**ABBOTSFIELD**

**BAT SURVEY & MITIGATION**

**JULY 2023**

Aluco Ecology Ltd  Registered in England No. 5598341
info@alucoecology.co.uk  www.alucoecology.co.uk
Hampshire 01962 886633 / Berkshire 01488 648321 / South-West 01326 291064
Registered Office: Pencairn, Penmenner Road, The Lizard, Cornwall TR12 7NR

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## 1.0 INTRODUCTION

### *Background*

Aluco Ecology Ltd was commissioned to carry out a Bat Survey of the property Abbotsfield, Havering Lane, Milton Lilbourne, Pewsey, SN9 5LJ, Grid Reference SU188602 / SU1888260279 By Luke Rose Architects on behalf of the property Owner. A Bat Survey is an investigation of a site for Bat use, presence or potential for Bat roosts and any impacts from a proposed development of replacement dwelling.

In this case, further bat emergence survey was completed as 'actual and further potential for roosting' was recorded. Given the findings from the survey to date, it is therefore considered likely that roosting will be affected by the proposals to replace the dwelling property house. In summary, survey to date of indicates impacts (roost loss) to regular use as non-breeding transitional spring / summer / autumn day roosts of, Common Pipistrelle (2) Soprano Pipistrelle (1) and periodic roost of Brown Long-eared Bat (1), (estimated population in any given year) occur in relation to the proposed scheme.

Mitigation for the loss will be through two roost units in the garden and 4x2fr concealed Roost units will be built into the new walls of the replacement building. A new clay tile roof will also provide a range of roosting opportunity. All activities with potential to disturb bats will be under the supervision of a licensed bat worker following the method statement agreed and (EPS) European Protected Species Licence.

This reporting follows updates plans in July 2023. The mitigation proposals are similar to previous scheme.

### *Legislation and Policy*

All native species of bat and their roosts are afforded full legal protection in the UK. As such the outcomes of this Assessment will be tested against relevant legislation and policy; namely the Conservation of Habitats & Species Regulations 2017 (as amended) in relation to European protected species (Bats), Wildlife & Countryside Act 1981 (as amended) and Countryside & Rights of Way Act (CRoW) 2000.

### *Outline of the Scheme and Site Location*

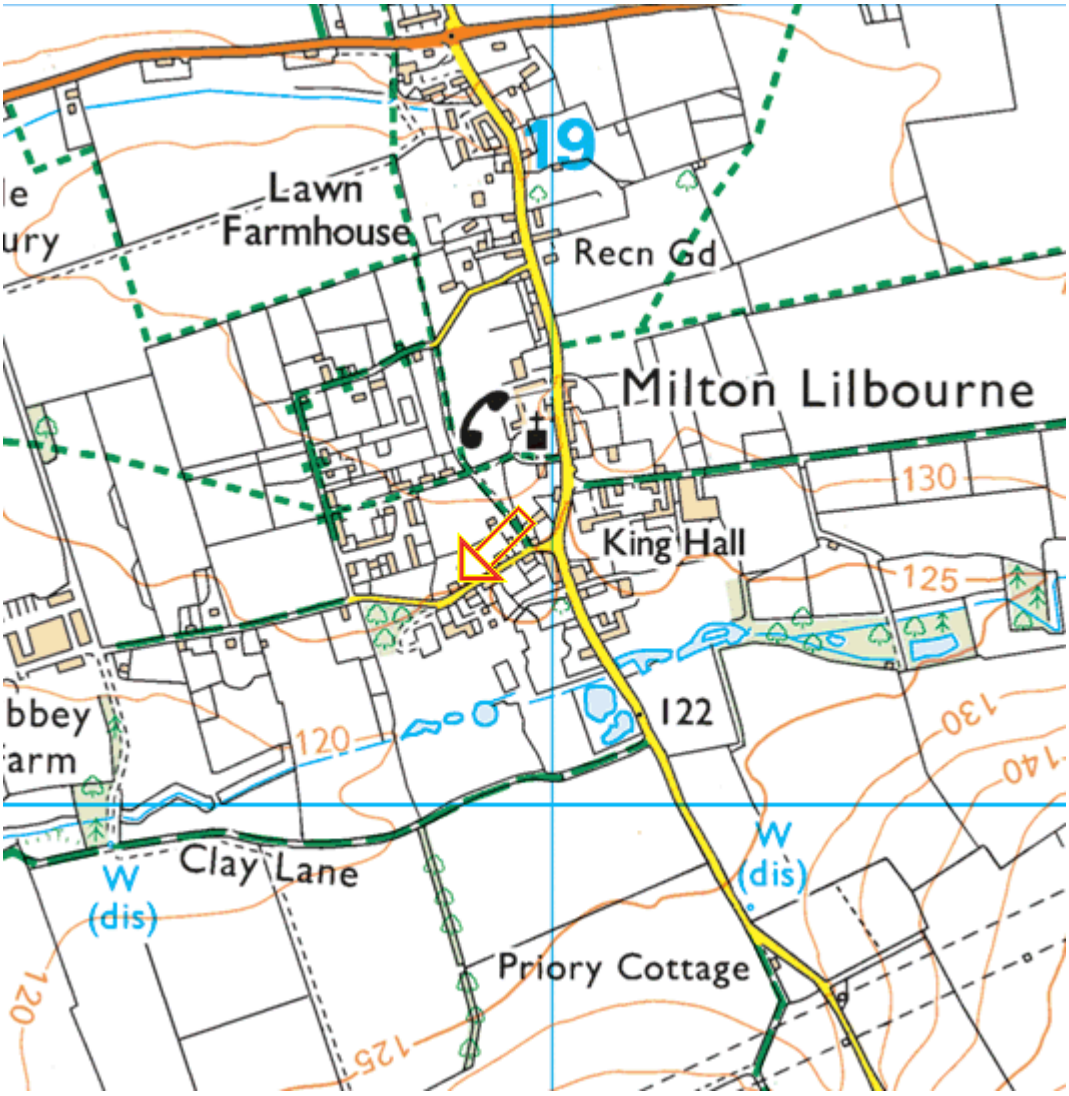
Abbotsfield is a late 20th century property with an annex added to the east side in 1998 and is set in gardens of 0.53 acres with public views from Havering Lane.

Constructed in machine brick stretcher bond, interlocking clay and concrete tiles, plastic windows, plastic conservatory and is suburban in quality. The 1998 extension is particularly incongruous with triangular windows and mono pitched roofs.

The area is AONB and the local setting is rural with widely spaced country properties set amongst densely hedged lanes, employing materials such as handmade English or Flemish bond brickwork, weatherboarding, timber sash or cottage windows, thatch, handmade tile or slate roofs and timber framing.

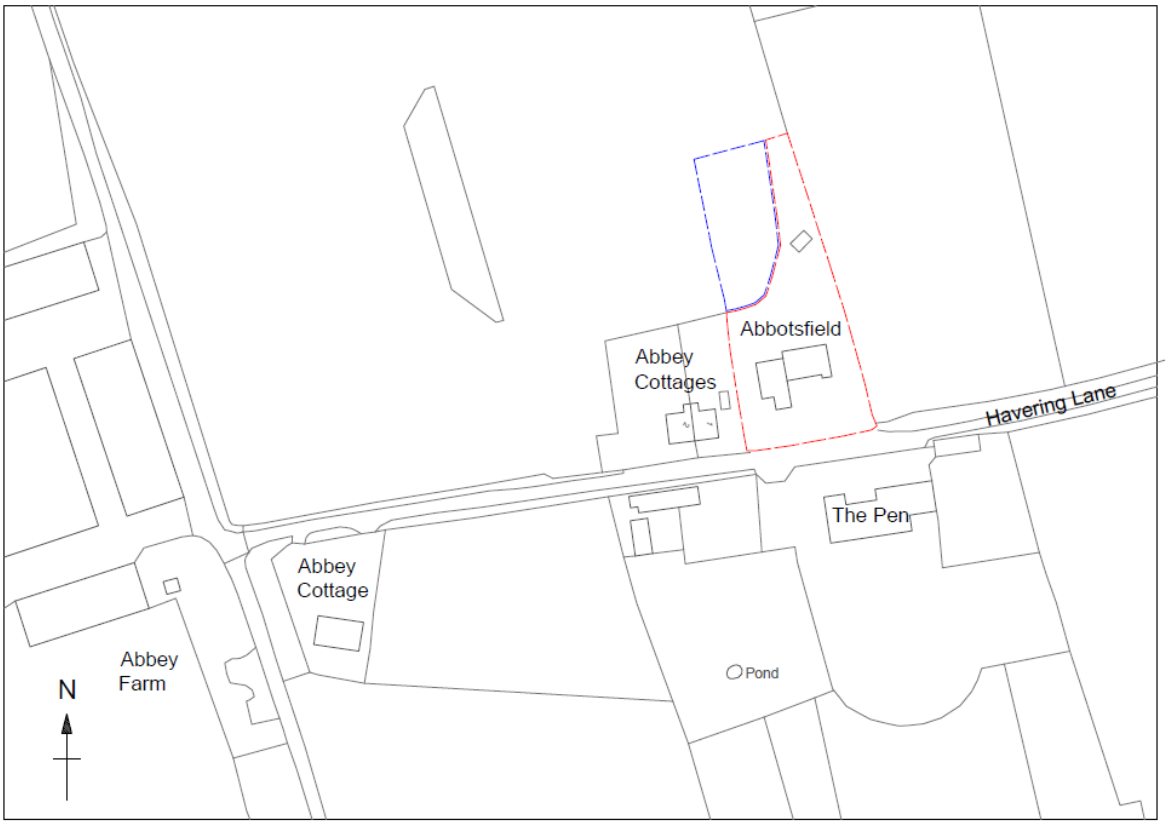
The Scheme is removing an awkwardly presented existing house and replace it with a building that draws its references from local, traditional or vernacular designs. Simplifying the roof forms, providing regular and classical fenestration and employing traditional materials.

The selection of render and tile with simple detailing are recognizable local combinations and they will be handmade in type and applied in traditional manners; lime-like pointing, soft render with rounded edges, bonnet hips, etc. (see **Figures 1-5)**.




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***Figure 1 Location Plan***




Site location plan 1:1250
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***Figure 2 Existing Site Plan, Main area of survey***

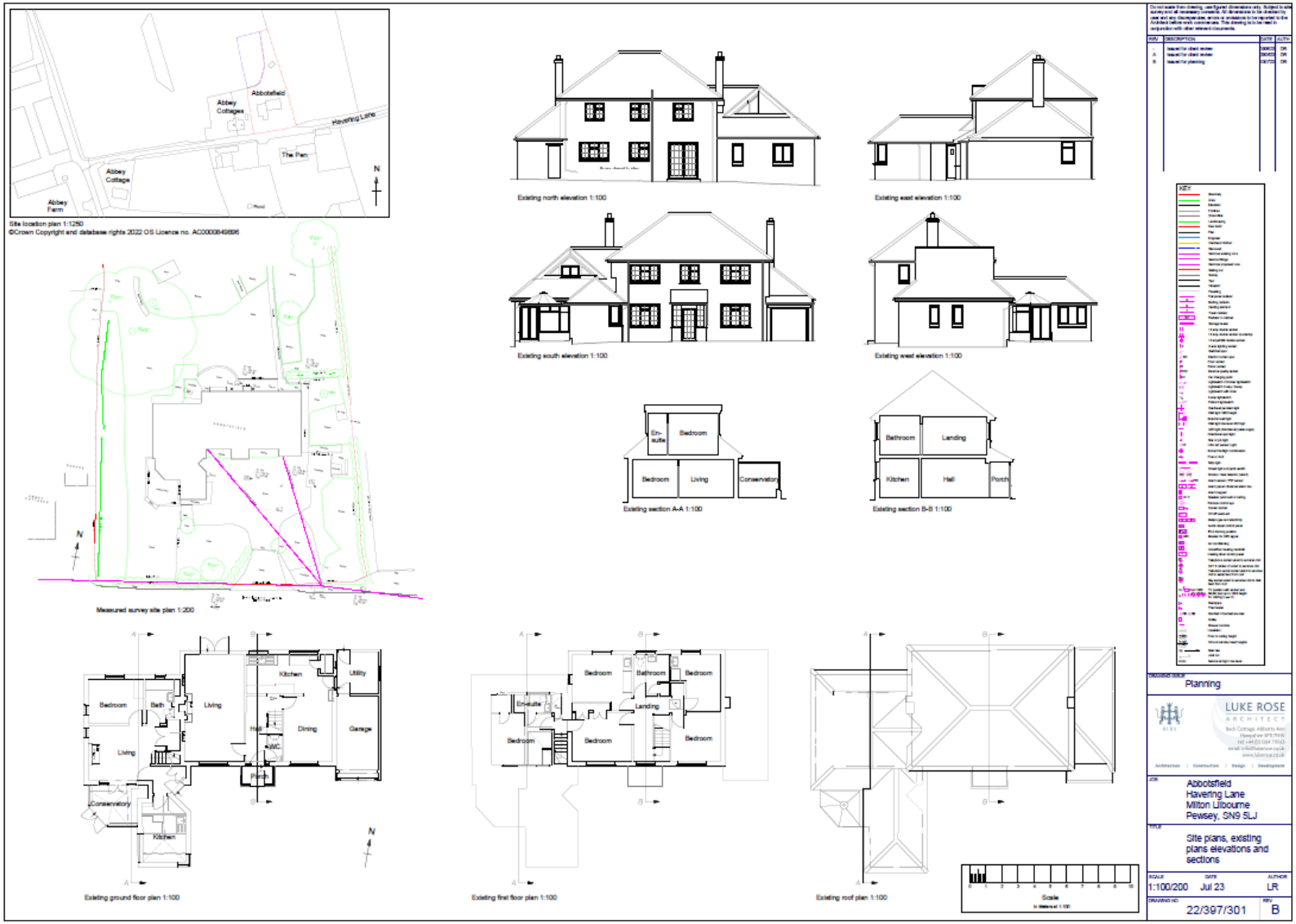



***Figure 3 Existing site Plan and elevations***

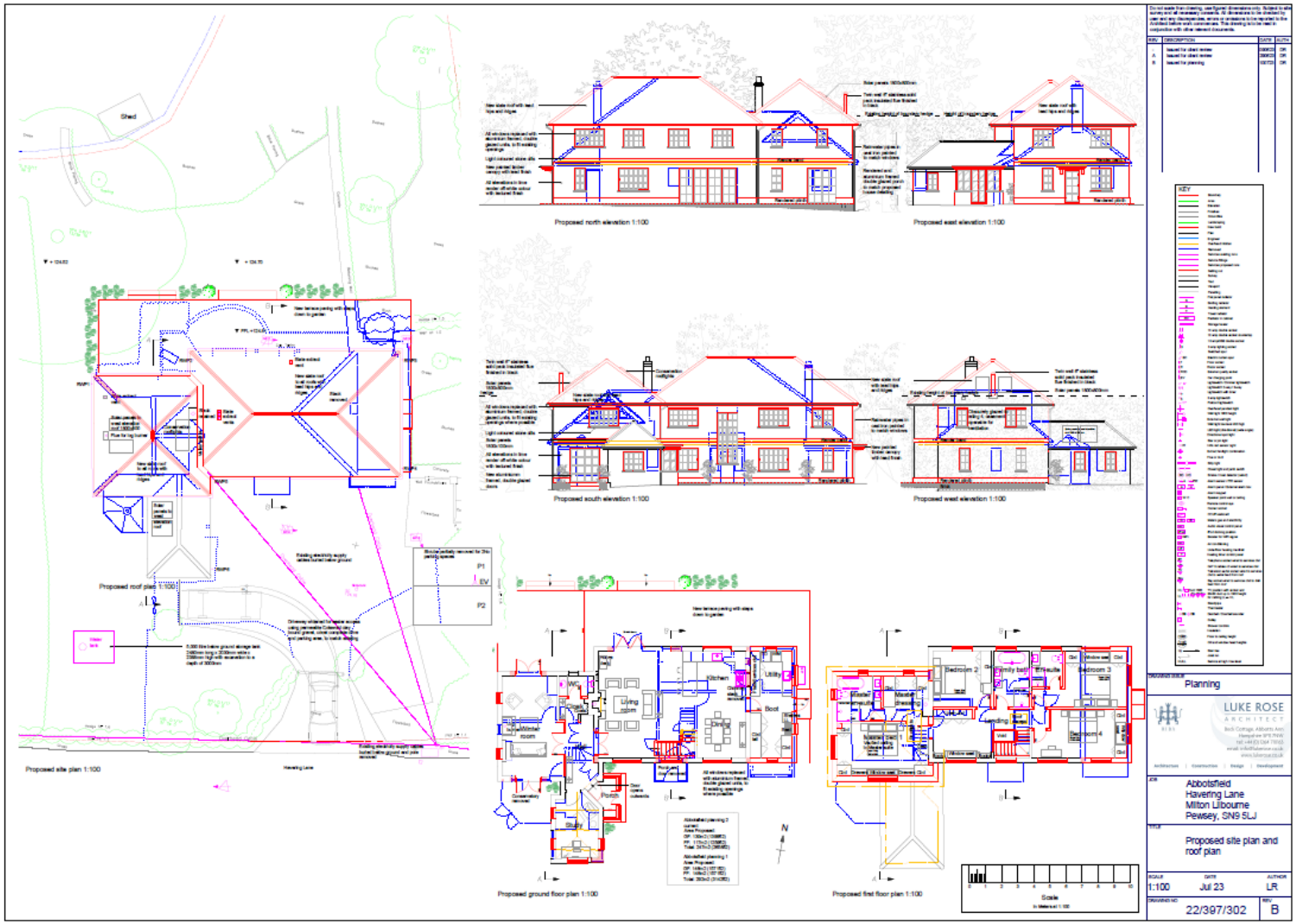



***Figure 4 Proposed site Plan and elevations***

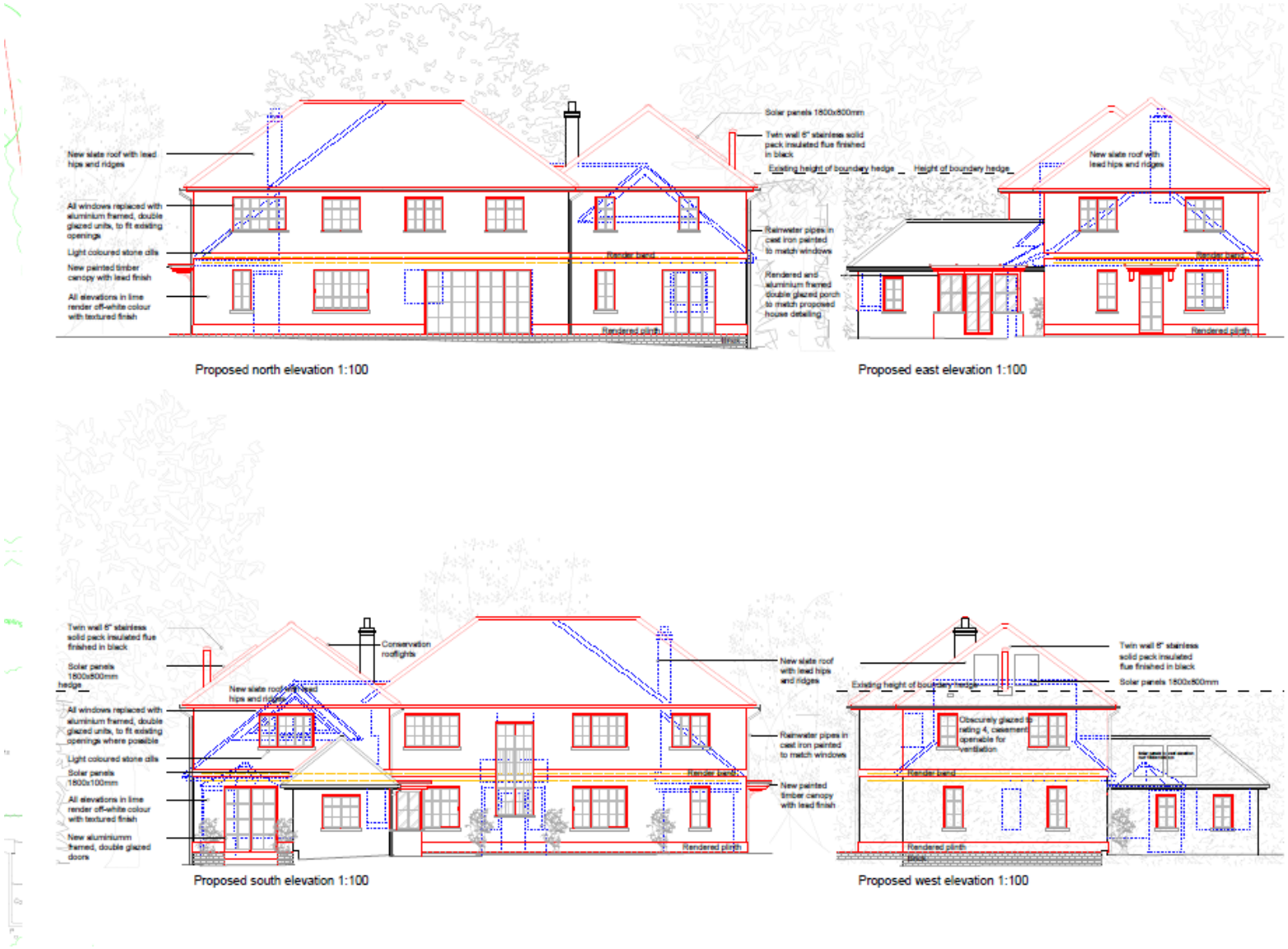



***Figure 5 Proposed site elevations***

## 2.0 SURVEY METHODOLOGY

***Methodology***

The aim of this Bat Survey is to evaluate the potential suitability of the proposed development site in relation to bat use and bat roosts using the Bat Survey Guidelines (Bat Conservation Trust, 2016), which provide guidance on assessing and evaluating development sites and features for bat roost potential. The potential for structures to support roosting or breeding bats is evaluated under the protocol for the visual internal and external inspection (with the categories; Negligible, Low, Moderate, High or Confirmed Roost).

Survey to assess the site for bats and bat roosts was carried out in August 2022. This involved a survey for any roosting bats or signs which could indicate use of the building by bats and for potential roost sites and roost access points. Anthony Blunden MCIEEM CEnv (Natural England Licence number 2015-10884-CLS-CLS), principal ecologist of Aluco Ecology with over fifteen years survey experience, conducted the survey and reporting. As Roosting Bats were recorded, the daytime bat survey was updated and supplemented by three emergence survey during August- September 2022 applying the methodology described by the Bat Conservation Trust survey guidelines (BCT, 2016), with further licenced Bat Ecologists David Endacott 2015-13561-CLS, Kathy Warden 2015-12571-CLS assisting with emergence survey for building coverage.

## 3.0 SURVEY RESULTS

***Daytime Inspection Results***

The site is generally flat and adjacent to a range of well-spaced rural. See **Photos 1** to **4** of the site. Abbotsfield is an unlisted machine brick stretcher bond, interlocking clay and concrete tiles, plastic windows, plastic conservatory and is suburban in quality. The 1998 extension is particularly incongruous with triangular windows and mono pitched roofs. (see **Photos 5-12**).

***Data search***

A data search has returned some information from local European Protected Species (EPS) licence applications. These include bat roosts in budlings affected by development works in

Rook Grove 200m north with Brown Long-eared *Plecotus auratus*, Common Pipistrelle *Pipistrellus pipistrellus* and Serotine *Eptesicus serotinus* in non-breeding roosts. Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared *Plecotus auratus*, Serotine *Eptesicus serotinus* in non-breeding roosts in Pewsey 2500m west

***Emergence / Activity Survey***

The daytime bat survey was then supplemented by emergence survey applying the standard methodology using the Bat survey guidelines (Bat Conservation Trust, 2016). Results are included in **Table 1, Figure 6** below**.**

Bat survey recorded roosting use of the house by Brown Long-eared Bat (1), Common Pipistrelle (2) Soprano Pipistrelle (1), in non-breeding day roosts.





***Photo 1/2 Abbotsfield (and south aspect) Current bat roost locations A few pip droppings on west window apex, few long-eared droppings in roof , and droppings on east wall above garage soffit gap with droppings below on lead flashing***





***Photo 3/4 Abbotsfield rear north aspect)***



***Photo 5/6 Abbotsfield (south aspect) high potential niche feature. Current bat roost locations Dropping location in roof void***



***Photo 7/8 Abbotsfield – soffit section on (south east aspect) a high potential feature with dropping fall below.***






***Photo 9/10 internal roof area of roof void. No long-term accumulation of cobwebs. dropping evidence recorded, very light scatter.***





***Photo 11/12 internal roof area of roof void. No long-term accumulation of cobwebs. dropping evidence recorded, very light scatter.***

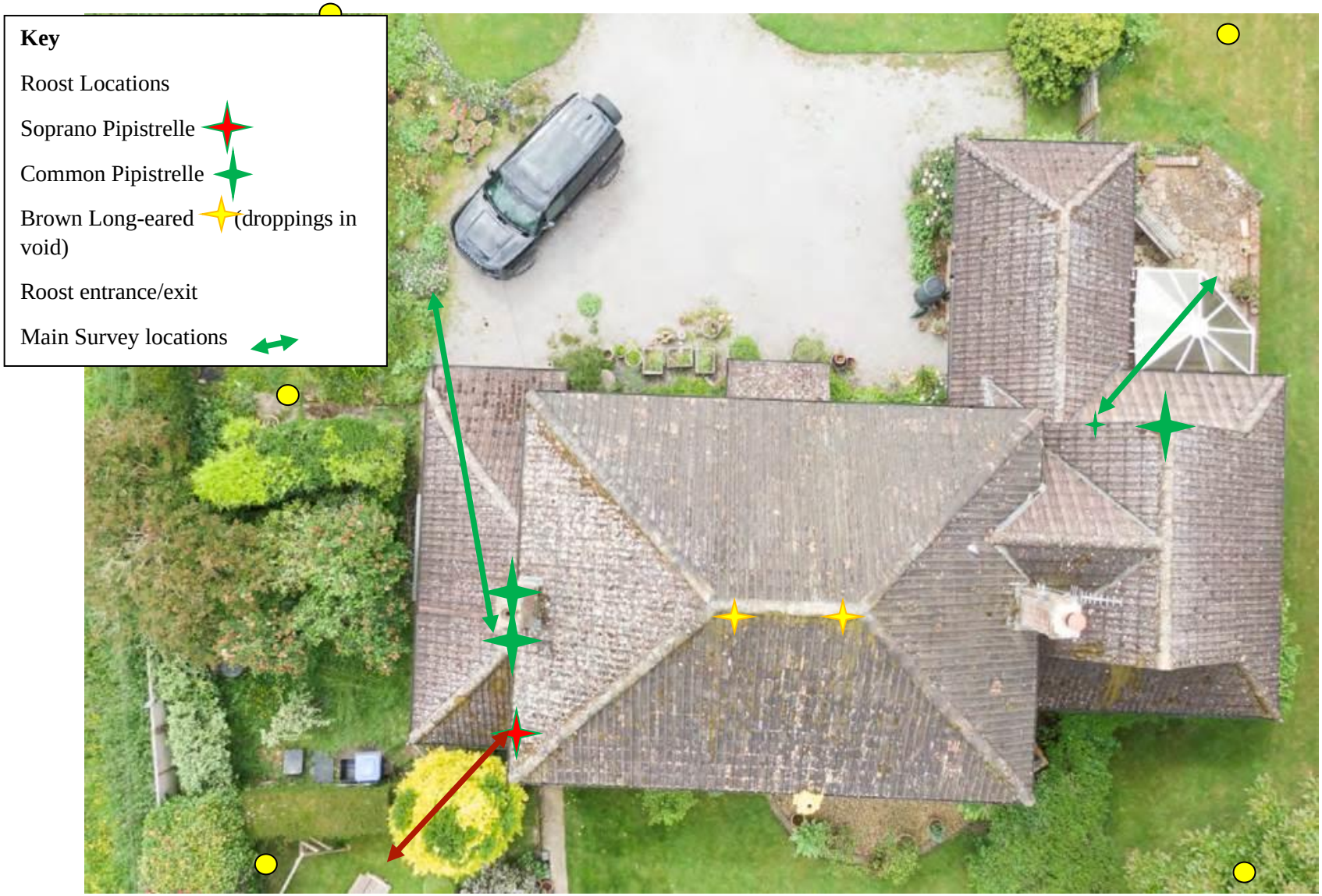
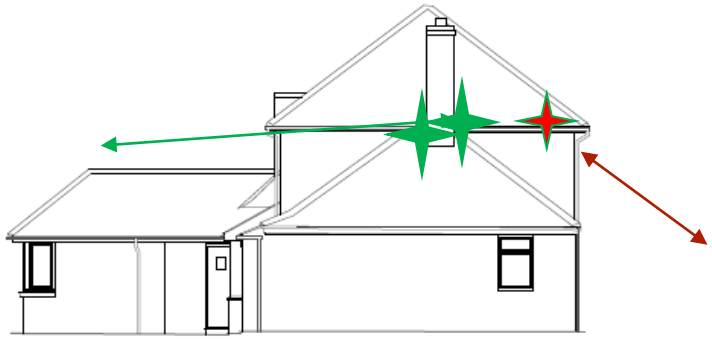



***Figure 6a Survey Results***



Existing north elevation 1:100



Existing east elevation 1:100



Existing south elevation 1:100



Existing west elevation 1:100

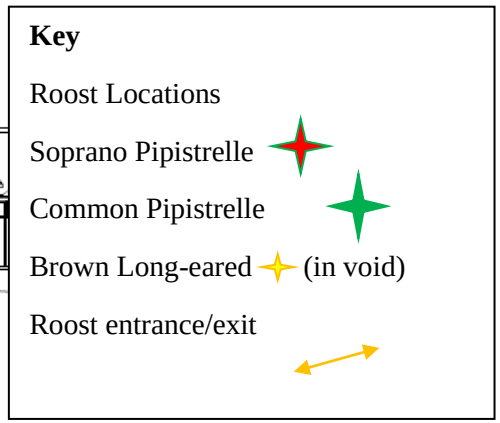



***Figure 6b Survey Results***

***Table 1: Bat Survey Results***

| Date | Survey | Weather | Results Summary |
|---|---|---|---|
| 07/08/2022 | External Inspection<br>Internal Inspection | | A survey of the dwelling identified dropping evidence with c4 Pipistrelle Bat droppings below high potential timber crevice on south western gable above window on extension and below soffit gap by chimney junction on east wall with droppings on lead flashing below. A few scattered Brown Long-eared droppings in roof void from considered very occasional periodic transitionary use of expected single bat. A very typical use of house roof voids. |
| 17/08/2022 | Emergence Survey | Cloud 8/8<br>Wind nil - 1<br>Temp 18.6 -16.8c<br>Precip Nil | **20:28 PS E east end eave**<br>**20:38 PP E SW Gable**<br>20:31, 34,36, 21:22 PS C then F in garden<br>20: 41, 44,47,51,56, 21:05,16,30,31,35 PP C then F In Garden<br>**21**:**49**, **PA** unseen pass in garden _ hight potential for E 21:58 F in garden<br>**Summary of Emergence 1x PP 1x PS 1?PA** |
| 31/08/2022 | Emergence Survey | Cloud 4/8<br>Wind nil<br>Temp 20-13c<br>Precip nil | **20:15 PP E North East eave**<br>**20**:**17 PP E South west gable**<br>20:21, 23,24,26,27,28,33, 38,39, 43,53,56, 21:01, 03,04,07,11,17,21, PP C then F In Garden<br>20:1925,32,35,36 PS C then F in garden<br><br>21:28 PA F in garden 21:30, 38<br>**2x PP, 1**prob**PA** |
| 14/09/2022 | Emergence Survey | Cloud 0/8<br>Wind nil<br>Temp 17.5-13.8c<br>Precip nil | **19:44 PP ?E South West corner (Gable?)**<br>19:42, 50, 52,54,58, 20:05, 08, 10, 13, 15, 19, 20, 24,25, 28, 31, 34, 36, 38, 43, 46, 49,55 PP<br>19:51, 20:04,20:45 PS<br>19:**59 PA** unseen pass in garden-high potential timing for local E, the F<br>20:01,02, 03, 06, 10, 15<br>**Summary of Emergence 1x PP 1? PA** |
| To Complete | Pre - Licence update survey | | To Complete as Licence Requirement |

Key: PP = Common Pipistrelle, PS = Soprano Pipistrelle, NN = Noctule, ES=Serotine PA =Brown Long-eared, My =Myotis Species, MyM = Whiskered Bat

F = foraging; C = commuting; HxS = heard but not seen; SxH = seen but not heard; E = emergence; R-E = Re-entry

***Summary Interpretation for Bats & Constraints to survey***

The building has been evaluated using the Potential Suitability of Proposed Development Sites for Bats (including Buildings & Trees) methodology as per the Bat Survey guidelines (Bat Conservation Trust, 2016). The house was initially evaluated as containing bat roosts.

Emergence survey from the house has recorded roosting use of the house by Brown Long-eared Bat (1), Common Pipistrelle (2) Soprano Pipistrelle (1), in non-breeding day roosts.

Given the findings from the survey to date, it is therefore considered that roosting will be affected by the proposals to replace the house. In summary, survey to date of indicates impacts (roost loss to all roosts) to regular use as non-breeding transitional spring / summer / autumn day roosts of Common Pipistrelle (2) and Soprano Pipistrelle (1) and periodic roosts of Brown Long-eared Bat (1), (estimated population in any given year) occur in relation to the proposed scheme.

Further emergence survey could be completed, but based on the current survey and building / potential roost impacts information further survey is considered unlikely to provide much further information.

The survey was carried out during a window of time in August-September 2022 and therefore the survey has provided a window of time of the sites use. Since bats regularly move between different roost sites, particularly to satisfy their varying requirements at different times of the year and weather conditions.

External building dropping evidence can be washed and blown away during periods of wet weather and during the late autumn winter period, but during warm weather in summer can remain for long periods.

Due to these survey limitations an assessment using professional judgement has been used to interpret the findings with a precautionary approach to the assessment of the bat population utilising the building and to carrying out the proposed work. Timing a survey to co-inside with the peak bats presence in the building is not always possible or practical.

# 4.0 MITIGATION FOR BATS

The proposed scheme at Abbotsfield is predicted to impact (by temporary habitat loss, demolition and replacement building) to regular use as non-breeding transitional spring / summer / autumn day roosts of Common Pipistrelle (2), Soprano Pipistrelle (1), Brown Long-eared Bat (1) (estimated population in any given year) which occur in relation to the proposed scheme. See **Figures 6 & 7**.

***Summary of the mitigation strategy***

In order to minimise impact on local bat populations and bat roosting opportunities, the following measures are proposed to be implemented:

- All activities with potential to disturb bats will be under the supervision of a licensed bat worker following the method statement agreed and (EPS) European Protected Species Licence.
- Prior to starting works a Schwegler Bat roosting box (2x 1FF or similar) (**Figure 7**) will be installed within a nearby tree within a nearby tree within the garden to provide alternative roosting during the works and to increase local roosting opportunity;
- Prior to starting works all contractors will be briefed by the bat worker to ensure that they are aware of the presence of bats, their legal protection and procedures should a bat be found at any stage of the building work, all building workers must be made aware that there is a bat roost and informed that bats may be present;
- Prior to starting works a Pre-works inspection survey will be undertaken to ascertain / check levels of bat activity / roosting locations have not changed from that outlined in this report. Any significant change will require reassessment of the methodology;
- Bats are very vulnerable to disturbance during hibernation, late pregnancy, and while dependent young that are unable to fly are in the roosts. All works associated with the development that may disturb bats (roof strip) will be undertaken at a time of year when bats are more tolerant of disturbance and outside of potential breeding and hibernation periods (When average temperature above 7c, best periods are March-April and /or September-October);
- 4x2fr or similar concealed Roost units or similar will be built into the new walls of the replacement building (see **Figure 7**).
- New Roof will have clay tiles with naturally occurring gaps and membrane used in new building will be either traditional or Natural England requires a certificate proving that a non-bitumen coated roofing membrane (NBCRM) has passed a ‘snagging propensity test’ before it will licence its use in areas where it may come into contact with roosting bats. The testing and certification of the membrane must follow the protocol set out within Essah et al (2020).

- All roost sites should not be illuminated by any site lighting during construction and operation. Please refer to Institution of Lighting Professionals, Guidance Note 08/18 Bats and artificial lighting in the UK for further information. Luminaires be low level and directional to light essential walkways and doorways etc only and should feature a peak wavelength of >550 nm with red / warm light spectrum to avoid the component of light most disturbing to Bats

The mitigation proposal is based on allowing access to roosting opportunities within the new building (see **Figure 7**). The new roost sites replicate those currently being used and all works will be sympathetic and complimentary to the building.

The property owners will instruct a suitably qualified bat ecologist to undertake a post-development survey and completion statement / Natural England licence return to ensure roosts are functional. This will be carried out between June and August and will consist of external inspection of the bat roosting areas. All Bat records will also be submitted to the local Biological Records Centre.

The owners of Abbotsfield will be responsible for ensuring that the monitoring is completed and to inform any future owners or tenants of the property of the bat roosts within buildings and garden. The owners are to pass on the information contained within this document which provides information on the location of the bat roosts in the building. The owners are aware that they are required to contact the statutory Nature Conservation Adviser (Natural England) for advice prior to any activity which may affect or disturb the bat roosts.

Following the Bat Mitigation Guidelines (EN, 2004), considering the scale of site level impacts (page 37, section 6.1) the scale of impact to the roosting bats is, based on current survey, considered to be 'low' (transitional/day roost), with the main roost areas in the house retained in-situ. The procedure and mitigation provided is precautionary with the overall impact on the population of bats in the local area should therefore be neutral.

## 5.0 POTENTIAL FOR OTHER PROTECTED SPECIES

***Breeding Birds***

Wild birds and their nests are protected from intentional harm by the provisions of the Wildlife and Countryside Act 1981 (as amended). Therefore, any vegetation and building clearance associated with the development will be required to be carried out sensitively to ensure that bird nests are not impacted by any works being carried out when birds are not breeding (the main bird nesting period is March-Aug inclusive) or after thorough checking by a suitably experienced ecologist. The mitigation proposed will ensure that legal and policy provisions relating to protected species will be met.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

***Compliance with legislation***

On the basis of the survey undertaken and presence of bat roosts, with bats listed on Schedule 2 of the Habitats Regulations 2017, the following tests must be met:

- *that there is no satisfactory alternative, and*
- *that the action authorized will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.*
- *that the action is required in 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;*

***Comment****:*

In relation to Conservation of Habitats & Species Regulations 2017) the following conclusions are made:

- The current building is not suited to the owner's needs in terms of use, design and layout.
- The proposed actions will provide an economic benefit from the construction and process of the works.
- Bat roosts effected by the proposals will be mitigated in similar locations within the new building. Further bat roost provision through enhancement will be provided.
- The proposed actions will not be detrimental to the bat populations. The method statement will ensure that the method and timing of works with minimise the impact to the bat populations on site.
- Bat roosts impacted by the proposals will be replaced where lost. Mitigation to replace existing roost and further bat roost provision through enhancement will be provided. The roost is a periodic non-breeding transitional summer / autumn roosts of Common Pipistrelle (2), Soprano Pipistrelle (1), Brown Long-eared Bat (1) of lower conservation significance.
- Where required the works will be carried out under European Protected Species (EPS) Licence and ecological supervision.

Details of the mitigation provision, building programme and procedure will also be required to be detailed for the European Protected Species (EPS) Licence.

The mitigation and monitoring detailed within this report and the Method Statement may be subject to a planning condition.

**Mitigation and Enhancement.**

Roosts opportunity will be incorporated into the scheme. This will include a Schwegler 1ff or similar roosting unit within the garden. Cladding access with 4x 2fr roost units or similar, (see **Figure 7**)

**Figure 7a**

**Schwegler 1FF**

The 1FF has an opening at the bottom, allowing droppings to fall out, it does not need cleaning and is therefore especially suitable for hanging in inaccessible places such as steep slopes and house walls.

Depending on their individual temperature requirements, the animals can choose between the cooler wood-concrete or the warmer wooden panel



**Figure 7b**

**Schwegler Bat Roost Unit 2FR**
Dimensions: height 47.5 x width 20 x depth 12.5 cm, Entrance: width 15 x height 2 cm, Weight: ca. 9,8 kg



| | |
|---|---|
| The same a 1FR but with knock-outs to allow joining and rear access |   |

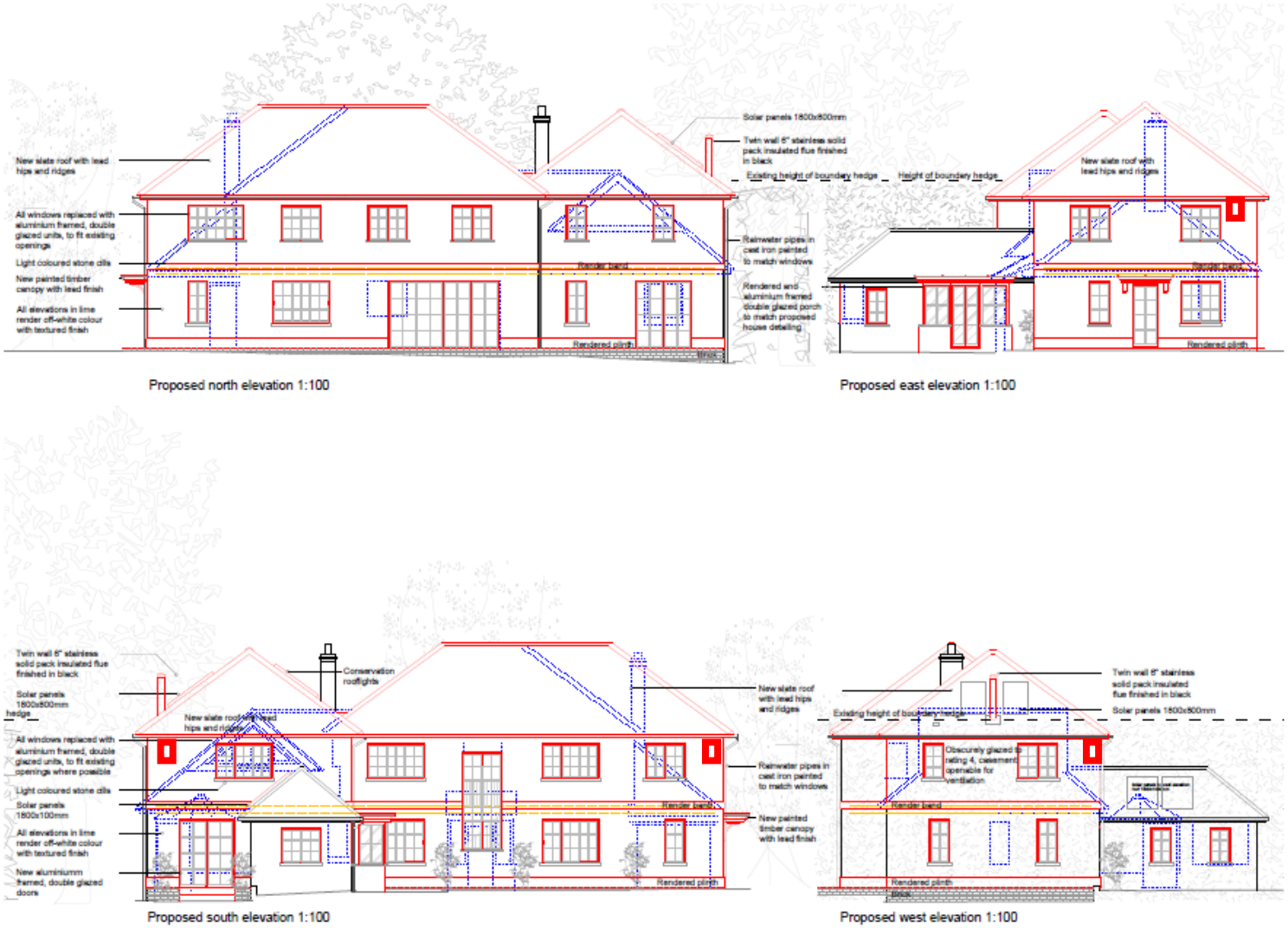



***Figure 7c Mitigation / enhancement 2fr Roost Unit or similar***

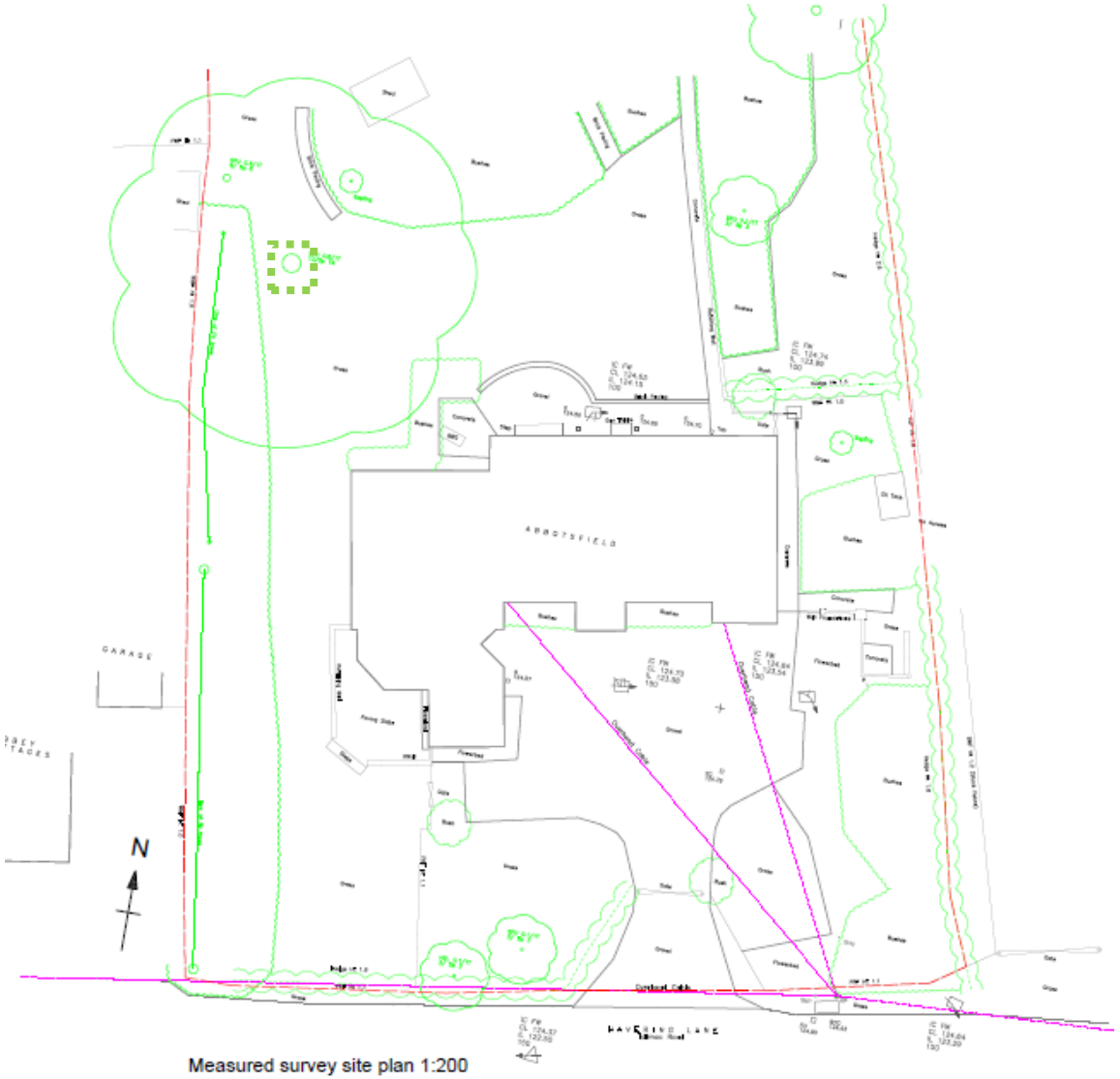



***Figure 7f Mitigation / enhancement*** **Schwegler 1FF Roost Unit or similar**

**REFERENCES**

Bat Conservation Trust 2016 Bat Surveys Good Practice Guidelines 3rd Edition

**Report Author**

**Anthony Blunden MSc CEnv MCIEEM**

**Aluco Ecology Ltd**