

**Protected Species Surveys at
Keeper's Cottage,
Sandy Lane, Hanmer, Wrexham
SY13 3DL
SJ 44117 38932
on 2nd, 5th and 30th July
and 25th September 2015**

**Version 2
14.3.16**

Survey by:
Susan Worsfold BSc Hons GradCIEEM
for Worsfold and Bowen
of Springfields, Station Road,
Llanymynech,
Shropshire. SY22 6ED

01691 772310
s.worsfold@hotmail.co.uk
01691 831450
mike.worsfold@tiscali.co.uk

Requested by:
C and J Lane (owners)

Surveyor & Town Planner:
Tim Evans BSc Dip EP
The Shed, Pant Lane
Dudleston
Shropshire
SY12 9EP

01978 710553
timevans58@gmail.com

Summary

Protected species surveys of buildings and land at Keeper's Cottage, Sandy Lane, Whitchurch, Wrexham SY13 3DL were carried out on 2nd, 5th and 30th July and 25th September 2015 by Susan Worsfold, Michael Worsfold and Craig Thomas for Worsfold and Bowen of Springfields, Station Road, Llanymynech, Shropshire SY22 6ED.

The area investigated is shown in Annexes 1-2.

Evidence of protected species was searched for at the request of C and J Lane the owners, the surveyor being Tim Evans BSc Dip EP, The Shed, Pant Lane, Dudleston Shropshire SY12 9EP, in relation to a proposed extension following renovation of the cottage.

Details of the survey methods and findings are included. The findings are supported by photographic evidence.

Plants

No important or endangered species of plants were found on the site.

Birds

Swallows have been using the barn therefore compensation should be provided for the loss of this nesting site in the form of an outbuilding or porch. Bird boxes should also be included as described on page 12.

Great crested newts (GCN)

There is not considered to be any risk of harm to individual GCN or threat to their conservation status.

Bats

Renovation of the cottage and the proposed extension would entail the loss of a long eared bat roost and soprano pipistrelle roost. Therefore a licence will be needed from Natural Resources Wales (NRW) before work commences. A draft Method Statement to accompany this is given on page

Other protected species

There was no evidence of any other protected species on the site or within 30 m of the site.

Scope

Protected species surveys of buildings and land at Keeper's Cottage, Sandy Lane, Whitchurch, Wrexham SY13 3DL were carried out on 2nd, 5th and 30th July and 25th September 2015 by Susan Worsfold, Michael Worsfold and Craig Thomas for Worsfold and Bowen of Springfields, Station Road, Llanymynech, Shropshire SY22 6ED at the request of Tim Evans BSc Dip EP, The Shed, Pant Lane, Dudleston Shropshire SY12 9EP, in relation to a proposed extension and renovation.

Evidence of the presence of protected species was sought as defined in:

The Conservation of Habitats and Species Regulations 2010 and listed in:

Schedule 2. European protected species of animals

Schedule 5. European protected species of plants

The protection of Badgers Act 1992

Protected species which might be associated with such a site include bats, owls and other breeding birds. The area around the site might be used by badgers, dormice, amphibians and reptiles, and might contain protected plant species.

Background

The cottage and outbuildings have not been occupied for some years and are in need of repair. It is proposed that the cottage is renovated to make it habitable and extended, while the outbuildings are demolished.

Procedures and equipment

A risk assessment was made before entering the building. A visual inspection was carried out to assess the potential or actual use by bats, of the interior and exterior of the building. It was searched systematically for any signs of bats, including droppings, rub marks and urine stains at entrances to roosts and insect remains, such as moth or butterfly wings. Crevices were checked where possible. Powerful lamps (LED Lenser P14, Cluson Clu-Briter) were used for examination of interiors and under eaves. Binoculars were used to examine parts which were not otherwise accessible. Photographs were taken of all areas and those of relevance are shown in Annex 4.

Three activity surveys were carried out to establish whether the building was being used by bats and the nature of that use if any.

Bat activity surveys were carried out in accordance with *Bat Surveys: Good Practice Guidelines*, 2nd Edition. Bat Conservation Trust. (Hundt, L, 2012) and *Bat Worker's Manual*, JNCC (McLeish, A. P. and Mitchell-Jones, A. J., 2004)

Frequency division detectors were used to record any bat sounds for later analysis on the computer. These were Anabat SD1, Anabat SD2, Anabat II, Echo Meter EM3, Echo Meter EM3+, Anabat Express and Song Meter SMZC.

Personnel

Susan Worsfold (SW) BSc Hons Grad CIEEM Licensed bat worker and VBRV, registration number CLS0895 2015-12555-CLS-CLS (CL15 Bat Roost Visitor Level 1) and registration number CLS 0895 2015-12556-CLS-CLS (CL18 Bat Survey Level 2) (NE) and 55624-OTH-CSAB:2014 (NRW); Licensed great crested newt worker, registration number 2015-8194-CLS-CLS (NE) and 55625:OTH:SA:2014 (NRW)

Michael Worsfold PhD (MW) Licensed bat worker (level 2) and bat roost visitor trainer, class licence number CLS0 1727 (WML-CL16, WML-CL18) (NE) and Level 4 (WML-A34) (NE) 2014-1217-CLS-CLS, 28465:OTH-CSAB:42:2011 (NRW); Licensed great crested newt worker, class licence number CLS0 1727
Craig Thomas (CT) is an experienced assistant

Annexes:

Location maps	1
Aerial photograph	2
Elevations and floor plan as existing	3.1
Proposed north and east elevations and location plan	3.2
Proposed south and west elevations and site plan	3.3
Survey diagram	4
Photographs of the site, buildings and ponds	5
Bats and the Law	6
Birds and the Law	7
When To Apply for a Mitigation Licence	8
The scale of main impacts at the site level on bat populations	9
Guidelines for proportionate mitigation	10

Environment

Elevation	75 m
Nearest town & distance	Ellesmere, 5 km south west
Situation	Rural, pastoral
Nearby woodland	7 areas of mixed woodland within 500 m of the site
Nearby ponds	8 ponds within 500 m
Rivers etc	Cumber's Brook 340 m north west
Hedges	Good network of hedgerows surrounding site, several trees.
Nearest SSSI	Hanmer Mere and surrounding environment, 820 m east - Ramsar site (England and Wales) and also SSSI (Wales)

Findings

Description of the buildings and signs of use or potential for use by protected species

House

Two storeys. Walls - brick, no cavity. Lined with wallpaper. Roof - slate, lined with bitumen felt. Timber frame. No missing or loose slates. Windows glazed with two broken.

More than 300 bat droppings in both lofts and on the stairs. Approximately 30 butterfly wings in room H and 10 in room C.

Barn

Two storeys. Walls - brick. Unlined. Roof - slate. Unlined. Timber frame. Large hole on the east side. Windows glazed and intact. Gaps around wooden stable doors. No signs of use by bats.

Shed

One storey. Dilapidated and barely accessible due to dense undergrowth. Walls - brick. Roof - slate with wood frame on one side, corrugated steel on the other. No signs of use by bats.

Bat Activity Surveys

Summary of conditions

Date	Sunset/ Sunrise	Start	End	Temp Start °C	RH Start %	Temp End °C	RH End %	Cloud %	Wind 0_6
5/7/15	21_36	21_05	04_48	15	73	12	81	20_30	0_1
30/7/15	05_26	03_20	05_30	12	70	10_5	79	15_20	0_0
25/9/15	19_03	18_30	20_45	18	60	7	90	5_5	0_0

5/7/15

Number of observers: 2

Observer 1: SW; equipment: Echo Meter EM3; Station: east side of house and barn

Observer 2: CT; equipment: AnaBat SD1; Station: west side of house and barn and intermittently inside buildings

Stationary equipment: Song Meter SMZC in loft 1, Anabat Express in loft 2, Anabat II in room F

First bat:

*Soprano pipistrelle (*Pipistrellus pygmaeus*)*

Time: 21.29; Location: both external stations

Subsequently: Frequently, both external stations

Other species:

*Common pipistrelle (*Pipistrellus pipistrellus*)*

Time: 21.38; Location: CT station

Subsequently: Occasionally, both external stations

*Daubenton's bat (*Myotis daubentonii*)*

Time: 22.18; Location: SW station

Subsequently: Occasionally, SW station

*Other Myotis species (*Myotis* sp.) (call quality not high enough to determine species)*

Time: 22.12; Location: CT station

Subsequently: Occasionally, both external stations

No bat calls were recorded in lofts 1 or 2 or room F

At 21.29 a bat was seen to emerge from the west gable end of the house, possibly from access point 4. This was a soprano pipistrelle. Another followed at 21.30. At 21.49 2 bats emerged from access point 2, then another at 21.52. At 21.53 another bat emerged from the west gable end of the house, possibly from access point 4. At 22.02 a bat emerged from another gap in the brickwork at the eaves between the two windows on the south side of the house. At 22.28 a bat emerged from access point 6. At 22.47 a bat was seen inside the house behind the window below access point 2. At 23.25 three long eared bats (*Plecotus* sp.) were seen perching on the ceiling above the stairs as shown in annex 5.5.

30/7/15

Number of observers: 2

Observer 1: SW; equipment: Echo Meter EM3; Station: east side of house and barn

Observer 2: CT; equipment: AnaBat SD1; Station: west side of house and barn and intermittently inside buildings

Stationary equipment: Anabat Express in loft 1, Song Meter SMZC in barn loft, Anabat II in loft 2, Anabat SD2 at bottom of stairs, Echo Meter EM3+ on landing I

First bat:

Noctule (Nyctalus noctula)

Time: 03.48; Location: SW station.

Subsequently: Once, SW station

Other species:

Soprano pipistrelle (Pipistrellus pygmaeus)

Time: 03.51; Location: SW station

Subsequently: Frequently, both external stations

Daubentons bat (Myotis daubentonii)

Time: 03.56; Location: SW station

Subsequently: Occasionally, SW station

Long eared bat (Plecotus sp.)

Time: 03.57; Location: CT station

Subsequently: Occasionally, CT station

Common pipistrelle (Pipistrellus pipistrellus)

Time: 04.23; Location: CT station

Subsequently: Occasionally, both external stations and once, barn, 05.06

Last bat: Soprano pipistrelle (Pipistrellus pygmaeus)

Time: 05.20; Location: CT station

No bat calls were recorded in loft 1, loft 2, landing I or bottom of stairs.

At 05.05 a bat entered access point 1, this was a soprano pipistrelle. Between 05.13 and 05.20 four bats entered access point 2 or adjacent crevices above the window. At 05.13 a bat entered access point 4. At 05.21 a bat entered access point 3.

25.9.15

Number of observers: 2

Observer 1: SW; equipment: Echo Meter EM3; Station: east side of house and barn

Observer 2: MW; Echo Meter EM3+; Station: west side of house and barn and intermittently inside

Stationary equipment: Anabat Express in loft 1, Song Meter SMZC in barn, Anabat SD1 in loft 2

First bat:

Natterers bat (*Myotis nattereri*)

Time: 18.59; *Location:* Loft 2

Subsequently: Once, SW station at 20.38

Other species:

Long eared bat (*Plecotus sp.*)

Time: 19.06; *Location:* Loft 2

Subsequently: Occasionally, both external stations

Soprano pipistrelle (*Pipistrellus pygmaeus*)

Time: 19.05; *Location:* MW station

Subsequently: Frequently, both external stations

Noctule (*Nyctalus noctula*)

Time: 19.37; *Location:* SW station

Subsequently: Occasionally, both external stations

Common pipistrelle (*Pipistrellus pipistrellus*)

Time: 20.00; *Location:* MW station

Subsequently: Occasionally, both external stations

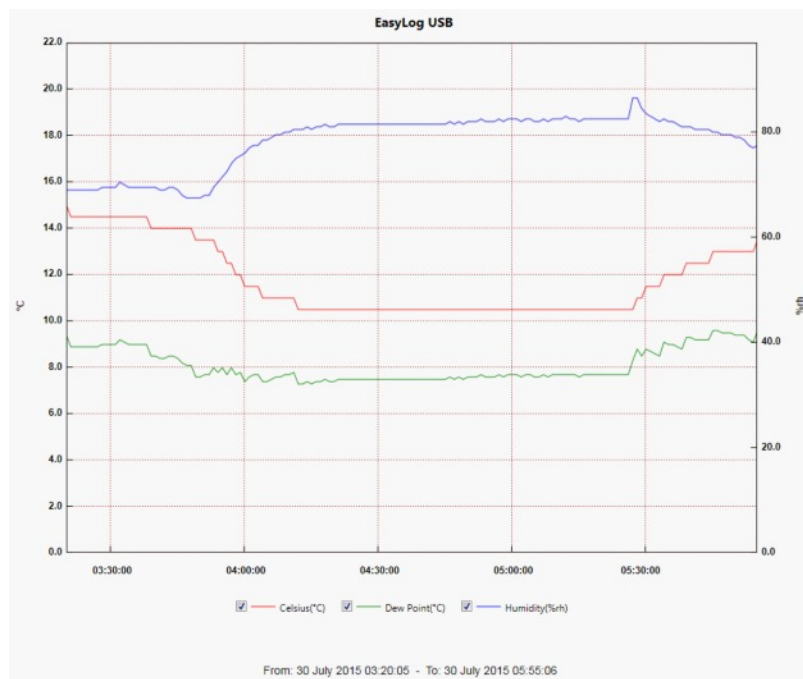
At 18.40 a long eared bat was seen flying around in loft 1 (see annex 5.3). At 19.25 a bat emerged from access point 2. Between 19.30 and 19.40 four bats flew out of access point 5. Although the sonograms of calls during this time were of soprano pipistrelles these appeared to be long eared bats, which were not picked up on the detectors due to the quiet nature of the calls. At 20.30 two long eared bats were seen on the ceiling inside the house above the stairs (annex 5.5)

Interpretation

The house is being used as a roost for long eared and soprano pipistrelle bats. It also appears to have been used as a temporary roost by a natterer's bat on the third survey. The pipistrelles are using gaps under slates and between bricks, and also the porch roof, whereas the long eared bats are using the larger area of the house interior and lofts, possibly emerging from the hole near the stairs on the ceiling above the stairs or from the lofts, although no bats were seen perching in the lofts. The open windows seem to be the main access for the long eared bats.

No bats were found to be using either the barn or shed.

Temperature and Humidity Charts



Habitat Suitability Assessment for Pond 1

	Score	SI
Location	A	1
Pond Area	350	0.7
Pond drying	sometimes	0.5
Water quality (invertebrate density & character)	moderate	0.67
Shade perimeter shaded to 1m from shore	90	0.4
Fowl	absent	1
Fish	absent	1
Number of ponds within 1km	>12	1
Terrestrial Habitat	moderate	0.67
Macrophytes % surface area occupied by macrophyte cover	0	0.3
Product	0.0188538	
HSI score		0.672

Pond suitability for great crested newts is average

HSI Pond suitability
 <0.5 = poor
 0.5 – 0.59 = below average
 0.6 – 0.69 = average
 0.7 – 0.79 = good
 > 0.8 = excellent

Pond 1 is approximately 160 m from the edge of the site. Although it appears as two separate ponds on maps it is continuous, although there is a narrower section in the middle which may dry out to form two ponds at times. It was not accessible so an estimate of water quality was made.

Habitat Suitability Assessment for Pond 2

		Score	SI
Location		A	1
Pond Area		140	0.3
Pond drying		never	0.9
Water quality (invertebrate density & character)		moderate	0.9
Shade	perimeter shaded to 1m from shore	40	1
Fowl		absent	1
Fish		absent	1
Number of ponds within 1km		>12	1
Terrestrial Habitat		moderate	0.67
Macrophytes	% surface area occupied by macrophyte cover	0	0.3
Product		0.048843	
HSI score			0.739

Pond suitability for great crested newts is

average

HSI Pond suitability

<0.5 = poor

0.5 – 0.59 = below average

0.6 – 0.69 = average

0.7 – 0.79 = good

> 0.8 = excellent

Pond 2 is approximately 200 m from the edge of the site. It may have served as a source of drinking water for livestock once but it is now fenced. It appears to be quite deep but was not accessible so an estimate of water quality was made.

Pond 3 was dry at the time of the survey but it is possible that it may contain water at times. It is approximately 200 m from the site.

Impact Assessment and Recommendations

Birds

1. Since the proposed development would entail the loss of nesting sites for swallows, and since these birds have specific requirements for nest sites which will be hard for them to meet elsewhere due to continued loss of agricultural buildings, we recommend that the developers consider the provision of alternative nesting sites for swallows. The requirements are for a small shelf close under an overhanging roof or cover, with open access for the birds to fly in. A car port or refuse bin shelter, or an outbuilding with a permanently open window or half door, or simply a space over the door, would suffice.
2. The impacts which the proposed development might have on other breeding birds should be small, providing that no nests are occupied or being built at the time the work is done.
3. It is recommended that two woodcrete nests suitable for small birds such as robin, blackbird, tit species and sparrow should be incorporated into the renovated building, and one woodcrete nests suitable for swallows. One swift brick is also recommended:

House Sparrow Terrace - Wooden (or woodcrete) nest box with 3 sub-divisions to support 3 nesting pairs. To be placed under the eaves of buildings or incorporated into walls. Entrance holes: 32mm diameter. Dimensions: H310 x W370 x D185mm. Also suitable for tits, redstarts and spotted flycatchers. Place at least 2 m from the ground.

Swallow nest - H110mm x W250mm x D140mm. The nest should be placed inside an enclosed outbuilding or shed, porch or garage leaving a distance of at least 6cm between the top of the nest and the ceiling. There must be access for the birds through an open window or sky-light.

Swift brick - an entrance hole of 55cm x 33cm. and external box/brick dimensions: Height 18cm x width 26.5 x depth 22cm.

Other designs of nest boxes may also be suitable.

4. If birds should gain access to the buildings and begin building nests before or during the work, then the work in that area will have to stop until the young have left the nests (see Annex 8).
5. No owl pellets or droppings were found that would indicate that any of the buildings are being used by owls.

Great Crested Newts (GCN)

6. There are two ponds within 250 m of the site. Although they are suitable for use by GCN the distance from the site and the area of land affected are sufficient that the risk of harm to GCN or their conservation status is unlikely. However, reasonable avoidance measures should be taken as described on page 14 to prevent potential harm to individual commuting GCN.

Bats

7. In our opinion the proposed development will affect individual bats and potentially the conservation status of bats. A day roost of soprano pipistrelle bats and a day roost of long eared bats will be affected. The long eared bat roost may be a maternity roost.
9. There is also potential for bats to roost in other crevices in the walls and elsewhere, both in the active season and for hibernation in the winter. Suitable mitigation will need to be incorporated into any programme of repairs or alterations which might disturb bats or damage or destroy a roost. A mitigation licence in respect of bats must be obtained from Natural Resources Wales (NRW). An indication of what will be needed is given below.

10. It will be recommended that two bat boxes are fitted externally or incorporated into the converted buildings as part of the licence application. Further information is given in the bat box information pack available at <http://www.bats.org.uk/index.php>
11. Any chemical treatment of timbers should not take place between the beginning of October and the end of March to avoid harm to hibernating bats.
12. No pointing or repairs of any gaps or crevices which cannot be easily seen to be empty should take place between the beginning of October and the first week in April, to minimise the possibility of incarcerating bats.
13. If bats are found at any stage of the development then work in that area must stop and a licensed bat worker contacted for advice.
14. A lighting plan should be designed in accordance with the Bat Conservation Trust guidelines: http://www.bats.org.uk/pages/bats_and_lighting.html

Annexe 6 outlines the legal status of bats in England and Wales, the fines that might be imposed if an offence against bats and/ or their roost is committed, and the circumstances under which a licence from Natural Resources Wales (NRW) in respect of bat species is required.

Annex 8 is an extract from guidance by Natural England on when to apply for a licence.

Annex 9, abstracted from English Nature's "Bat Mitigation Guidelines", Jan. 2004, illustrates the scale of main impacts at the site level that a development can have on bat populations.

In this case the proposed development would involve loss of a day roost of long eared bats, which are a common species. The resulting scale of impact would be small.

Annex 10 is a copy of Figure 4 taken from English Nature's "Bat Mitigation Guidelines", Jan. 2004 which indicates the type of mitigation/ compensation NRW would expect the developer to provide, depending on the impact of that development.

Licences can only be issued by NRW where the proposed activity meets the criteria for the purpose below (or others not relevant to this situation) **and** the following two criteria (together commonly referred to as the "three tests"):

Purpose

(e) 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 for the environment;

Criteria

That there is no satisfactory alternative; and

That the action authorised will not be detrimental to the maintenance of the species concerned.

Other protected species

No badger setts were seen on the site or within 30 m of the site.

No evidence of use by dormice was found on or near the site.

No evidence of use of the site or nearby environment by any other protected species was found.

Reasonable Avoidance Measures with Regard to Great Crested Newts

It is a criminal offence to harm a great crested newt.

Great crested newts spend most of their time on land, returning to still water only to breed once they are mature at about 3-4 years of age.

They may travel more than kilometre from their breeding pond.

They move about mostly at night, and by day creep underground or beneath shelter such as stones or logs.

They hibernate during the winter, which is generally from the beginning of November until late March, depending on the weather. Hibernation is underground in burrows made by other small animals or beneath substantial cover such as large stones or piles of logs.

1. The vegetation in all areas should be kept as short as possible.
2. If any trenches cannot be filled the same day they will need a ramp of earth made at the ends of the trenches, to the full depth of each trench, so that newts can climb out. It is not sufficient to leave a piece of wood against the sides, which would allow small mammals to escape, but not newts, which are not good climbers. The trenches must be inspected carefully before infilling, and any animals carefully removed and released into the surrounding hedgerows (but see para 7 below).
3. Building materials should be stored clear of the ground (say, on pallets) so as to avoid crushing any animals which might seek refuge under them, when the materials are lifted. Any such storage must be on a gravel drive or other hard surface, and not on a lawn or other soft surface.
4. If any potential refuges such as piles of rubble or logs need to be moved before work starts, care must be taken when moving them. This should be done by hand.
5. Any open pipework should be capped overnight. All open trenches and pipework should be inspected at the start of each working day to ensure no animal is trapped.
6. Any excavated material which is not replaced on the same day must either be removed from the site or stored on a hard surface and covered with an impermeable membrane, such as a plastic sheet or tarpaulin, and the edges of the sheet secured so that no amphibians can gain access.
7. If any great crested newt is discovered in the area of the work, then work in that area must stop and a licensed great crested newt worker contacted immediately for advice.

Draft Method Statement with Regard to Bats

Some sections of the NRW Method Statement are covered elsewhere in the report so are not duplicated here

B.2 Proposed works to be covered by licence:

Possible re-pointing of brickwork. Repair to windows resulting in loss of some access points to the roost.
Demolition of porch.

B.3 Actions requiring licence:

Loss of ceiling surface (resting place) to bats by incorporation into a domestic living area. Potential disturbance by exclusion from brickwork. Destruction of roost by demolition of porch. These actions are necessary to allow renovation of the building in order to be habitable and expansion of the living space.

D.1 Short term impacts in the absence of mitigation/compensation:

Obstruction to access points due to scaffolding and plastic sheeting, also window repair. Noise, vibration and dust from repairs to building.

D.2 Long term impacts (roost modification) in the absence of mitigation/compensation:

Loss of access to ceiling area and increased temperature of loft during winter.

D.3 Long term impacts (roost loss) in the absence of mitigation/compensation:

Would be likely to be minimal at regional or national level. Locally some impact if no suitable alternative roosts were found by displaced bats (*P. auritus* and *P. pygmaeus*) However, the proposed new extension is much larger than the existing porch due for demolition and therefore offers potentially more roost space.

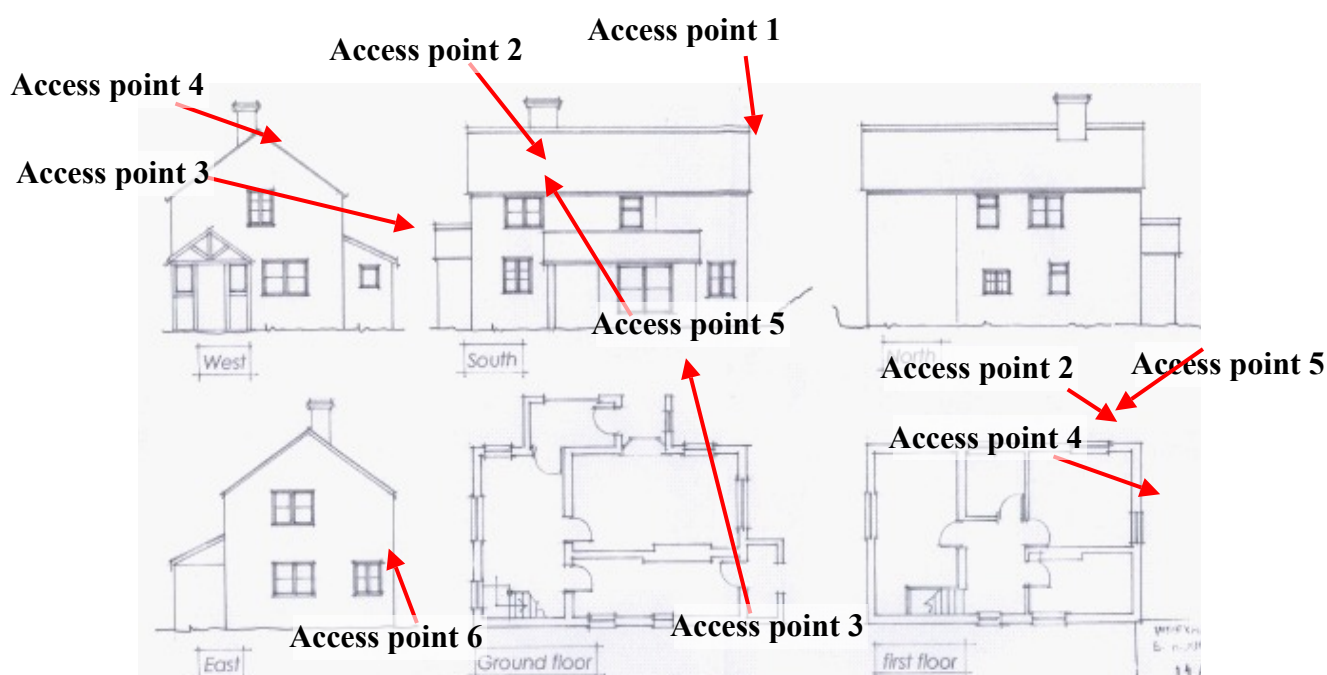
D.4 Long term impacts (fragmentation/isolation) in the absence of mitigation/compensation:

Small increase in lighting.

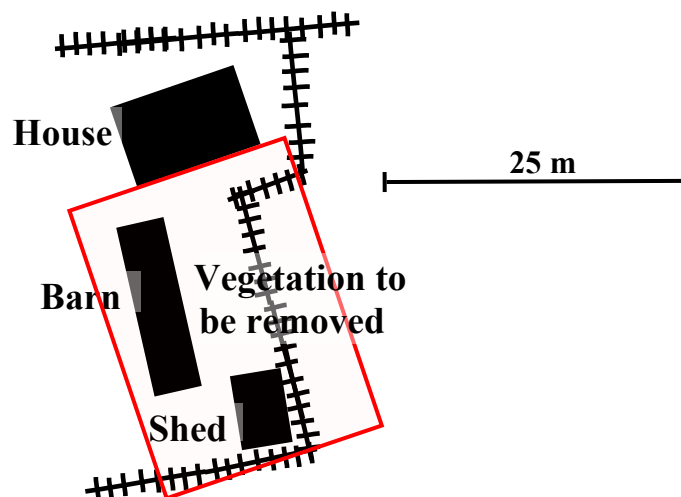
D.5 Post development interference impacts in the absence of mitigation/compensation:

Use of loft space for storage.

D.6 Predicted scale of impact on species status: Low impact due to the small number of bats affected.



Draft Method Statement with Regard to Bats contd.



E.1 Works to be undertaken by ecologist (capture and exclusion):

1. The areas affected will be inspected by the ecologist or a suitably qualified appointed agent at least one week before work in those areas commence.
2. If any bats are discovered in gaps between bricks, these will be left until the bat has left, then the gaps may be filled.
3. Access points 3, 5 and 6 will be fitted with a flexible flap of plastic sheeting or other suitable material which will allow bats out of the building but not back in. Bat detectors will be placed internally next to 5 and 6 and when the sonograms indicate that no bats remain in the building the windows may be sealed. One emergence survey is also recommended to confirm the absence of bats inside.
4. Before work begins, the workforce will be instructed by the ecologist about the legal protection of bats, how to avoid disturbing or harming bats, and about preserving their own safety in relation to bats.
5. If a bat is discovered during supervised work, work in that area will stop at once. The ecologist will contact NRW for advice, and to arrange licensing for further work if deemed appropriate.
6. If a bat is discovered at other, unsupervised times, work will cease immediately and the licensed bat ecologist will be called for advice as in para 5 above.
7. The demolition of the porch will be supervised by the ecologist or agent. Any bats discovered during the process will be transferred to a safe container and released at dusk.

E.2.1 Bat roosts and habitat; in situ retention of roosts:

The slates will be retained and the existing roofing felt replaced with bitumous felt where in need of repair. Insulation is likely to be laid in both lofts. Timbers will not be treated until all bats have been excluded. Access point 1 will be retained.

E.2.2 Bat roosts and habitat; modification of existing roosts:

A Schwegler 1FE bat access panel will be fitted to the east gable end to allow access to loft 1. The internal loft hatch will remain closed but functional to allow inspection by an ecologist as appropriate.

E.2.3 Bat roosts and habitat; new roost creation:

A Schwegler 1FF bat box will be fitted in loft 1 and one externally on the south side of the building.

E.2.4 Maintenance/modification of habitat:

No significant habitat is to be lost.

Draft Method Statement with Regard to Bats contd.

E.3 Mechanisms for ensuring delivery of mitigation and compensation measures:

Supervision of re-pointing and examination with endoscope where necessary by ecologist. Site visit upon completion by ecologist.

E.4 Mitigation contingencies:

None anticipated

E.5 Biosecurity risk assessment:

No hazards identified

F.1 Post-development site safeguard (site management and maintenance):

The property will be occupied by the present owner who will be responsible for its management and maintenance.

F.2 Post-development site safeguard (population monitoring, roost usage):

A licensed bat worker will visit the site each year for 3 years after completion of works at an appropriate time of year to carry out an emergence survey and check bat boxes.

F.3 Post-development mitigation contingencies:

Further compensation measures may be necessary such as more bat boxes at different aspects/positions.

G Timetable of works:

Exclusion will be carried out between May and September until no bats remain inside the building. Demolition of the porch will take place once it is considered that no bats remain inside, as far as possible. Demolition will be supervised by an licensed bat worker. Construction of new extension and repair to windows will take place once it is considered that no bats remain inside, as far as possible. Bat boxes and access panel will be installed near completion of works. A licensed bat worker will visit the site each year for 3 years after completion of works at an appropriate time of year to carry out an emergence survey and check bat boxes.

References

Bat Conservation Trust available at: <http://www.bats.org.uk/index.php>

English Nature (2001) *Great Crested Newt Mitigation Guidelines* Peterborough: English Nature

Great crested newts: surveys and mitigation for development projects available at:
<https://www.gov.uk/great-crested-newts-surveys-and-mitigation-for-development-projects>

Gent A.H, Gibson S.D (eds) (1998) *Herpetofauna Workers' Manual*. Peterborough: Joint Nature Conservation Committee

Hundt, L (2012) *Bat Surveys: Good Practice Guidelines*, 2nd Edition. Bat Conservation Trust.

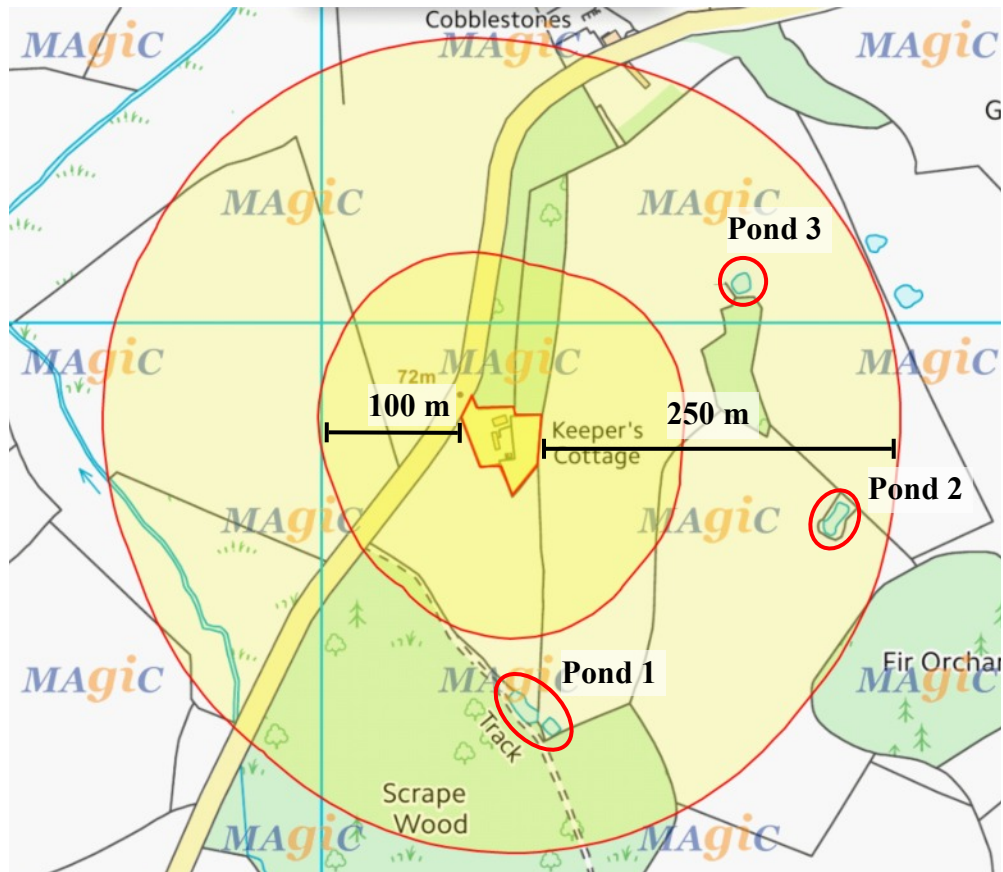
JNCC, (2010), *Handbook for Phase 1 habitat survey - a technique for environmental audit*, ISBN 0 86139 636 7

Langton, T., Beckett, C., Foster, J. (2001) *Great Crested Newt Conservation Handbook*. Halesworth: Froglife

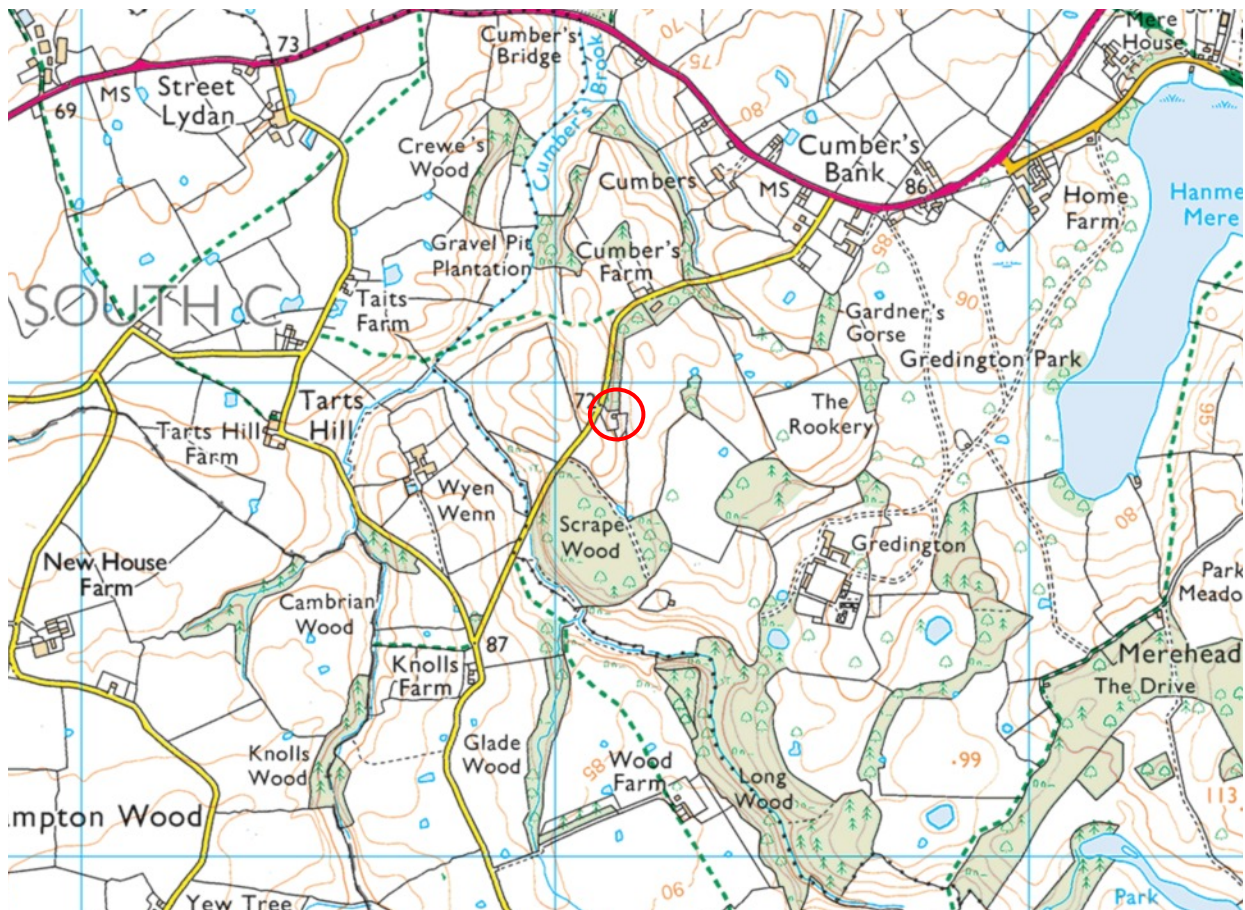
Mitchell-Jones, A. J. and McLeish, A. P. (2004) *Bat Worker's Manual*, JNCC

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.

Annex 1.1: Location Map



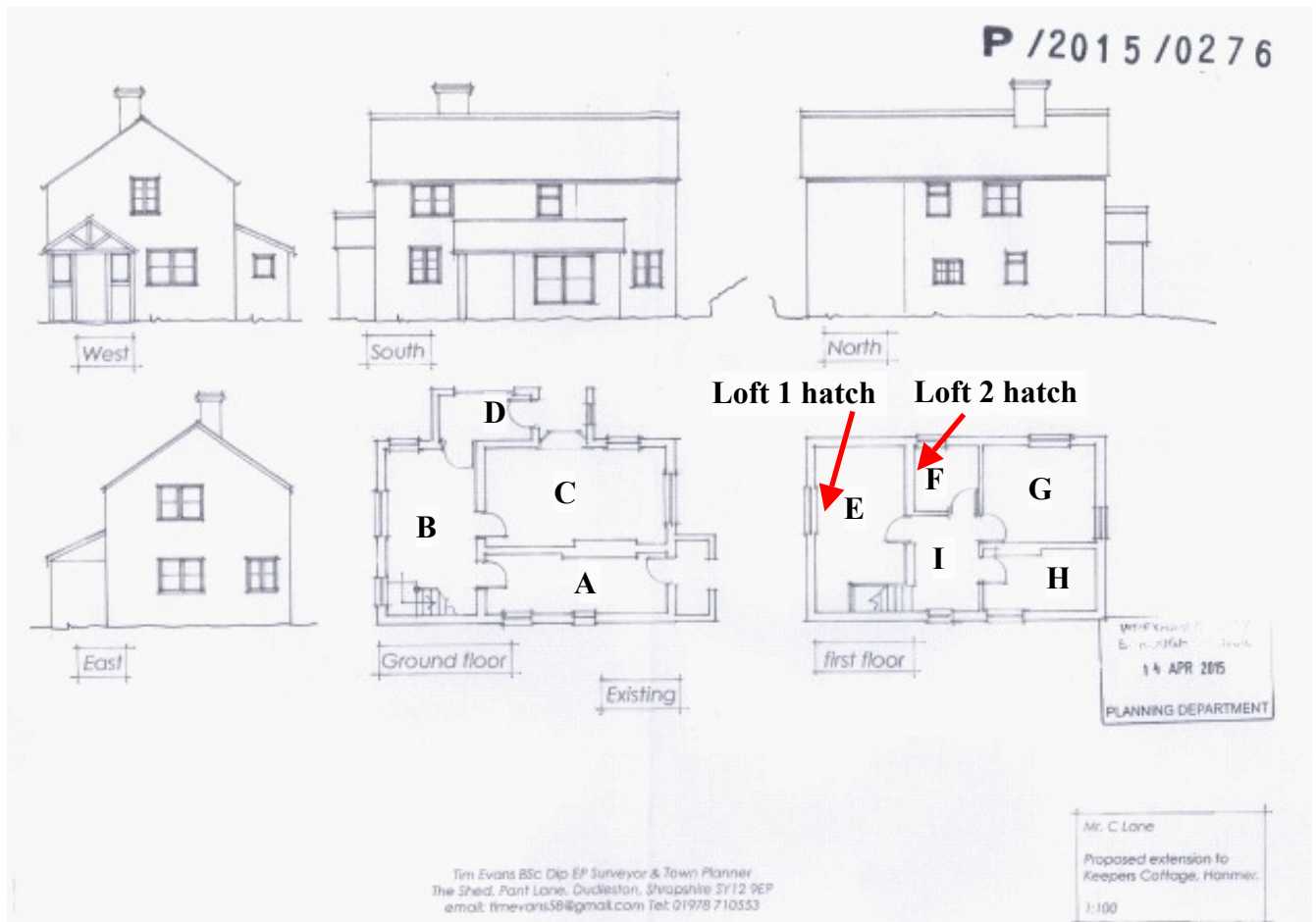
Annex 1.2: Location Map



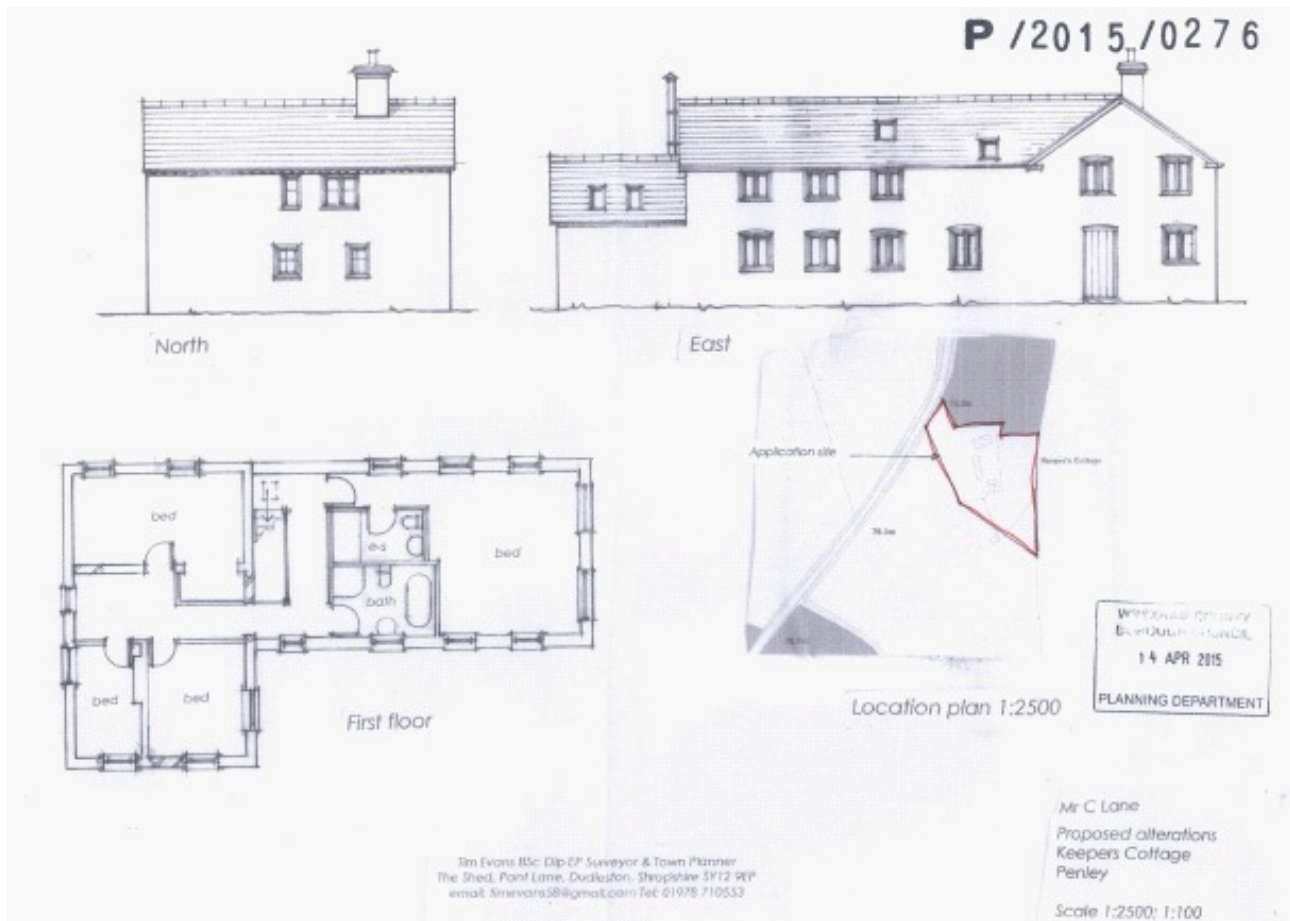
Annex 2: Aerial Photograph



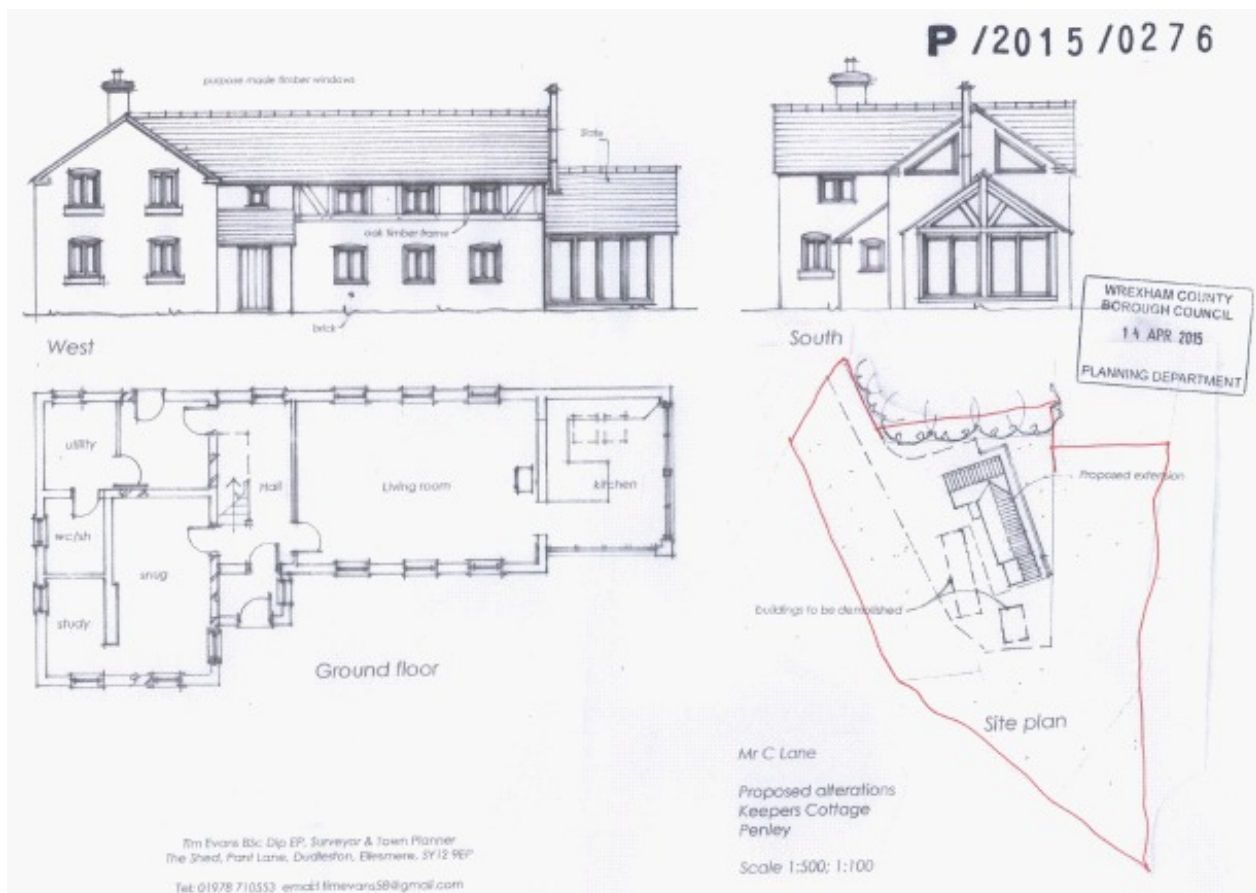
Annex 3.1: Elevations and Floor Plan as Existing



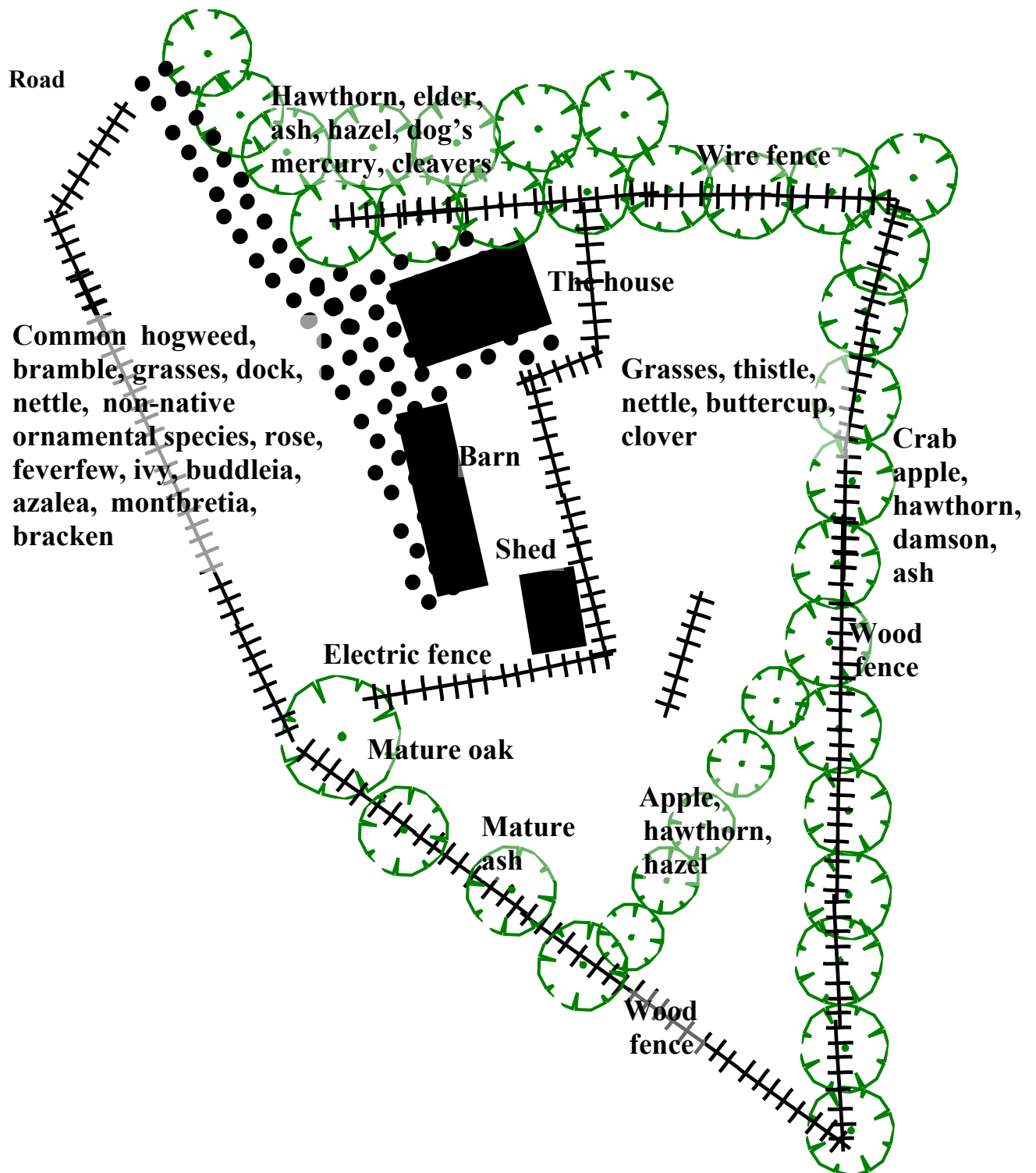
Annex 3.2: Proposed North and East Elevations and Location Plan



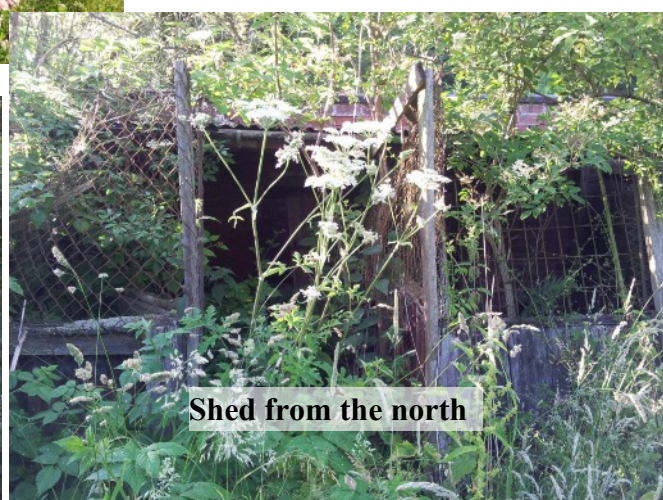
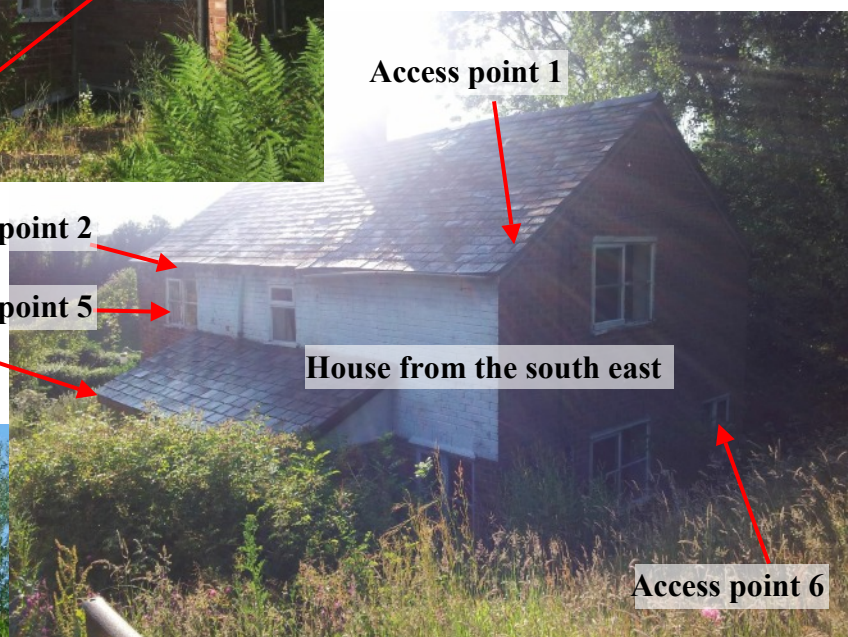
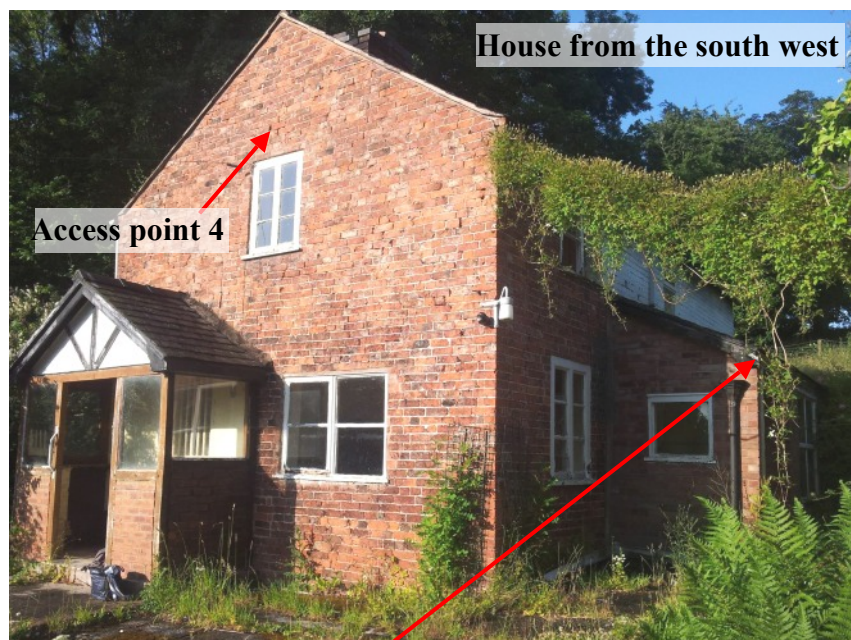
Annex 3.3: Proposed South and West Elevations and Site Plan



Annex 4: Survey Diagram



Annex 5.1: Photographs of the Building Exteriors



Annex 5.2: Photographs of Building Exteriors



Access point 2



Access point 3



Access point 4



Annex 5.3: Photographs of House Interior



Loft 1



Bat droppings in loft 1



Long eared bat in
loft 1 25.9.15



Loft 2



Bat droppings in loft 2



Ceiling of 1

Annex 5.4: Photographs of House Interior



Droppings between E and I



G



H



Butterfly wings in H

Annex 5.5: Photographs of House Interior



Annex 5.6: Photographs of Building Interiors



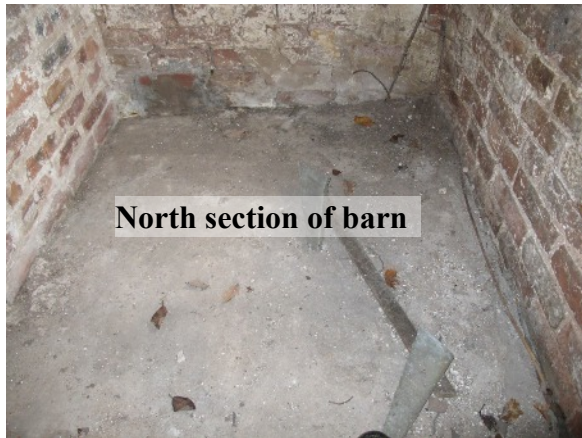
Annex 5.7: Photographs of the Barn Interior



Underneath loft



Loft showing hole in roof



North section of barn



Loft

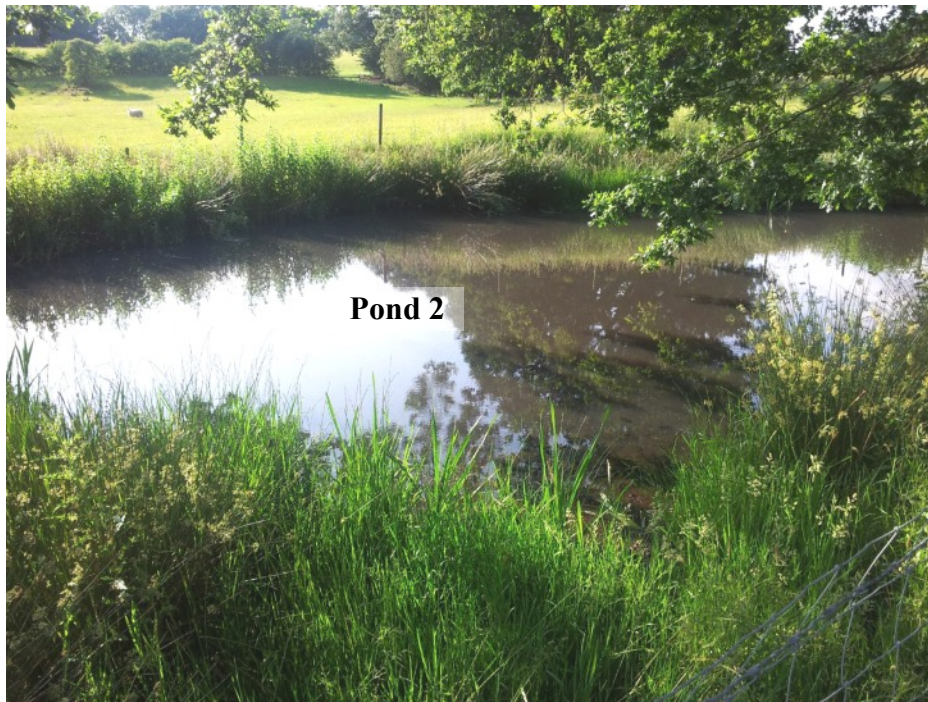


South section of pond 1



North section of pond 1

Annex 5.8: Photographs of the Ponds and Site



Annex 5.9: Photographs of the Site



Annex 6: 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 The Conservation of Habitats and Species Regulations 2010 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' (Conservation of Habitats & Species 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 (or, in Wales, NRW (Natural Resources Wales) 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 41 currently stands at £5000 and/or imprisonment for up to 6 months.

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 a NRW licence in respect of bat species

A Welsh National Assembly 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.

Natural England's view (we are not aware of equivalent guidance published by NRW) is that:

“ a licence **is** needed if the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity **is reasonably likely** to result in an offence under Regulation 41 (animals) or 45 (plants); or

If the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is **reasonably unlikely** to result in an offence under regulation 41 or 45 then no licence is required. However, in these circumstances Natural England would urge that reasonable precautions be taken to avoid affecting EPS during works. If EPS are found then work should cease until you have assessed (in consultation with a consultant ecologist) whether you can proceed without committing an offence. A licence should be applied for if offences are unavoidable and the work should not be re-started until a licence is obtained.”

Annex 7: Birds and the Law

All birds, their nests and eggs are protected by law and it is an offence, with certain exceptions,
To:

- a) intentionally kill, injure or take any wild bird
- b) intentionally take, damage or destroy the nest of any wild bird while it is in use or being built
- c) intentionally take or destroy the egg of any wild bird
- d) have in one's possession or control any wild bird (dead or alive) or part of a wild bird which has been taken in contravention of the Wildlife and Countryside Act 1981 or the Protection of Birds Act 1954
- e) have in one's possession or control an egg or part of an egg which has been taken in contravention of the Act
- f) have in one's possession or control any birds of a species occurring on Schedule 4 of the Act unless registered and ringed in accordance with the Secretary of State's regulations.
- g) intentionally (or recklessly, in England and Wales only) disturb any wild bird listed on Schedule 1 while it is nest building or is at (or near) a nest with eggs or young; or disturb the dependent young of such a bird.

Annex 8: When To Apply for a Mitigation Licence

Key Message: Avoidance -

A licence is not always necessary. Natural England advocates the use of good practice and avoidance measures to minimise the impact of a proposed activity on wildlife and in particular EPS. Licensing should be seen as the last resort where all other alternative ways of avoiding impacts on the species have been discounted.

Ecological consultants are expected to advise their clients on whether works can proceed in the absence of a licence. It is not Natural England's role to do this.

Your consultant ecologist will advise you on the likelihood of the proposed activity resulting in a breach of the legislation and how to take avoidance measures. The ultimate decision on whether to apply for a licence or not will rest with you, as the person responsible for commissioning the proposed activity, by taking into account the advice of the consultant ecologist. Adequate surveys carried out at the right time of year are crucial in ensuring that the presence of EPS is detected.

Natural England's view is that:

- a licence is needed if the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably likely to result in an offence under Regulation 41 (animals) or 45 (plants);

or

- if the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is *reasonably unlikely* to result in an offence under regulation 41 or 45 then no licence is required. However, in these circumstances Natural England would urge that reasonable precautions be taken to avoid affecting EPS during works. If EPS are found then work should cease until you have assessed (in consultation with a consultant ecologist) whether you can proceed without committing an offence. A licence should be applied for if offences are unavoidable and the work should not be re-started until a licence is obtained.

Extracted from "How to get a licence" wml-g12_tcm6-4116.pdf . English Nature 2011

Annex 9: The scale of main impacts at the site level on bat populations

Bat mitigation guidelines, Jan 2004

Roost type	Development effect			
		Low	Medium	High
Maternity	Destruction			✓
	Isolation caused by fragmentation			✓
	Partial destruction; modification		✓	
	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		✓	
	Modified management	✓		
	Post-development interference	✓		
Night roost				
	Destruction	✓		
	Partial destruction	✓		
	Temporary disturbance	✓		
	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.

Annex 10: Guidelines for proportionate mitigation. The definition of common, rare and rarest species requires regional interpretation.

Low	Roost status	Mitigation/compensation requirement (depending on impact)
	Feeding perches of common/rarer species Individual bats of common species Small numbers of common species. Not a maternity site	Flexibility over provision of bat-boxes, access to new buildings etc. No conditions about timing or monitoring
	Feeding perches of Annex II species Small numbers of rarer species. Not a maternity site	Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species'
	Hibernation sites for small numbers of common/rarer species Maternity sites of common species	Timing constraints. More or less like-for-like replacement. Bats not to be left without a roost and must be given time to find the replacement. Monitoring for 2 years preferred.
	Maternity sites of rarer species Significant hibernation sites for rarer/rarest species or all species assemblages Sites meeting SSSI guidelines Maternity sites of rarest species	Timing constraints. Like-for-like replacement as a minimum. No destruction of former roost until replacement completed and usage demonstrated. Monitoring for at least 2 years. Oppose interference with existing roosts or seek improved roost provision. Timing constraints. No destruction of former roost until replacement completed and significant usage demonstrated. Monitoring for as long as possible.
High	Conservation significance	