bat roosts.**

Building development, such as the conversion of the cider mill into alternative use would require a "European Protected Species Licence" under the Habitat Regulations. This licence is administered by Natural England, and it is not a foregone conclusion that a licence would be issued. The application for a licence also has to be completed by a suitably experienced and qualified person and requires further surveys and a Method Statement, as would also be required by the planning authority. It is likely that further supervision work by an experienced ecologist will be required during the development of a barn, especially during the dismantling of any roof structures or timber beams.

5.2 BIRDS

There was no evidence of any nesting birds in the cider mill barn at the time of survey. The only active bird nest found was that of a spotted flycatcher *Muscicapa striata* within a brick cavity on the north facing external wall. This is a summer migrant bird and usually remains faithful to nesting sites.. Other birds within the near vicinity of the cider mill included dunnock, robin,

blackbird, house martin, swift, and swallow. A tawny owl was heard during one of the dusk surveys.

Bird's nests are protected under the Wildlife and Countryside Act 1981 from damage or destruction whilst in use or being built.

5.3 AMPHIBIANS

There are two known sites recording Great Crested Newt *Triturus cristatus* within 500m of Lower Court. The nearest pond is south of the cider mill adjacent to the church but separated from it by a solid mortared stone wall, further buildings and hard stoned track and concrete floor areas. The local habitat to the south and east is ideal for these species, with a bank between the pond and church offering an ideal potential hibernacula site. The proposed development of the cider mill is not likely to impact on any local amphibian population.

6.0 ASSESSMENT OF THE IMPACTS OF DEVELOPMENT ON BATS

The following activities could have an impact on bats. Most of these impacts can be reduced by the inclusion of mitigation measures in the design, and timing and implementation of the work.

During development;

Activity	Impact
Clearance of site of debris inside and outside building	No appreciable impact
Removal of roofs	Bats could be roosting between tiles/slates and timbers or under the ridge tiles, and will be disturbed.
Demolition of lean-to's and steel structures	No appreciable impact
Alterations to floors and internal timber frame	Damage to roost sites, bats may be using crevices in timber frames
Timber treatment	Bats are sensitive to timber treatment.
Building work: re-roofing, repair to windows, rebuilding walls. Repairs to brick mortar joints.	Bats may be roosting within cavities around windows and elsewhere within building. Loss of roost sites
Noise and dust	Disturbance

Long-term impacts

The development of the cider mill barn 1 will result initially in the loss of bat roost sites which have been used, probably, for a number of years.

Post-development interference impacts

Activities	Impacts
Disturbance	Some bats, particularly the Pipistrelle, do not appear to be unduly affected by general noise or lighting, and usually roost around occupied buildings. However, strong security lighting, which could be set off by bats, near their roost access points can affect them.
Domestic pets - cats	Cats can have a significant impact on bat colonies, particularly where they can gain access to the roost access point.
Dislike of bats by new owners and requests for their removal	Can result in total exclusion of bats from their roost.

Mitigation measures installed for bats are subsequently altered by owners	Loss of roosts

7.0 ASSESSMENT OF THE IMPACTS ON BIRDS

There will be some loss of nesting sites opportunities for birds from barn development. Birds and their nests are protected by law. The impact on birds will be greatly reduced by avoiding building operations in the birds nesting season and by habitat improved and the provision of a variety of nest boxes.

8.0 MITIGATION MEASURES FOR BATS

The strategy at Lower Court cider mill is to maintain bats at a favourable conservation status and should include the following:

- **Planning and during development:**

Activity	Mitigation measures
Conversion to residential unit	Bat loft/s with access points
	Bat bricks
	Roost sites
	The installation of bat boxes, bat access points to lofts and other features should be supervised by a bat worker to ensure that it is carried out correctly
During building work	
Demolition and brickwork repair	Timing: Work will be carried out at a time least likely to disturb bats (March to early May, Sept – October) Phasing: Work on the buildings can be phased to reduce total impacts. . Supervision: Further survey work by the licence holder would need to be carried out immediately prior to any destructive work to ensure that no bats are present, particularly if weather conditions mean that bats could be roosting inside cavities in walls or timber joints.
	Any creeping vegetation such as ivy may need to be removed in order to carry out building work. Stems should be cut in Feb/March and allowed to die back before stripping. Complete by April
Timber treatment	Will only be used where required. Use of recommended method, at an appropriate time. See below.
Noise and dust	Timing: Noisy and dusty work will not take place in the breeding season. Dust suppression: Where dust may disturb bats, protective sheeting will be used. Phasing: Phasing of work will restrict areas of noise and dust.
Bats found during works	If any bats are found during works the licence holder or vaccinated bat worker will be called out. A short induction course on bats should be arranged for the work force.

- **Post-development:**

Activity	Mitigation measures
Disturbance from lights, noise	No security lights are fixed in proximity to bat access points.
Dislike of bats by residents and requests for their removal	Information is given to new owners about bats, their ecology, current legislation, and what to do if they find one. Position bat roost exit points, bricks and boxes, if possible, away from windows and external seating areas to avoid droppings from causing a nuisance.
Mitigation measures installed	Restrictions on owners entering the bat lofts, or removing or

for bats are subsequently altered by owners.	blocking up any provision for bats. The roost can be registered. Should the property be sold on, potential buyers must be informed of the status of the bat roost.
Use of site by bats – access points or positioning of boxes may need to be amended. Maintenance of bat loft/s	Monitoring: three times a year, June to August to assess use, and identify any improvements necessary. Continue as long as possible Annual clearance of droppings in October, check of access points

Timber Treatment (Ref: Bat Workers Manual JNCC 1999).

Synthetic pyrethroids are now commonly used chemicals in treating timber against insects. Permethrin and cypermethrin have been tested on bats, and appear to be safe for use in bat roosts. Boron compounds, such as Borester 7, disodium octoborate and boric acid, are used for the treatment of furniture beetle infestations, and are relatively non-toxic to mammals.

Some fungicides (e.g pentachlorophenol PCP) are very toxic to bats. Zinc and copper based fungicides have a low mammalian toxicity, but only zinc octoate, copper naphthenate and acypetacs zinc have been tested on bats and proved to be safe.

Timbers should be cleaned by brushing, once it has been established that no bats are present in timber joints etc, and treatment applied by hand, not fogged.

Any new wood which is to be used in the bat loft must not have been pre-treated with lindane or TBTO (Tributyltin oxide).

- **Habitat creation, restoration and enhancement** – include opportunities for establishing new native species hedgerows following newly formed site boundaries. The local area is reasonably low lying and an opportunity to create a new pond whilst suitable machinery is on site would provide an ideal gain to local wildlife.

Provision of alternative roost sites:

- **Bat Loft/s**

Brown long-eared bats (Plecotus auritus) usually roost under ridge ends, at junction of a number of roof timbers, around a chimney or on roof slopes. They are often found below roofing felt or unlined roof tiles along the ridge beam, and fly internally before emerging from the building. They can use a variety of access points away from roost site, sometimes travelling through cavity walls to reach them (Hutson1993). The most successful bat loft for this species is to use the whole length of the roof at tie beam level. The minimum size requirement for a loft is 9 – 10 m long, 1.8m high, with correct bat access points to allow access by bats, but which are not too draughty or of a size to allow birds in. They also need access for humans to clear out droppings if necessary. Suitable loft voids could be created within the upper storey of the cider mill and the adjacent cider storage barn using a connecting access structure. An adjacent pole barn also presents a similar opportunity to create a roof void.

- **Other provision for bats:**

Pipistrelle bats roost in small gaps under soffit boards and eaves, and external cladding, between roof tiles and insulation material, around window frames and in cavity walls. They favour a north-east to south-westerly aspect, and places to move to depending on the temperature.

Where possible the existing identified roost sites should be maintained.

Bat bricks and boxes can also be installed on main buildings and any associated garages.

- **Habitat enhancement**

Hedgerows and trees on adjoining land in the same ownership.

Bats use hedgerows both for foraging and for navigating through the countryside. Tall hedges, 3 – 4 m tall are the best, and hedgerows under the same ownership should be managed on a rotational basis, cutting only once every 3 years, and leaving to grow taller which will benefit both bats and birds.

Trees will be maintained on site. Any mature trees on adjacent land in the same ownership should be retained, where they do not present a hazard, to provide tree roost sites.

9.0 MITIGATION MEASURES FOR BIRDS

There was evidence a variety of birds using the local environs of Lower Court. Where possible the existing identified nest site for spotted flycatcher should be maintained. Artificial nest boxes of differing patterns can be installed for birds within the property.

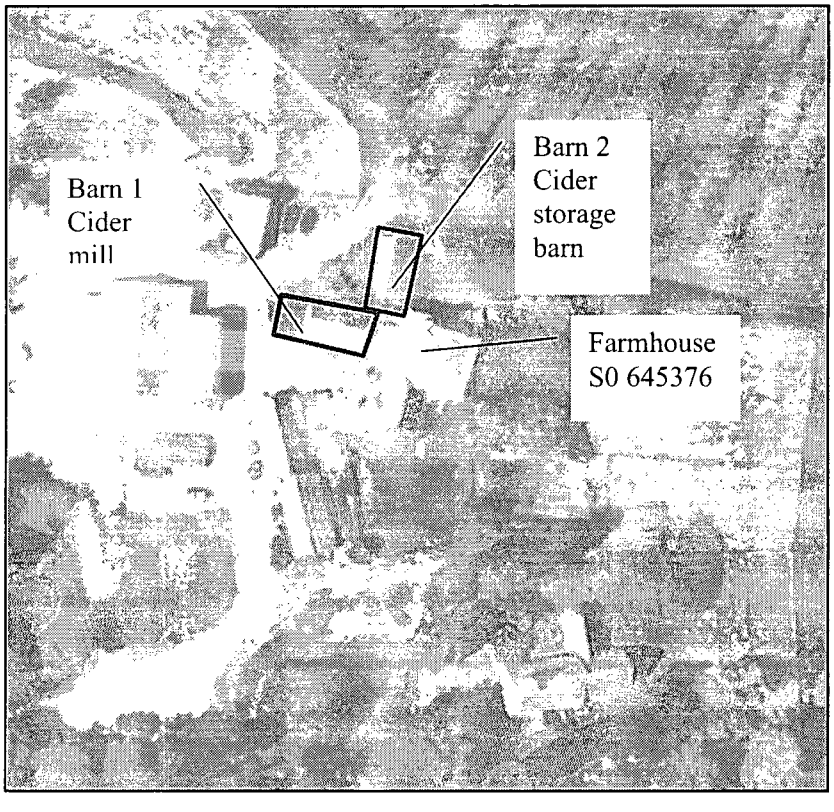
Tawny owls were noted in the area and owl boxes could be erected in suitable trees nearby.

10.0 SUMMARY

Although the cider mill at Lower Court is used as roost sites for bats and nesting sites for birds, the following features within any future development could take into account the conservation requirements for bats and birds:

- **Timing** of the work: it should be possible to carry out the work in such a way that the conservation requirements for bats and birds can be met.
- **Adjacent buildings**: Particularly the cider storage barn 2 could provide a good opportunity to provide bat roost sites and bird nesting places which might not be ideal within the developed barn.
- **Building design**: timber weatherboarding, if erected to provide gaps, will enhance bat habitat.
- **Provision of bat bricks**, boxes and bird/owl boxes in the development and surroundings as appropriate.
- **Management of adjacent land:** the management of adjacent land and ponds will also benefit bats by increasing their invertebrate food resource.

APPENDIX 1: LOCATION OF BARN STRUCTURES IN RELATION TO FARMHOUSE



APPENDIX 2: SURROUNDING HABITAT