Ecology Planning

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The Furlongs, Brockhampton, Herefordshire

Bat Report

Report Ref: 1421 / 01

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[redacted]

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Contents

1. Introduction

1.1 This report has been produced by Ecology Planning on behalf of Hook Mason architects in support of a planning application for the renovation and extension of an existing dwelling (hereafter referred to as 'the Building') at The Furlongs, Brockhampton, Herefordshire HR1 4SA hereafter referred to as 'the Site'.

1.2 The Site is situated in a rural area, approximately 10km southeast of Hereford at National Grid reference SO 602 326. The proposed works include extension and renovation of the rear (north-western) aspect of the Building, removal of small single storey sections on the rear and minor alterations to the front porch.

1.3 The report includes full descriptions of all methods undertaken to gather ecological data, the results and analysis and recommendations for appropriate mitigation and enhancement with regard to relevant legislation, planning policy and conservation documents.

2. Methodology

2.1 This section provides details of all methods used in this ecological assessment including timing of works, weather conditions and equipment used.

2.2 All works were carried out in line with best practice guidelines including:

- Bat Surveys for Professional Ecologists Good Practice Guidelines[1];
- Bat Mitigation Guidelines[2]; and
- Bat Workers Manual[3].

Desk Study

2.3 Given the small size of the Site and limited number of bats recorded during the surveys, a full desk study has not been undertaken.

2.4 A designated sites search was made using:

- MAGIC Interactive Map[4].

Site Survey

2.5 In accordance with current best practice guidance, the initial daytime building assessment was supported by three-night time surveys, based on an initial assessment of moderate-high bat roost potential.

Building Assessment

2.6 An internal and external assessment of each of the building was made in terms of its suitability to support roosting bats on 29th April 2016 by Rebecca Bohane, a licensed bat worker (NE bat class licence number: 2015-14852-CLS-CLS). The survey followed standard methodologies and consisted of a visual inspection of the interiors and exteriors of the buildings for:

- direct evidence of bat use including droppings, feeding remains and scratches and staining from fur oil or urine around roost exit/entry points;
- features that have the potential to be used by bats including loft voids, soffits, wooden beams, hanging tiles; and
- general conditions including roof structure, temperature, disturbance and connectivity of suitable habitat.

2.7 The survey was aided by the use of ladders, close-focussing binoculars and high powered torches where necessary.

2.8 The roosting potential of the building was classified into one of the following categories:

- High Roosting Potential – Buildings with significant potential containing a large number of suitable features or features present appear optimal;
- Medium Roosting Potential – Buildings with roosting features appearing less suitable;
- Low or No Roosting Potential – Buildings with few if any features suitable for roosting.

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[1] Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).* The Bat Conservation Trust, London

[2] Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines English Nature*, Peterborough

[3] Mitchell-Jones, A.J. & McLeish A.P. (2004) *Bat Workers Manual (3rd Edition)* JNCC, Peterborough

[4] Available online only at: www.magic.gov.uk Accessed 30.06.16

Emergence/Dawn Swarming Surveys

2.9 An initial emergence survey was undertaken on 14th May 2016 by Laurence Brooks an experienced bat surveyor and licensed bat worker (NE class licence number: 2015-17507-CLS-CLS), accompanied by Martin Shaw (also a licensed bat worker).

2.10 A dawn survey was undertaken on 2nd June 2016 by Laurence Brooks and Martin Shaw; and a second emergence survey was undertaken on 25th June 2015 by the same surveyors.

2.11 The surveys were spread across late spring and into early summer, encompassing the pre-maternity and maternity periods when bats are most active. The weather conditions were suitable for all surveys, as detailed in **Table 1.** below.

2.12 Surveyors used *Batbox Duet* heterodyne and frequency division bat detectors. In addition, two *Anabat Express* static automated detectors were used as additional bat detectors outside the Building during all surveys. All calls were recorded as MP3 files/WAAC files and analysed using *BatSound* and Analook software.

Date	Dawn/ Dusk time	Duration	Temperature (Start - End)	Cloud Cover	Wind	Precipitation
14.05.2016	20:55	20:40 – 22:25	17 – 10.5°C	0/8	None	None
02.06.2016	04:58	03.25 – 05:00	11.5 - 11°C	8/8	None	None
25.06.2016	21:35	21:20 – 23:08	18.5 - 14.0°C	7/8	Slight breeze	Light drizzle 22:55-23:10

Table 1. Dates durations and weather conditions of night time bat surveys.

Constraints

2.13 There were no constraints to survey.

3. Results

Desk Study

Designated Sites

3.1 The River Wye Special Area of Conservation (SAC) lies approximately 1.4km to the west of the Site. There are no other statutory sites within 2km of the Site. This site is not primarily designated for bats, though it offers and excellent foraging area and commuting/migration route for various species.

Bat Survey

Site Setting

3.2 The Site is located in valley within rolling hills, surrounded by mixed but predominantly pastorally farmed area with the River Wye and associated riparian woodlands/habitats and some large blocks of woodland in the local area. The wider area is therefore a considered to provide excellent foraging habitat, as well as many likely roost sites for various species of bats.

Building Assessment

3.3 The Building is illustrated in **Appendix 1 – Photographs**.

3.4 The building is a two storey, roughly T-shaped dwelling of rough stone construction, supporting a slate tiled roof.

3.5 The building is oriented with the ridge line running approximately north-east to south-west. A perpendicular cross gable ridgeline extends from approximately the centre of the north western elevation of the roof. The main roof is slate tiled and of a simple pitch. The rear elevation (north west) has a longer roof, extending down to single storey level, with a change in gradient midway down the pitch. There are two small single storey lean-to sections of roof on the north western elevation which are also slate tiled.

3.6 The roof is in moderate condition and there are numerous gaps on all elevations, including: beneath raised/missing/broken slates. The ridgelines appear to be in reasonable condition and none on the concrete ridge tiles appear to be significantly raised. There is damage to one tile on the rear (north western) elevation, although this is unlikely to provide access. More significantly there are numerous gaps present on both the north eastern and south western gable ends where the verges are not sealed. These gaps are particularly extensive on the north eastern elevation.

3.7 Further gaps (albeit relatively minor gaps) are present beneath almost all sections of lead flashing, particularly on the pitched bay window roofs and the single storey lean-to roof on the rear. It is possible that there may be gaps large enough to allow bat access along the central piece of lead flashing on the rear elevation of the main roof.

3.8 The cross gable roof appears to be in a comparatively better state of repair. The slates are in good condition and there are no visible access points within the intact ridge. The lead gulleys are in good condition also. The eaves appear to have been open in the past, with only narrow soffit board that stop far short of the walls, but have since been blocked up with brickwork. It appears that small gaps are present between the roofing felt and the top of the brick work.

3.9 Small sealed voids are present above the small rear lean-to extension and above the two bay windows on the front, which are connected by a central porch. Small access gaps are present beneath tiles and poorly fitting sections of lead flashing. These gaps may provide access into the

voids beneath, but the voids are sealed internally so the presence/condition of the felt, and therefore access into the void, is unknown. Access is also possible at the base of the porch, where the timber ceiling boards are poorly fitted against the rough stone work. There is a single storey vaulted ceiling at the rear of the property and it is assumed that a narrow cavity may be present between plasterboard and tiles/felt.

3.10 The external rough stone work is in reasonable condition with all pointing intact. A single hole was recorded within the chimney on the north eastern elevation and a second within stonework to the east of the same chimney.

3.11 Internally the two loft spaces are connected, with free flight access available between voids.

3.12 The main void is approximately 1.8m at the apex and spans the full width of the house. The roof is primarily a simple cut and pitch construction, although there are intermittent collar beams and occasional struts throughout. Bitumen roofing felt is present and this appears to be in excellent condition. Pointing on the stonework gable end walls is likewise in excellent condition, although there are numerous large access gaps along verges and wall tops.

3.13 A single medium sized bat dropping was recorded in the loft. Hundreds of mouse droppings are present throughout the void which may have resulted in bat droppings not being detected. The roof of the void was cobwebby along the entire ride, with large numbers of dead cluster flies present.

3.14 The connected cross gable loft void is approximately 1.2m to the apex and again spans the full length of the rear section of the house. The roof is of a simple cut and pitch structure and lined with bitumen felt which is in excellent condition. The rear (north western) gable end is of lathe and plaster, which is also in good condition. No bat droppings were recorded. Abundant mice droppings were present throughout the void.

3.15 One small fresh dropping was recorded on an internal window sill on the upper floor of the house.

Emergence Survey 1 – Mid May

3.16 Bat activity was recorded from 21:14 with a soprano pipistrelle pass along the adjacent lane.

3.17 A single unidentified pipistrelle bat emerged from beneath a slate tile on the rear elevation just above the single storey rear lean-to porch (western corner of the Building) (**see Appendix 1 – Photograph 4**).

3.18 Further bat activity was recorded throughout the survey, with common pipistrelle and Myotis passes detected. A single pass by a lesser horseshoe bat was recorded at 21:32. There were no further bats recorded emerging from the Building.

Dawn Survey – Early June

3.19 A low level of bat activity was recorded throughout the survey, with the majority of passes by common pipistrelle bats, a few soprano pipistrelle bats and a single myotid species.

3.20 At 04:20 a common pipistrelle bat entered a small hole to the right of the drainpipe near the chimney on the north eastern gable end (**see Appendix 1 – Photograph 4**).

3.21 At 04:22 an unidentified pipistrelle bat entered the top of the wall to the right of the chimney on the north eastern gable end (see **Appendix 1 – Photograph 4**).

3.22 At 04:27 an unidentified pipistrelle entered beneath a tile (at the verge) along the north eastern gable end (see **Appendix 1 – Photograph 4**).

Emergence Survey – End June

3.23 Bat activity was recorded from 21:44 with a noctule pass over the Site. Pipistrelle activity was then recorded throughout the survey until 22.28.

3.24 At 22:07 a Brandt's/whiskered bat was recorded emerging from the verge on the lower rear roof on the south western elevation (**see Appendix 1 – Photograph 4**).

3.25 At 22:17 a single common pipistrelle bat was seen to enter the stonework gap to the right of the drainpipe on the north eastern elevation (roost site previously recorded at dawn).

4. Planning Policy, Legislation and Conservation Context

4.1 This section briefly outlines the various levels of planning policy, legislation and conservation status pertaining to the Site and the species, or likely species, of importance contained therein.

Planning Policy

National Policy

1.1 The relevant adopted policy at the national level is the National Planning Policy framework (NPPF) which comprises the Government's guidance on nature conservation and sustainable development. It sets out the principles for ensuring that the potential impacts of planning decisions on biodiversity are fully considered, whilst maintaining a presumption in favour of sustainable development. These include:

- Ensuring that the requirements for survey are proportionate to the nature and scale of development proposals;
- Enhancing the natural environment and where possible providing net gains for biodiversity, within the context of ecosystem services; and
- Minimising impacts on biodiversity by identifying and mapping components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation. This affords some protection to both statutory and non-statutory sites, as well of habitats of value within the local context.

Herefordshire Local Development Plan

1.2 Herefordshire County Council is currently preparing new Local Plan, which will provide the overall strategic planning framework for the county up to 2031. The Herefordshire Unitary Development Plan (UDP) was adopted on 23 March 2007 and guides development within the county until the adoption of the Local Plan - Core Strategy. The policies specific to nature conservation are set out below and referred to in **Section 5 – Discussion and Recommendations**.

- ***DR4 – Environment:***
  Where relevant to the proposal, all schemes will be required to:
  ...5. contribute to local open space provision and safeguard and where appropriate protect, restore and enhance biodiversity, features of geological interest and landscape character;...
- ***NC1 Biodiversity and development****:*
  In determining all development proposals, the effects upon biodiversity and features of geological interest will be taken fully into consideration. Prior to determination of applications for development on sites where there is reason to believe that such features of importance exist, a field evaluation may be required. Proposals should:

  1. seek to retain existing semi-natural habitat, wildlife corridors, species or geological features within their layouts and design; and

  2. demonstrate that the proposal will have no adverse effects on any adjacent biodiversity and features of geological interest, or lead to the fragmentation, increase isolation, or damage to protected or priority habitats and / or priority or protected species.

- ***NC6 Biodiversity Action Plan priority habitats and species***:
  Developments should have regard to those habitats and species listed in the UK and Herefordshire Biodiversity Action Plans in order to protect, manage and enhance priority species and habitats. Proposals that might result in a threat to such priority species or habitats will not be permitted unless the reasons for the development clearly outweigh the need to safeguard the habitat or species.
- ***NC7 Compensation for loss of biodiversity***:
  Where development is permitted, the use of conditions and/or planning obligations will be considered in order to provide appropriate mitigation and compensatory measures to avoid, minimise or offset the loss of or damage to any biodiversity feature covered by policies NC2 to NC6. Such measures will be at least proportionate to the scale of the loss or impact.
- ***NC8 Habitat creation, restoration and enhancement***:
  The design of new development and the restoration and reclamation of derelict and degraded sites and landscapes, should wherever possible, enhance existing wildlife habitats and provide new habitats for wildlife as opportunities arise. In bringing forward such measures proposals should: 1. retain and enhance existing semi-natural habitats, wildlife corridors or geological features within their layouts and design; 2. demonstrate that they will have no adverse effects on any adjacent nature conservation resource; 3. help to create or restore habitat networks in particular through the creation of new wildlife corridors and /or stepping stones; and 4. contribute towards one or more targets in the UK and Herefordshire Biodiversity Action Plans.

Legislation

4.2 All bats species are listed on Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended) (WCA), which provides legal protection from injury and protection to their roosts. The WCA has been strengthened by the CRoW Act, which allows for 'reckless' as well as deliberate offenses under the legislation. Certain species are also afforded protection under the NERC Act, which additionally requires biodiversity enhancement as part of new development.

4.3 The Conservation of Habitats and Species Regulations 2010 make it an offence to damage or destroy a breeding site or resting place of any bat, or to deliberately capture, kill or disturb a bat or its roost.

Conservation Context

Biodiversity Action Plan

4.4 The UK BAP identifies seven bat species as being of conservation priority including soprano pipistrelle bats.

5. Discussion and Recommendations

Evaluation

5.1 There are minor roosts of pipistrelle and Myotis species present (totalling four individuals) within the Building, including (all locations shown on **Plan 1**):

- Minor roost of a single common pipistrelle bat in stonework on the north eastern elevation;
- Minor roost of a single unidentified pipistrelle bat on the wall-top/roof cavity on the north-western (rear) aspect;
- Minor roost of a single unidentified pipistrelle bat at the verge on the north eastern elevation; and
- Minor roost of a single *Myotis* species considered likely to be a Brandt's or whiskered bat on the wall-top/roof cavity on the north western (rear) aspect (exited on the south-western side verge).

5.2 Common and soprano pipistrelle are considered common and widespread species. Brandt's and whiskered bats are considered to be widespread and relatively common. As a whole, the assemblage of roosts in the Building are considered to be of low conservation value.

5.3 There is considered some potential for hibernation within stonework especially for pipistrelle species, where there is likely to be access into the stonework cavities from the wall tops.

Impact Assessment

5.4 The works will include:

- A small two-storey extension to the existing cross gable section on the rear elevation;
- Removal of all single storey sections on the rear elevation to be replaced with a two storey extension and corresponding flat roofs; and
- Minor repair works, to possibly include making good current gappy verges.

5.5 In absence of mitigation the works have the potential to impact bats as following:

- Destruction of the exact sites of the minor unidentified pipistrelle roosts and the minor whiskered/Brandt's bat roost.
- Possible disturbance or harm/injury of bats during roofing/repair works in the vicinity of the recorded roosts sites.
- The common pipistrelle roost in the stonework is unlikely to be affected.

5.6 The exact locations of the bat roost sites currently recorded under tiles/verges on the lower pitch of rear elevation are likely to be lost as the rear elevation is increased in height and a flat roof added. However, only the lower, single storey sections of the pitched roof will be lost.

5.7 Whilst destruction of a roost site is technically an offence under the legislation afforded to bats, the presence of a single bats on a single occasions means that these are unlikely to be regularly used sites. The one stonework cavity used by a single bat on all surveys will be retained. The existing presence of gaps along almost the entire verges means that the precise locations of the roost sites are unknown. Functionally, the retention of potential verge/slate roost locations on both pitches of the roof at two storey height would mean the roost sites and the individuals using them are unlikely to be significantly affected in the long term. Maintaining long term access into

the verges on both the north eastern and south western elevations is essential to ensuring continued ecological functionality of the roost sites in the long term.

5.8 No bats have been recorded in the vicinity of the north western cross gable roof structure. The proposed extension to this is therefore not expected to affect bats.

5.9 All potential impacts are considered able to be sufficiently mitigated through simple methods of working and retained access as set out below. With implementation of specific enhancements for bats it is expected that the proposed alterations would result in at least a minor positive impact.

Mitigation

Timing of Works

5.10 In accordance with the *Bat Mitigation Guidelines,* there are no applicable timing constraints when affecting minor roosts. However, in order to avoid committing an offence under the legislation afforded to bats, and thereby to ensure continued ecological functionality of the roost sites, works affecting the single storey section of the roof must be undertaken when bats are less likely to be present. It is recommended that such works are undertaken between autumn and spring as far as is possible to avoid disturbance to bats present.

Working Methods

5.11 Prior to any roofing works, a bat worker will assess the location of existing verge access/roost sites within the areas to be retained. If necessary, further gaps will be created (as set out below). It is essential that this work is carried out prior to destruction of any sections of roof to ensure minimal overall change to the number and orientation of existing verge roost locations (accepting minor changes in location and height of roost sites).

5.12 Direct supervision by a licensed bat worker will be required for the removal of tiles/dismantling of the roofs and verges on the single storey sections of roof. All tiles will be carefully removed hand following a briefing from the bat worker. The bat worker must work alongside contractors to oversee the removal of slates on both sections. Depending on the condition of the wall tops, the bat worker may need to supervise some dismantling of the stone work, since the precise location of roost sites cannot be known and the potential for bats within the stonework is likewise unknown. If there is significant potential for bats to be present within the stonework, then any works affecting the stone walls must be undertaken outside of the hibernation period (November to mid-March, inclusive).

5.13 No bats have been recorded in the cross gable roof and no direct supervision of works is proposed in this area. However, given that bats have been recorded within the building, all contractors should be made aware of the possibility of encountering bats. In the event that any bat is discovered during works, works must cease immediately and a licensed bat worker contacted for advice.

5.14 In the event that repairs to the verges of the main roof are required, this must be carried out under supervision of a licensed bat worker. Repair works would likely result in blocking up a large gaps, retaining small access locations in more-or-less like-for-like locations where bats have been recorded. Works would be undertaken in spring or autumn as far as possible to reduce the likelihood of bats being present. A minimum eight gaps (dimensions of 30mm high by 100mm wide) will be retained in total to ensure continued functionality of recorded roost sites. Two of these would be located either side of the chimney on the north-eastern and south-western gable end walls.

5.15 Immediately prior to any infilling, the affected areas will be thoroughly inspected by a licensed bat worker using high powered torches and endoscope. If cavity visibility is insufficient then it may be necessary to leave additional small areas unblocked. Only when the bat worker is confident that no bats are present will the areas be infilled, using cement/mortar or similar. No expanding fillers will be used.

Materials

5.16 Timber should be pre-treated where possible to avoid the need for any treatment in situ but the Natural England list of safe timber treatments will be provided to the applicant if necessary.

5.17 Given the new pitched-roof extension will tie into the existing cross-gable roof, it is recommended that a bitumen roofing felt is used throughout the new extension. As access into the existing roof is possible by bats and may be used in future, it is essential that the new connected roof space will comprise materials that are not harmful for bats. A modern breathable roofing membrane will therefore not be used on the two storey extension.

5.18 There are no restrictions on materials used for the single storey flat roofed section. This must be adequately sealed from the pitched roof to ensure no bats can enter.

New/Replacement Roost Features

5.19 With very minor modifications the new extension will increase the loft volume available for bats and is considered to enhance the Site above existing levels and will ensure long term roost sites are available.

Ridge Tile Access

5.20 The loft space within the Building is currently suitable for bats and may become colonised in future. Existing access is present along the wall top and at the verges and much of this access will remain. Additionally, two ridge tiles on the main ridge will be removed and reset, as outlined below, to allow bat access underneath and corresponding access will be cut through the bitumen felt of 30mm x 50mm, under each tile.

5.21 Access will be created into the loft from the new extension. The end ridge tile of the new north western extension will be raised, as shown in **Appendix 2**. A corresponding gap (approximately 30mm by 100mm) will be created in the bitumen felt adjacent to a rafter in close proximity to the tile access. Two further access gaps will be provided on this north western gable end, either in soffits, or beneath barge boards, as appropriate. One access will be created against the external wall on either pitch, with dimensions of 30mm by 100mm.

Bat box on tree.

5.22 A *Schwegler 1FD* bat box on a mature tree in the garden. This will be located as high as possible and a minimum of 3m height on an open section of trunk. This bat box will be sited away from any sources of lighting. If the applicant is at all uncertain as to the best location, a licensed bat worker can advise on site.

Post-Development Disturbance

5.23 It is unlikely that any recorded roost will be affected by the proposed renovation works in the long term. Given the scale of the proposed alterations and the relatively small change in the structure of the building, it is unlikely that additional light spill will be an issue in terms of lighting existing roost sites. No external lighting should be installed on the north eastern or south western gable ends.

Compliance

5.24 Given the location of the minor roosts present and the scale and location of the proposed works, bats are unlikely to be disturbed during or after completion of the extension. Central to ensuring no/minimal disturbance is the principle of continued ecological functionality. Whilst the precise locations of very minor, occasional roost sites will be lost, the retention of almost identical sites (at slightly greater height but the same structural location and orientation) in extremely close proximity is considered is considered to ensure such functionality. As set out above, all works in the immediate vicinity of recorded roost sites may be undertaken without detrimental effect, providing this is undertaken at a time of year when bats are less likely to be present and under the supervision of a licensed bat worker. Failure to comply with these recommendations is likely to result in an offence under the legislation afforded to bats and any deviation would require a European Protected Species derogation licence. It is envisaged that all recommendations can be controlled via a suitably worded planning condition.

Appendix 1 - Photographs

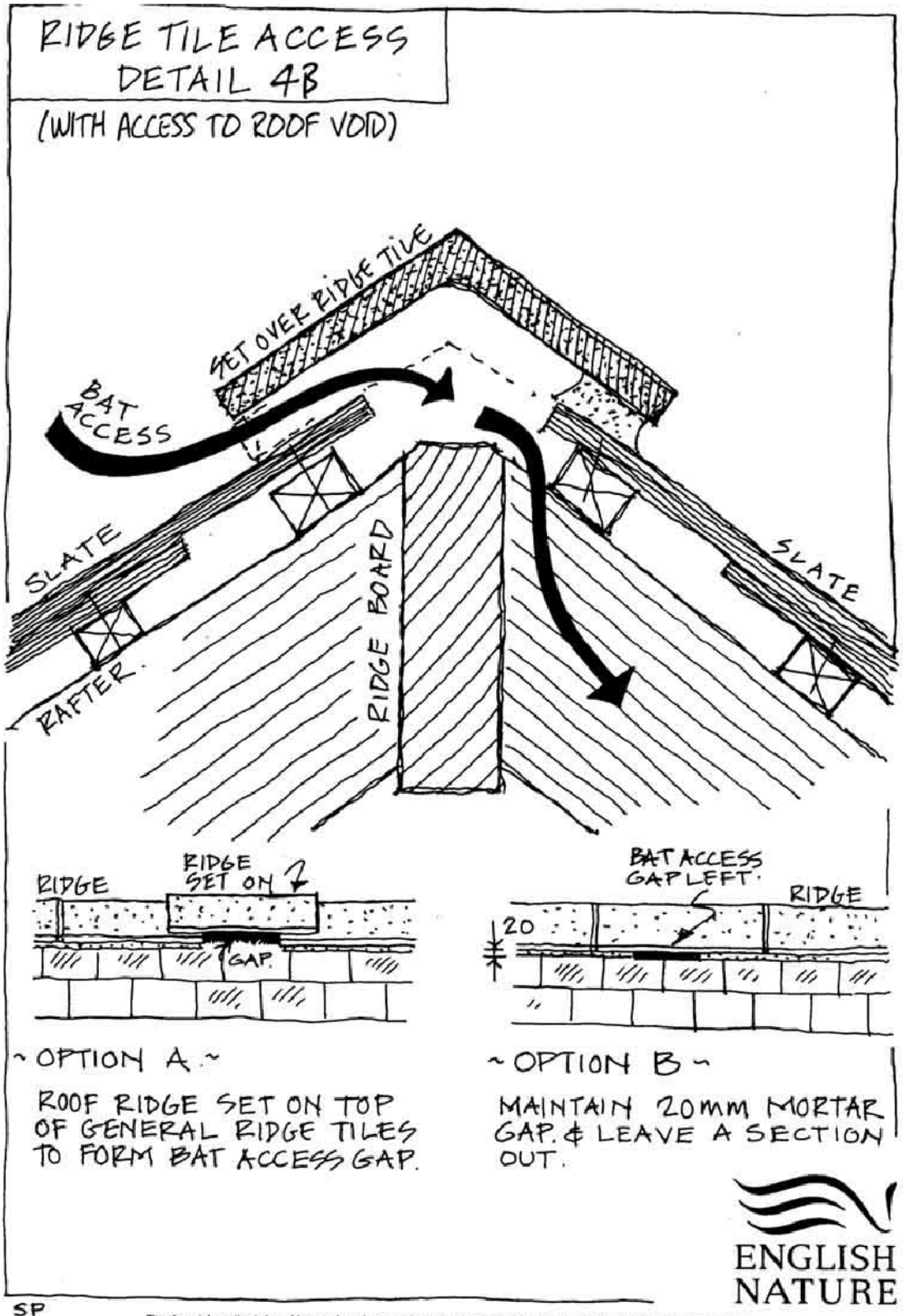
Photograph 1.The front (south-eastern) and south-western aspects of the lding viewed from the south.

Photograph 2. The rear (north-western) aspect viewed from the south-west.

Photograph 3. The small and cluttered rear loft.

Photograph 4. The access points to the four recorded minor roosts.

Appendix 2 – Ridge Tile Access



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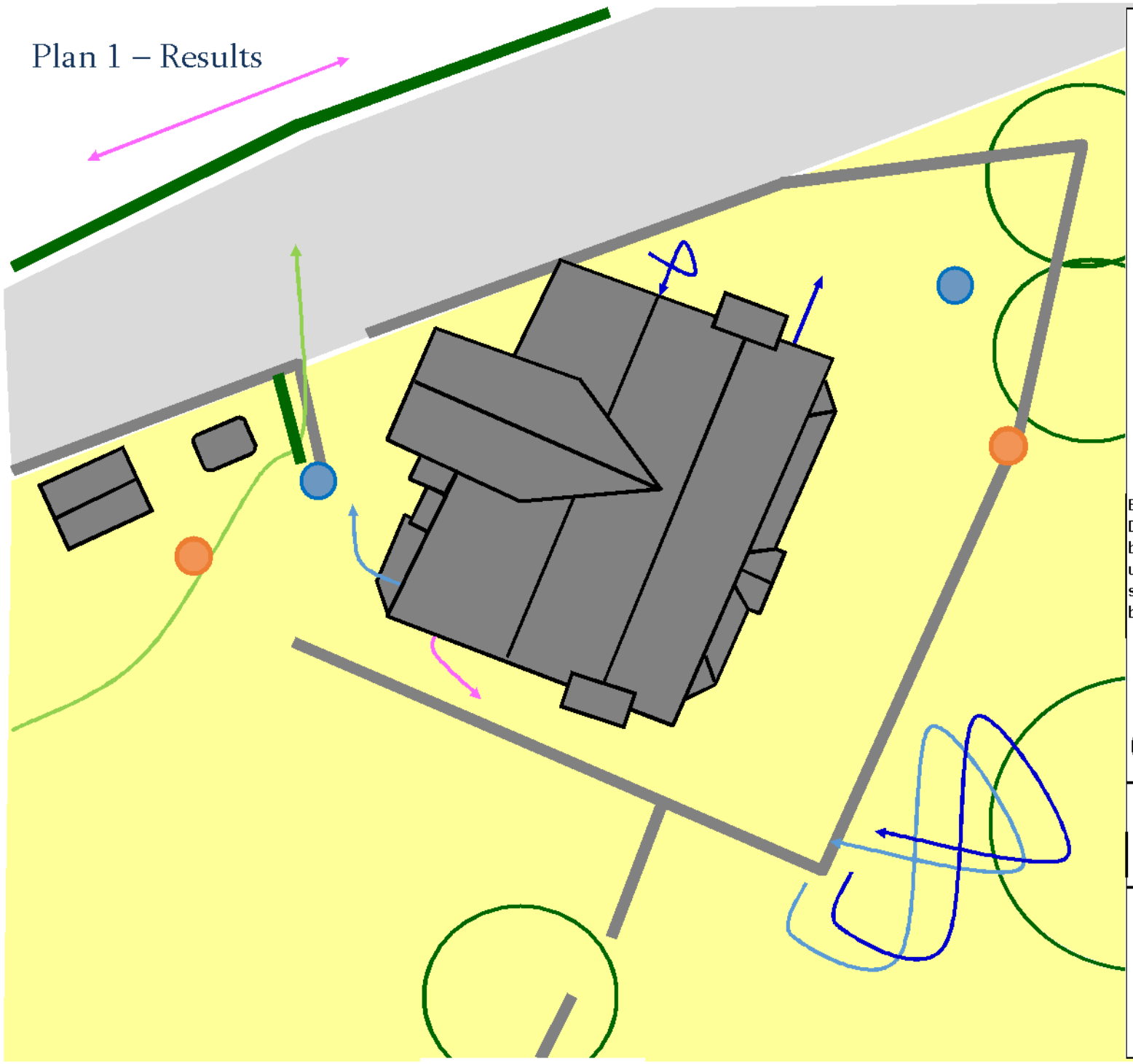
Plan 1 – Results



Key

- The Site
- Buildings and Hard-standing
- Lawn / Garden
- Hedgerow
- Scattered Trees
- Surveyor position
- Automated detector position
- Bat Emergence
- Bat Foraging Activity
- Bat swarming / re-entry

Bat Species Colour Code
Dark blue = soprano pipistrelle; light blue = common pipistrelle; purple = unidentified pipistrelle; pink = *Myotis* species; light green = lesser horseshoe bat.

N

Not to scale

Ecology Planning
Ecological Planning Advice and Protected Species Surveys

Project: The Furlongs, Brockhampton, Herefordshire

Drawing Number: 1421 / 01

Drawn by: LGB

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