
73 Bearwood Road, Barkham,
Wokingham, RG41 4SX.

Phase 1 & 2 Bat Surveys:

73 Bearwood Road,

Barkham,

Wokingham,

RG41 4SX



Survey and report by: Vesper Conservation & Ecology Limited

Report produced by: Robert West BA(Hons), PGDip, MCIEEM

Non-Technical Summary:

Site name and location	73 Bearwood Road, Barkham, Wokingham, RG41 4SX Grid Ref: SU 78295 67714
Scope of works	Phase 1 bat survey undertaken on 22nd January 2022 Phase 2 surveys undertaken during the 2022 season This survey is valid for a period no longer than 24 months after that a further Phase 1 will be needed to ascertain if anything has changed in that time.
Assessment and survey methods	The Phase 1 survey was carried to the standards set down in the Bat Conservation Trusts Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition) (2016) and guidance from the Chartered Institute for Ecologists and Environmental Managers (CIEEM).
Lead Surveyor	Robert West BA (Hons), PGDip. MCIEEM
Purpose of Works	The purpose of this survey is to inform a planning application for: • The proposal seeks to create a 5 No bedroom dwelling with associated parking by extending to both rear and south side and with the addition of a new floor.
Summary of Surveys and evaluation	The house has bat droppings in the roof space, a sample has been taken for DNA analysis. The roof has numerous gaps that could allow ingress into the building.
Recommendations	A EPS 'BAT' license will be required to undertake the proposed works, this can only be applied for once full planning has been granted, as the permission is part of the application process. The 'BAT' license takes a minimum of 30 working days to be granted and can take longer in busy periods. Mitigation added into the new building in the form of 4 inbuilt bat boxes on all four of the new elevations (see mitigation strategy)

1. Introduction

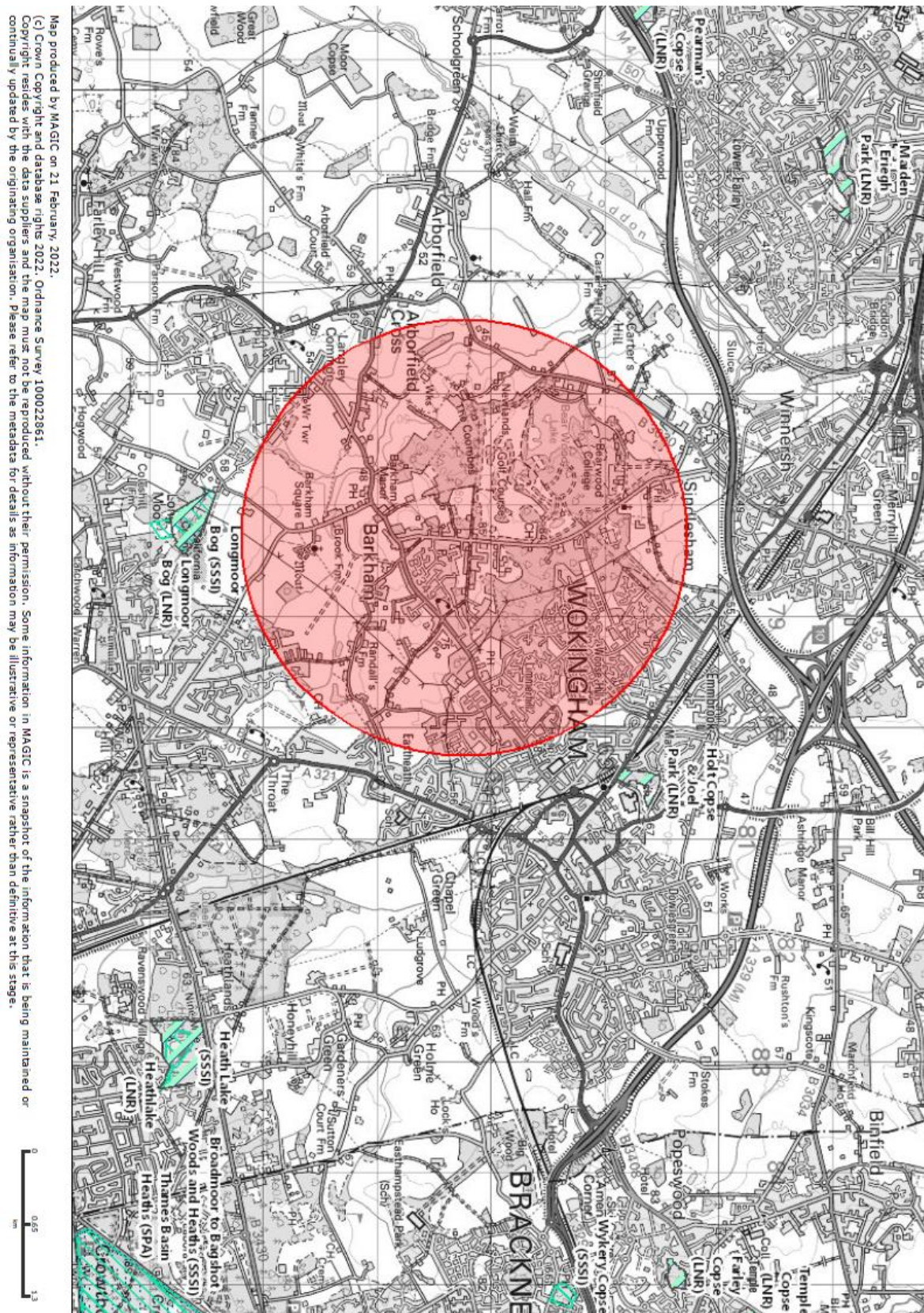
- 1.1 This report was commissioned by the Homeowner to determine if there were any ecological issues associated with the proposed redevelopment of this building.
 - 1.2 73 Bearwood Road, Barkham, Wokingham, RG41 4SX. The national grid reference number is SU 78295 67714.
 - 1.3 The property is situated in the Barkham near Wokingham, there are some good priority habitats within 1km of the building, this includes woodlands and wood pasture to the north-west of the property.
 - 1.4 There are no designated sites within 1km of the property, the closest is Longmoor Bog SSSI and LNR which is 1.3km to the south.
 - 1.5 A search of data from the local Bat Group has shown that there are records of both pipistrelle species (*Pipistrellus pipistrellus*, *Pipistrellus pygmaeus*), Long eared bats (*Plecotus auritus*), Serotine (*Eptesicus serotinus*) and Myotis species in the area, there are no known roosts of bats within 20m of the house, the neighbouring property has had works done under a bat license in the recent past.
 - 1.6 There are 18 species of bat in the UK, 7 of which are UK BAP priority species and Species of Principal Importance in England under S41 of the NERC Act 2006. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitat Regulations 2010. (See appendix)
 - 1.7 The Phase 1 & 2 surveys were carried to the standards set down in the Bat Conservation Trusts Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition) (2016) and guidance from the Chartered Institute for Ecologists and Environmental Managers (CIEEM).
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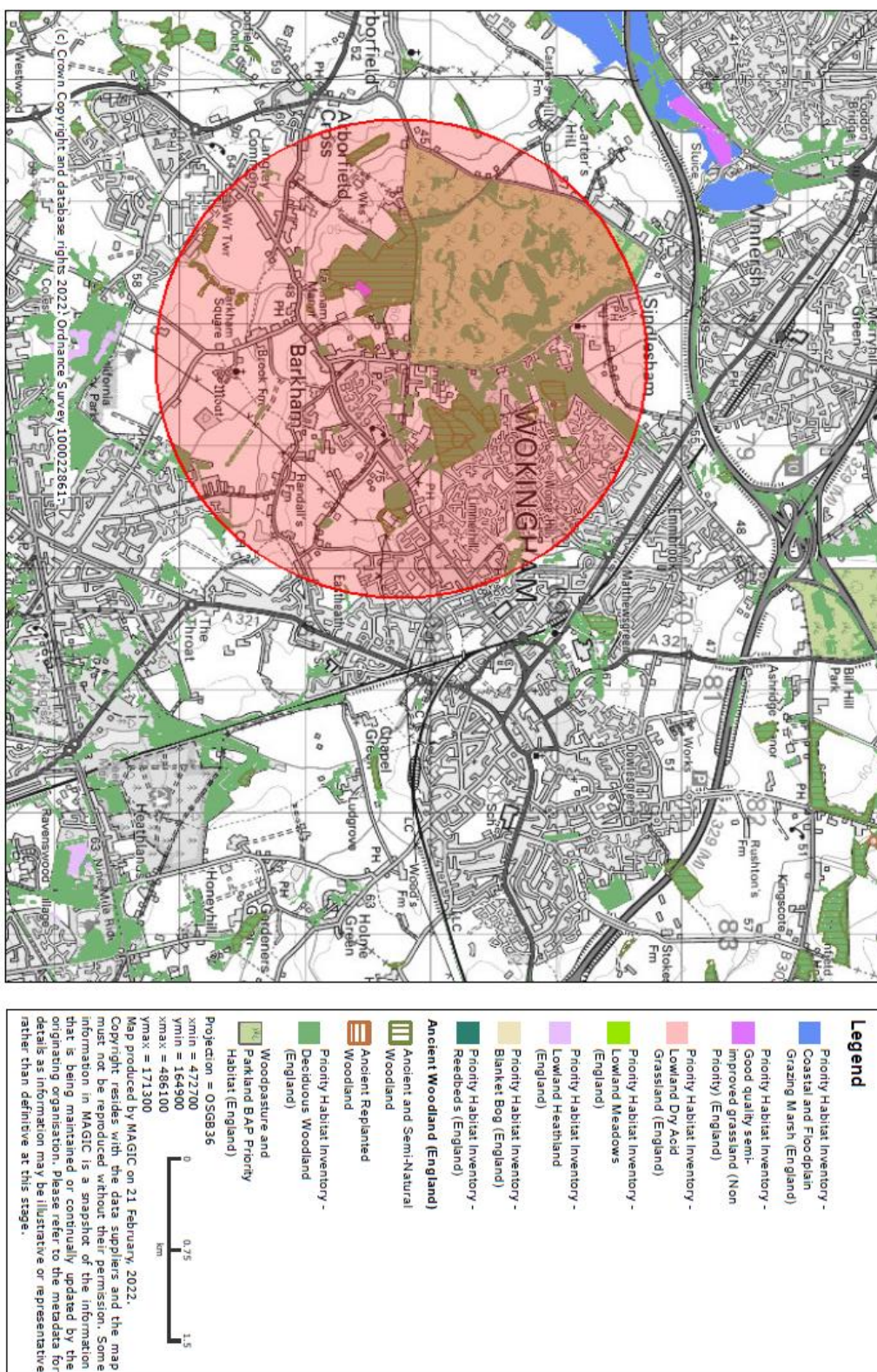
Suitability	Description of roosting habitats	Description of commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats	Negligible habitat features on site likely to be used by commuting or foraging bats
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (<i>i.e.</i> unlikely to be suitable for maternity or hibernation).	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated, <i>i.e.</i> not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only)	Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. The site is close to and connected to known roosts.

Table 1: Bat roost suitability (Adapted from Collins 2016)



Map 1: Site (Magic.gov 2022)



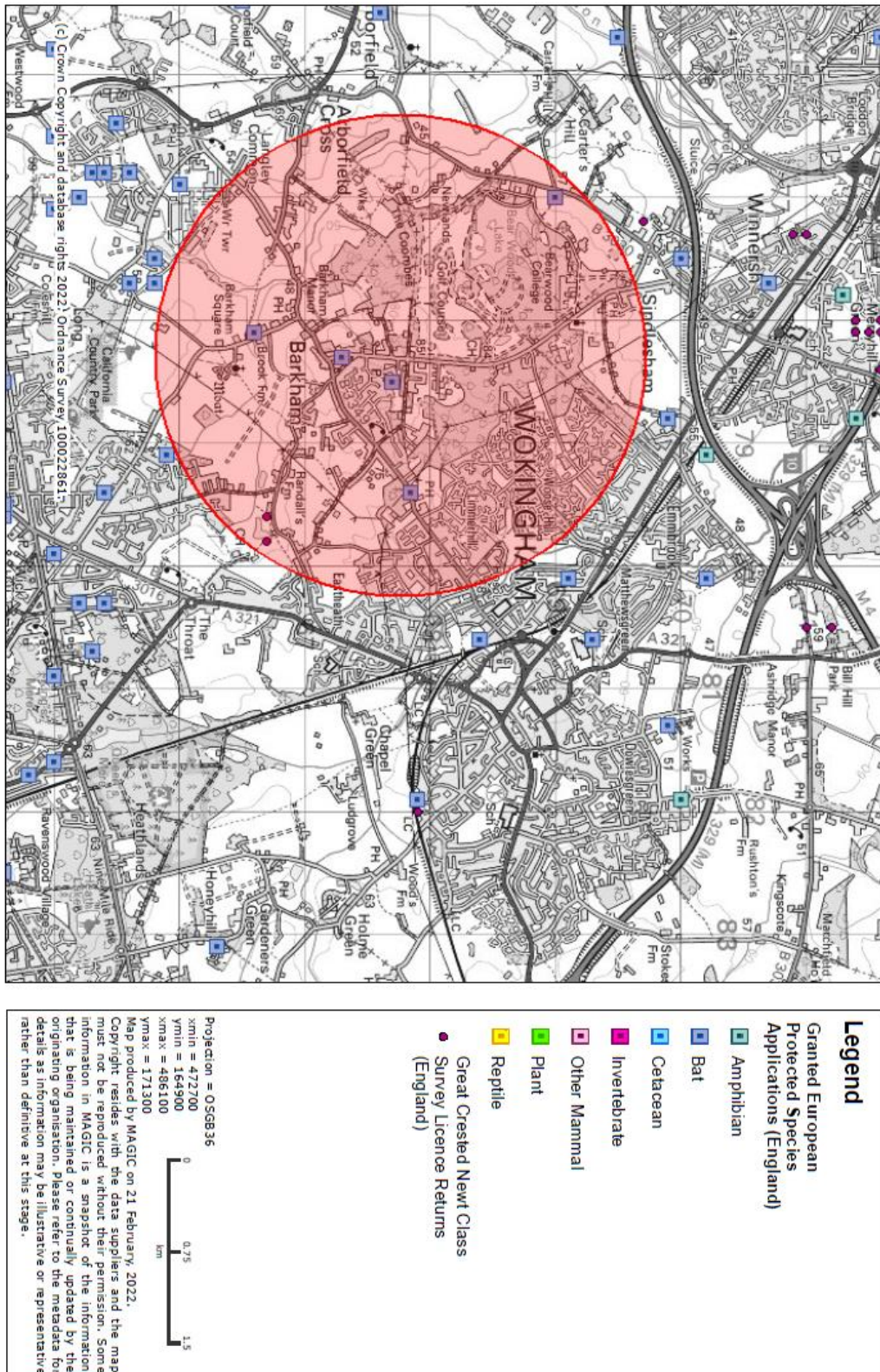


Map 3: Priority Habitats (magic.gov 2022)

Vesper Conservation & Ecology Limited

Director: Robert West. Company Secretary: Stephanie West.

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Map 4: Granted Protected Species licenses (Magic.gov 2022)

2. Field Survey

External Inspection: Bats (see pictures in appendix)

- 2.1 An external inspection of the property was undertaken on the **22nd January 2022** by experienced ecologist and bat surveyor Robert West (NE license number 2018-33612-CLS-CLS). This inspection was undertaken to identify any potential ingress/egress points within the roof and the body of the structure and any other potential for bat activity.
- 2.2 The house is a detached building with a parking area to the front and large gardens to the rear. The house dates from the early 1920s in style, there are two outbuildings one new and the other a garage.
- 2.3 The large garden to the rear has been stripped of its grass and the area is now bare soil, the site abuts on to a woodland to the west. The front garden area has a mature hedge and there are mature trees in the neighbouring properties.
- 2.4 The neighbours to the north have had works done under a bat license and there are mitigations for bats within the building and hung in the neighbours trees.
- 2.5 The roof of the house is covered in small clay tiles, there are numerous gaps on all elevations that could allow ingress into the building. The rear of the house has had a two-storey extension which has a flat roof.
- 2.6 The ridge is made from the same material as the roof and there are gaps along the ridge on the southern and eastern elevations.
- 2.7 The southern gable wall is covered in hanging tiles, these tiles have numerous gaps and holes that would allow ingress into the fabric of the building.
- 2.8 The eaves are tight fitting with no obvious holes or gaps that would allow ingress into the building.
- 2.9 The lead flashing around the chimneys is intact and there are no obvious holes that would allow ingress into the building.

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- 2.10 The external inspection showed that this building has a high potential for bats to be roosting within its structure.

Internal inspection (*see pictures in appendix*)

- 2.11 This property has a roof space that covers the whole of the house; access was easy throughout. The floor was boarded almost throughout the roof space.
- 2.12 The main roof (north/south) was about 2 m to the ridge., the roof area that runs east/west is a lower roof and is about 1.5m to the ridge. The front gable has a small window in which allows light into the roof space.
- 2.13 The tiles of the house are backed with bitumen felt, this is in good condition
- 2.14 The roof is constructed as a truss frame there is a ridge beam that runs east to west, even into the newer extension.
- 2.15 The floor of the roof was covered with a thick layer of glass fibre insulation throughout. No light was seen coming in through the eaves.
- 2.16 Bat droppings were seen in the larger of the two main roof areas, droppings were seen against the large front facing gable wall they look like from a smaller species of bat such as pipistrelle, a sample was taken for DNA analysis.
- 2.17 Bat droppings were also seen in the lower western part of the roof, with droppings seen on the fibre insulation, samples were taken for DNA analysis.
- 2.18 The internal inspection of this property showed that bats **are using the building as a roost.****

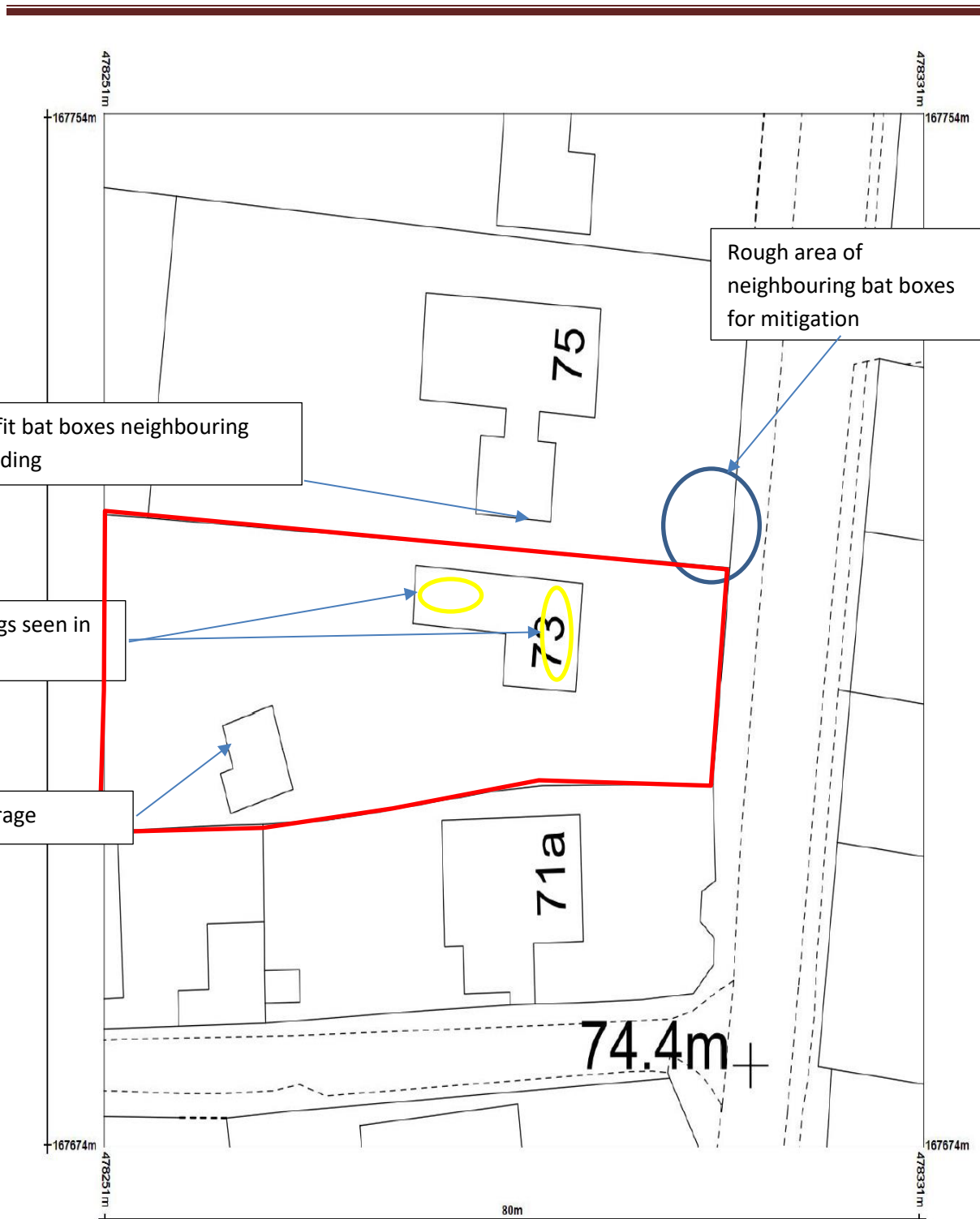


Figure 1: Phase 1 bat survey results

3 Phase 2 activity surveys

3.1 Three activity surveys were undertaken to establish the use of the site by roosting and foraging bats 1 x Dawn (11/07/22) and 2 x Dusk (16/06/22 & 30/06/22). Surveys were undertaken in accordance with the Bat Conservation Trusts Guidelines for Bat Surveys (3rd Edition, 2016), as endorsed by Natural England.

3.2 The surveys were undertaken under good weather conditions:

	Time st	Time fin	Temp h/l	Wind	Cloud	Rain
16/06/22	21:14	22:53	20.7/ 18.6	0	100%	no
30/06/22	21:04	22:54	14.9/ 12.9	1	30%	no
11/07/22	03:308	05:10	14.7/13.5	1	25%	no

3.3 Due to the size of the building and its regular shape three surveyors were used and sited around the house to cover all possible elevations of the building. All the surveyors used Anabat Walkabout and EM Touch Pro bat detectors.

3.4 During the first dusk survey (16/06/22) 3 species were recorded (Common and Soprano Pipistrelle, Brown long eared bats). **1 X Brown Long eared** bat was seen emerging from a loose tile the southern elevation. There was a lot of activity around the property with numerous bat passes heading towards the west. Foraging in and around the gardens was frequent throughout the survey (See figure 2) (Rob West, Des Purdy and Pete Allen).

3.5 During the second dusk survey (30/06/22) 3 Species of bat were recorded (Common and Soprano Pipistrelle and Noctule bats)., **1 x Common Pipistrelle** bats was seen emerging from the tiles above the verge on the southern elevation. Lots of foraging and passes were recorded throughout the survey at both side of the house (See figure 2) (Rob West, Des Purdy and Pete Allen).

3.6 During the dawn survey (11/07/22) 4 species were recorded (Common and Soprano Pipistrelle, Brown Long eared and Noctule bats)., **1 x Brown Long eared** bat was seen re-entering into a tile just below the ridge on the western

elevation. The activity was reduced but there was still plenty of foraging and commuting activity throughout the survey (See figure 3). (Rob West, Des Purdy and Pete Allen)

- 3.7 During the activity surveys bats were seen emerging/re-entering from the building. The grounds around the house had plenty of activity on the first two dusk surveys, but the bat activity was reduced on the dawn survey.

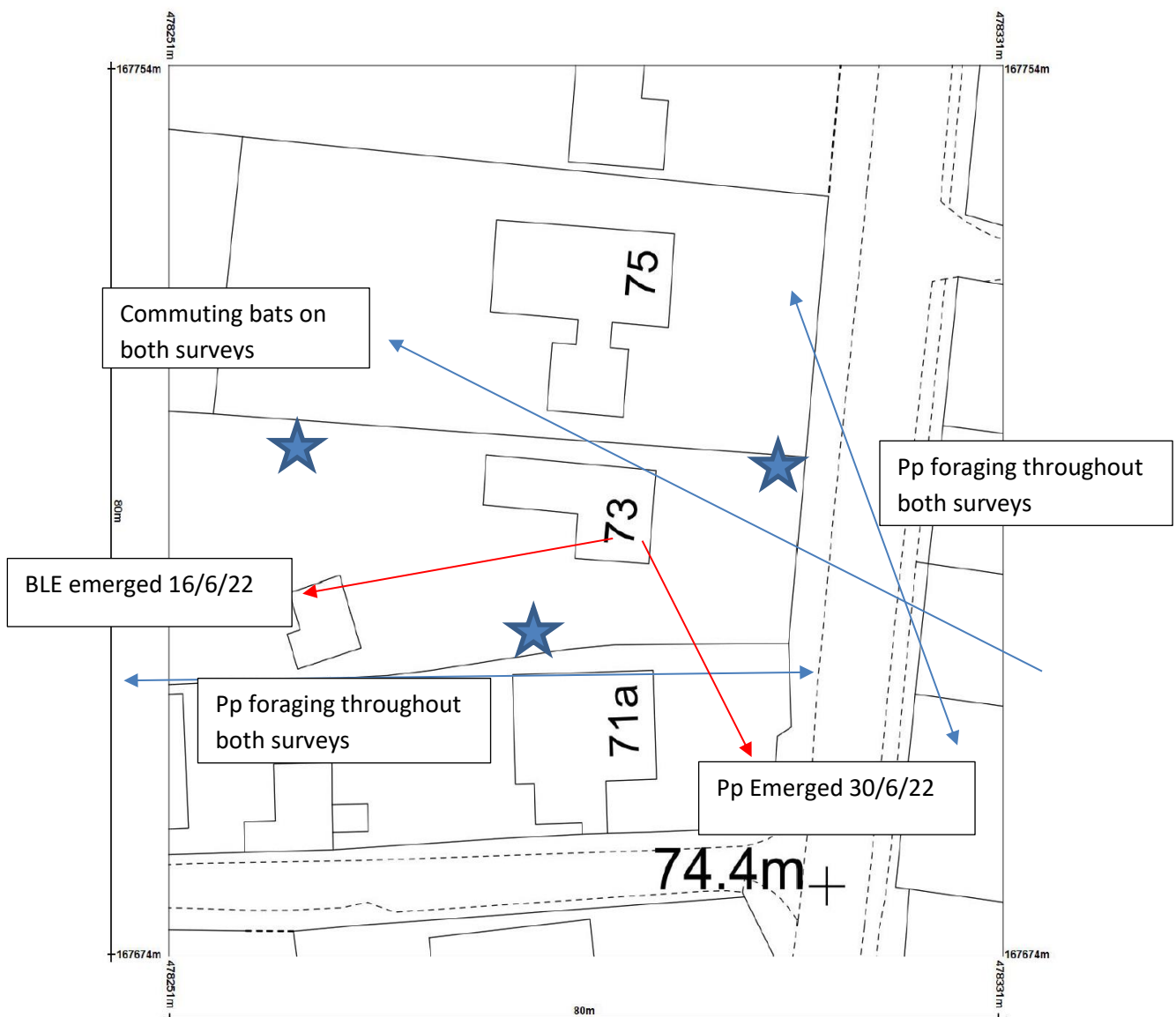


Figure 1: Dusk survey results 16/06/2022 & 30/06/2022



Surveyor position

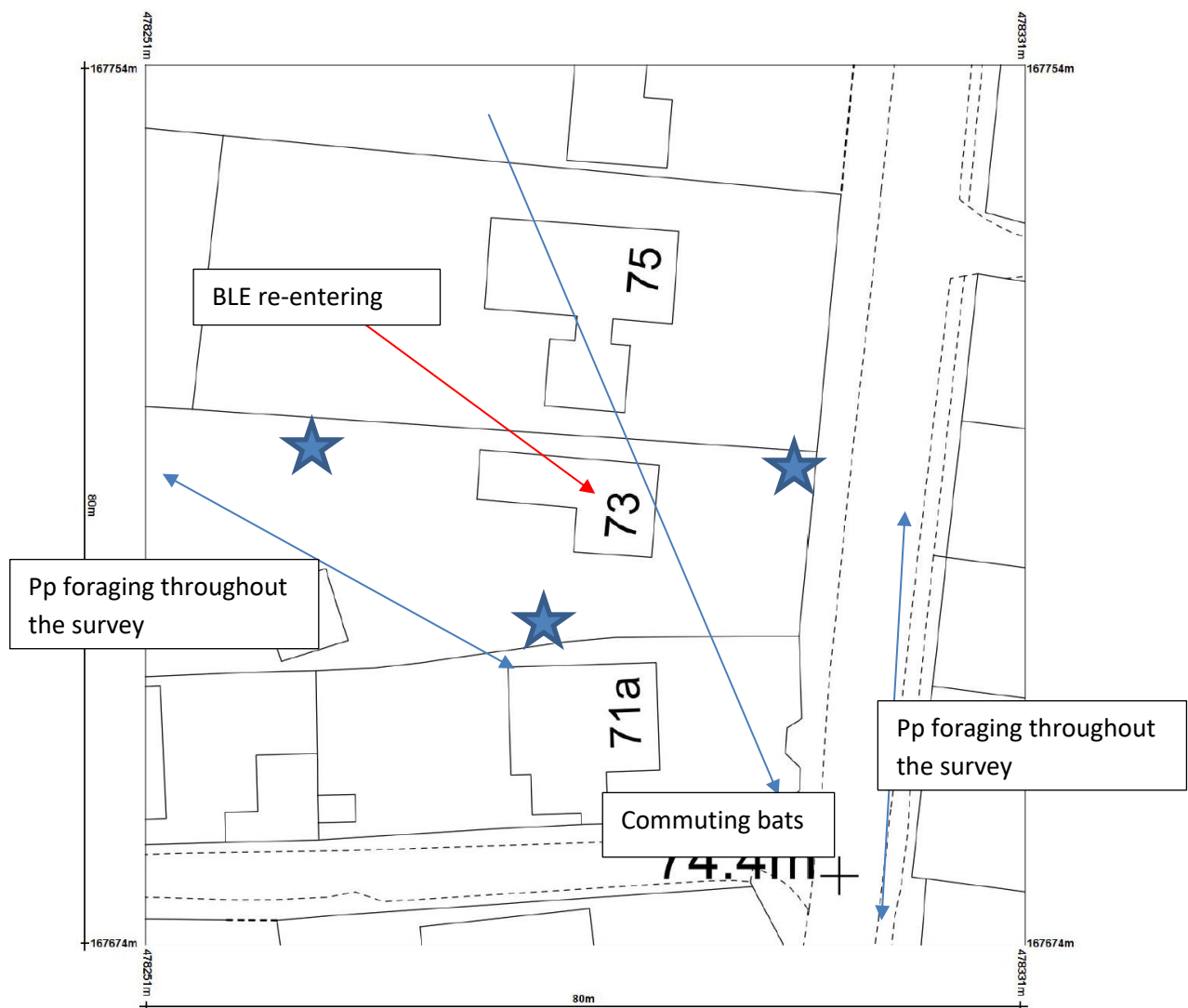


Figure 2: Dawn survey results 11/07/2022



Surveyor position



Figure 3: Showing the area the bat emerged on the southern elevation of the property



Figure 4: Showing the area a bat re-entered the building

4 Survey conclusion

- 4.1 The preliminary survey carried out on 22nd January 2022 by Vesper Conservation & Ecology Limited showed that building is a bat roost. The subsequent phase 2 bat activity surveys in the 2022 survey season showed that bats are using the building as a roost by two different species.
- 4.2 The DNA analysis for the droppings showed that Common Pipistrelle bats were roosting within the roof.
- 4.3 It is not thought that with number of droppings within the roof space and the number so bats seen emerging, this property has a **non-maternity day** roost of Common Pipistrelle and Brown Long eared bats, and the building structure is unsuitable for this to be a hibernation roost due to lack of stable temperatures within the roof space.
- 4.4 There are records of bats in the area and there have been several protected species licenses granted within a few km of the site. The closest are within 10m of the property. The phase 2 surveys recorded lots of foraging in and around the garden.
- 4.5 On the two dusk activity surveys there was plenty of foraging activity around the building especially along the road, Common pipistrelle and Brown Long eared were seen emerging from the southern elevation. On the Dawn survey a Brown Long eared was seen re-entering into the western elevation near the ridge.
- 4.6 The activity surveys showed that 2 species of bat are using the building as a roost, and this building **is a confirmed bat roost**.
- 4.7 Therefore, to carry out the proposed works, a suitable mitigation strategy needs to be developed. A **European Protected Species Licence** (EPSL) in respect of bats will also be required to carry out any works affecting the bat roost. This will require an application to Natural England and can only be applied for after the grant of planning permission, as a copy will need to go

with the license application. The application usually takes up to 30 working days (6 weeks) although Natural England are taking up to and beyond 45 working days (9 weeks) due to current restrictions.

- 4.8 No trees or bushes are to be removed so there is no potential to be disturbing nesting birds, the rest is tightly mown lawn with little ecological value. The proposed work is not planned to encroach on to the garden.

5. Mitigation Strategy

- 5.1 The Phase 1 and 2 surveys have shown that 73 BearWood Road, Barkham is a bat roost used by a small number of bats Common pipistrelle and Brown long eared bats.
- 5.2 It is thought that the roost found here is a non-maternity day roost of Common Pipistrelle and Brown Long eared bats roosting within the building. **However**, as the proposed works on the building will result in the roost being disturbed/destroyed when the building is demolished and replace with a new dwelling, under the provisions of the Habitats Regulations 2019 (as amended leaving the EU) a European Protected Species Licence (EPSL) will be required to ensure the works can be undertaken lawfully (to be applied for subsequent to the grant of full planning permission).
- 5.3 As part of this Licence application, it will be necessary to demonstrate provision of a suitable mitigation strategy which will meet the three derogation tests within the Habitats Regulations.
- 5.4 In effect, there are three key elements to the mitigation strategy which is proposed here which are necessary to comply with the provisions of the legislation and licensing requirements.
- That appropriate methods are employed to ensure that bats are not at risk of killing or injury during demolition and construction works.
 - That safe roosting provision is provided within the re-developed building suitable for the maintenance of a small non-maternity day roost of Common Pipistrelle and Brown Long eared bats.
 - That adequate provision is made for monitoring of the installed mitigation where required under the existing guidance from Natural England.

Method Statement for the Avoidance of Harm to Roosting Bats

5.5 There are a number of requirements which Natural England will expect to see within the Method Statement document which will be provided as part of the licence application. These will include:

Timing of Works:

- Details of the timings of works will need to be provided within the Annexed Method Statement and Work Schedule.
- Alterations to roosting areas within the building (in this case destroying the roost will not normally be permitted within the most sensitive seasons, maternity and hibernation). **Works within these sensitive areas will need to be carried out either during the period March – May or September – November.** Prevailing weather conditions can also provide an additional constraint on these windows as overnight temperatures will be required to be in excess of 8°C.

Demolition Methods:

- Roof tiles felt and cladding and fascia and soffits in sensitive areas will need to be removed by hand to limit the risk of injury or death to roosting bats. Especially over the older part of the house.

Supervision and contact with contractors:

- A suitably qualified ecologist will be required to oversee sensitive sections of tile and hanging tile and soffit removal.
- A toolbox talk will need to be provided to contractors working on the roof which will include an overview of the requirement of the bat licence and advice on identifying bat presence and action required in the case of a bat being discovered. A written record of this will need to be provided to Natural England as part of the licence return report.

Provision of Alternative Roosting Opportunities

- 5.6 Due to the evidence of bat roosting within the building from the internal inspection and the activity surveys, it is considered that the bats using the building the older part of the building, the proposed works will demolish the whole building. Consequently, the proposed redevelopment of the property will disturb the roosting of the bats in the short term.
- 5.7 The following inclusions are therefore recommended for incorporation into the redeveloped building to keep and improve roosting opportunities:
- The addition of 4 inbuilt bat boxes (vivaro Pro built in woodstone bat box or Bird Brick Houses STBAT (brick fronted) into the new elevations as shown in figures 4 & 5 pictures 9 & 10
 - During the works a suitable alternative roost will need to be supplied so that any bats found during the destructive search/tile strip of the building, this should be one Schwegler 2FN bat boxes or equivalent. This will be place in a tree or on a building within the grounds of the property at about 3m from the ground.
- 5.8 With regards to the construction of the new roofs for the extensions, Natural England will no longer accept mitigation strategies which include access to a roof space which incorporates breathable roofing membranes such as Tyvek within their construction. This is due to the findings of recent research which has highlighted two significant issues with these materials in bat roosting locations:
- Bats are at severe risk of entanglement, and therefore death, in the loose fibres associated with these materials
 - Oils and grease from bat fur significantly reduce the breathability and therefore functionality of these materials, in some circumstances rendering them useless.

(Please see <http://www.batsandbrms.co.uk/> for further details.)

Monitoring of Installed Mitigation

5.9 A key requirement of the licensing process is that mitigation installations are properly installed as per the license agreement.

5.10 In this circumstance, and given current guidance from Natural England, I would recommend that 0 visit is undertaken:

- A post-completion compliance check to ensure all mitigation features have been installed correctly before contractors leave the site.



Figure 4: Showing mitigation (front and rear elevations)



Figure 5: Showing mitigation (northern and southern elevations)

Appendices:

Bats and the law

Natural England offers further detailed advice which can be applied to planning applications that affect protected species.

Bats

There are 18 species of bat in the UK, 7 of which are UK BAP priority species and Species of Principal Importance in England under S41 of the NERC Act 2006. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitat Regulations 2017. It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, deliberately or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts); or
- Possess, sell or transport a bat, or anything derived from it.

For more information please read:

Natural England. 2016. *Standing Advice for Protected Species*. Available from:
<https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects>

Birds

48 species of bird on the UK BAP exist in England. These species, plus the Hen Harrier, are also listed as Species of Principal Importance in England under S41 of the NERC Act 2006. All birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

Schedule 1 of the Wildlife and Countryside Act 1981 affords extra protection for a number of species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependant young, constitutes an offence.

Reptiles

All four of the widespread British species of reptile, including the Common Lizard *Lacerta vivipara*, Slow-Worm *Anguis fragilis*, Grass Snake *Natrix natrix* and Adder *Vipera berus*, are also UK BAP priority species and Species of Conservation Concern in England. They are protected under Schedule 5 (Sections 9.1, 9.5a, 9.5b) of the Wildlife & Countryside Act 1981 (as amended) from intentional killing, injury and trade. The habitat of the four widespread reptiles is not legally protected; however the replacement of habitat lost through development may be required through the planning system. Mitigation for these species is not subject to licensing by Natural England but should nonetheless be planned to minimise disturbance.

Neighbours who have bat mitigation built into the building



Picture 1: Showing the eastern elevation



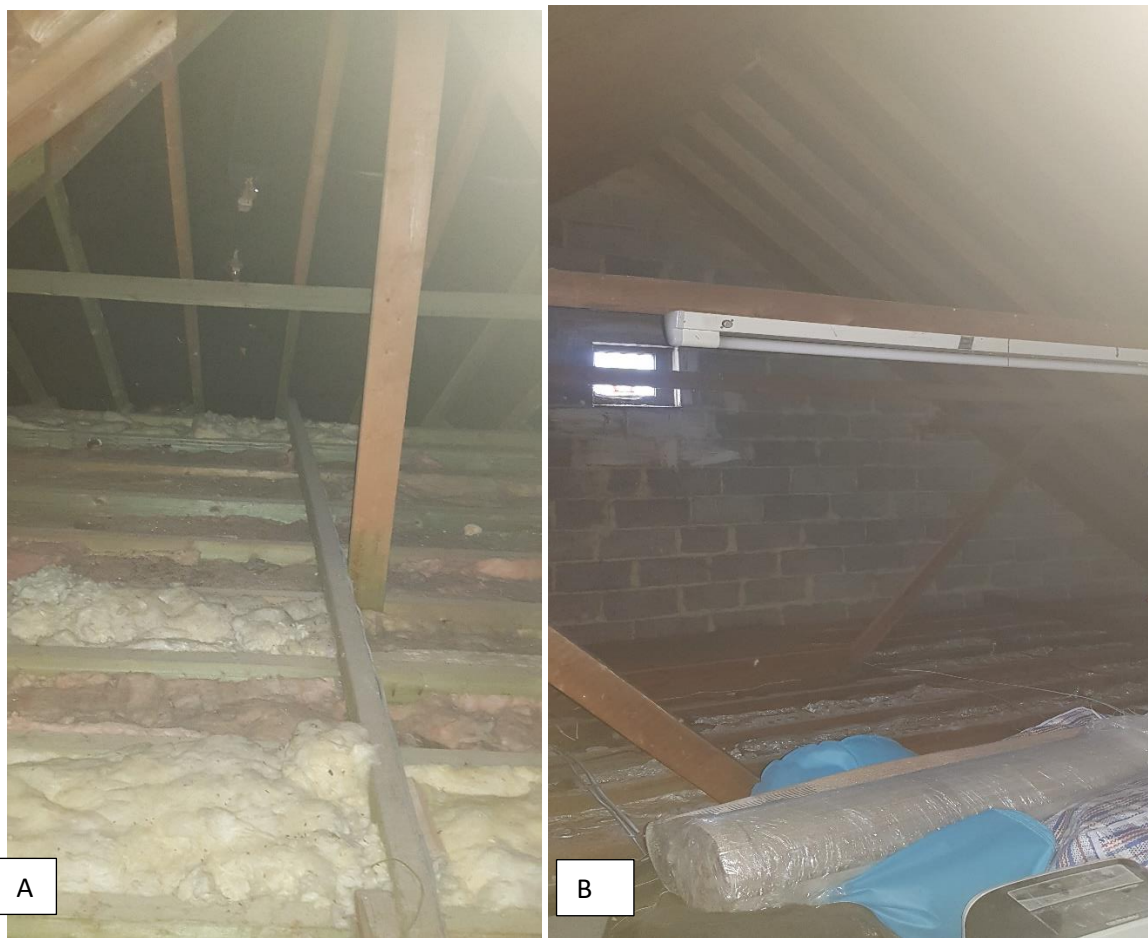
Picture 2: Showing the southern elevation.



Picture 3: Showing the western elevation of the property



Picture 4: Showing bat droppings in the roof near the front gable wall



Picture 5: Showing the internal roof space (A = in the western part of the roof, B = in the eastern part of the roof)



Picture 6: Showing the bat dropping on top of the insulation



Picture 7: looking west into he garden

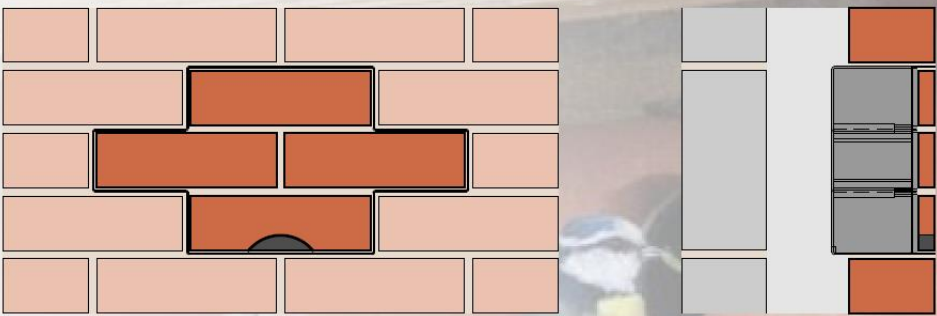


Picture 8: Showing the front garden area



Picture 9: Vivaro PRO Build-in WoodStone Bat Box are recommended for this project as they can be built into block work and rendered over

STBAT (brick fronted), MFBB (mesh fronted).



- Bat Box fitted with stretcher bond brick slips (other bonds available), suitable for most of UK's bat species, houses up to 50 Pipistrelles. Maintenance free.

- Available with stainless steel mesh fronted larve for render, stonework etc.

- Dimensions/weight 440L x 227H x 125D,

- Weight with brick slips fitted 5kg Mesh fronted 2.3kg

- Main body 100% recycled polypropylene, real brick slips bonded to removable front with exterior grade tile adhesive (data available). Sawn timber internal baffle board. Retaining screws stainless steel. Two drainage holes located in base.

Bird Brick Houses Ltd. 01323 488732 www.birdbrickhouses.co.uk

STBAT/MFBB bat box.



Picture 10: Bird Brick Houses STBAT, these can be obtained in other bonds and can have the same brick finish attached, or can be mesh fronted for rendering over



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