



**ROBERTS BUNGALOW, SIR HAROLD
HILLIERS GARDENS, ROMSEY,
HAMPSHIRE:
BAT SURVEY REPORT**

August 2012

Our Ref: JSL1987-R-002

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EXECUTIVE SUMMARY

- RPS was commissioned by Hampshire County Council to undertake bat emergence surveys of the site of Roberts Bungalow within the grounds of Sir Harold Hillier Gardens, Jermyns Lane, Romsey, Hampshire SO51 0QA situated approximately 2km to the north-east of the town of Romsey at OS Grid Reference SU 38034 23740, in order to help assess any potential impact on such species in relation to the re-development of the site.
- Proposals for the development of the site include the re-roofing and re-pointing of the brickwork of the entire building, refurbishment of the interior and exterior building and change of use of the building to student accommodation.
- A previous daytime bat assessment, carried out by RPS in March 2012 found evidence of roosting bats. One bat dropping was found externally on the north-west gable end window and approximately nine old bat droppings were found scattered internally in the north-west wing. It was not possible to physically inspect the entire roof void due to the unsafe structure. The building was therefore deemed to have roosting potential for bats (RPS 2012) and it was recommended that summer bat emergence surveys were carried out in order to fully ascertain whether bats are currently using Roberts Bungalow.
- No bats were identified on the three surveys nights emerging from a roost location in Roberts Bungalow, either on the infra-red digital video recorders, or by the surveyors.
- A high level of Common Pipistrelle *Pipistrellus pipistrellus* activity was recorded throughout all three surveys. Common Pipistrelle bats were observed emerging from the adjacent property Jermyn's House. Two flight lines, one north-east and the other north-west from Jermyn's House, were identified during the three emergence surveys. Based on the level of activity recorded it is likely that the building is used as a maternity roost.
- In addition, Noctule *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus* and Whiskered / Brandt's *Myotis mystacinus* / *Myotis brandtii* were also identified present on site.
- The re-development of Roberts Bungalow is unlikely to impact upon roosting bats or impede the existing Common Pipistrelle flight lines from Jermyn's House. The small number of bat droppings (<10) found internally were old and the building in its current condition is unlikely to afford significant bat roosting potential.
- Nonetheless, given that the building is situated adjacent to a maternity roost it is recommended that a method statement is produced and works to the building are conducted at a suitable time of year under the guidance of a licensed bat ecologist. Specific recommendations are detailed in Section 5 of this report.
- The re-development of the building provide an opportunity to increase its value to roosting bats by creating new roosting enhancements for bats that will provide additional roosting environments for the adjacent Common Pipistrelle maternity colony. Specific recommendations are detailed in Section 5 of this report.

1 INTRODUCTION

Background to the Study

- 1.1 RPS was commissioned by Hampshire County Council to undertake bat emergence surveys of the site of Roberts Bungalow within the grounds of Sir Harold Hillier Gardens, Jermyns Lane, Romsey, Hampshire SO51 0QA, in order to help assess any potential impact on such species in relation to the re-development of the site.
- 1.2 Proposals for the development of the site include the re-roofing and re-pointing of the brickwork of the entire building, refurbishment of the interior and exterior building and change of use of the building to student accommodation.
- 1.3 A previous daytime bat assessment, carried out by RPS in March 2012 found evidence of roosting bats. One bat dropping was found externally on the north-west gable end window and approximately nine old bat droppings were found scattered internally in the north-west wing. It was not possible to physically inspect the entire roof void due to the unsafe structure. The building was therefore deemed to have roosting potential for bats (RPS 2012) and it was recommended that summer bat emergence surveys were carried out in order to fully ascertain whether bats are currently using Roberts Bungalow.

Study area

- 1.4 Roberts Bungalow is situated within the grounds of Sir Harold Hillier Gardens, Jermyns Lane, Romsey, Hampshire SO51 0QA, approximately 2km to the north-east of the town of Romsey at OS Grid Reference SU 438034 123740. The building is situated on the edge of Ampfield Wood in a semi-rural area within the gardens of Sir Harold Hillier Gardens and Arboretum.

Aims and objectives

- 1.5 The aims of the bat surveys were to carry out an emergence survey in line with BCT best practice guidelines (Hundt 2012) of the building which was deemed to have bat roosting potential (RPS 2012).
- 1.6 The objective of the study was also to determine the current use of the site by bats, to inform its future development. The study aimed to determine the potential impacts (if any) of the development by establishing whether any bat roosts were present on site.

Legislation

- 1.7 All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981, as amended. All bat species are also included on Schedule 2 of the Conservation of Species and Habitats Regulations 2010. Taken together, these pieces of legislation make it an offence to:
 - Intentionally or recklessly kill, injure or capture bats;
 - Deliberately or recklessly disturb bats (whether in a roost or not); and
 - Damage, destroy or obstruct access to bat roosts.

-
- 1.8 A roost is defined as 'any structure or place which [a bat] uses for shelter or protection'. As bats tend to reuse the same roosts, legal opinion is that a roost is protected whether or not bats are present at the time of survey.
- 1.9 Barbastelle Bats *Barbastella barbastellus*, Bechstein's Bat *Myotis bechsteinii*, Noctule *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat *Rhinolophus ferrumequinum* and Lesser Horseshoe Bat *Rhinolophus hipposideros* are also listed as being species of principle importance to the conservation of biodiversity in England under Section 41 of the Natural Environment and Rural Communities Act 2006.

2 METHODS

Bats

- 2.1 Three dusk emergence surveys were carried out on the 22nd June, 25th June and on the 10th July 2012 in appropriate weather conditions following standard guidelines (Hundt 2012) and when bats are likely to be active.
- 2.2 Observations were made outside the buildings from where it was considered bats might emerge (see Figures 3.1 – 3.3). The dusk survey commenced approximately 15 minutes before sunset, and lasted for approximately 90 minutes, the optimum time for bats to emerge from a roost, in order to record any bats that may emerge from the buildings.
- 2.3 A time-expansion bat detector (Pettersson D 240x) and frequency division detector (Batbox Duet) was used to record bat echolocation calls of any emerging bats and identify species where possible. Time-expanded (x10) recordings were made using an Edirol recording device (R09-HR), which were later analysed using the computer software 'BatSound'.
- 2.4 Sony night vision video cameras were also used to film areas of the building with the assistance of two external infra-red lamps to accurately identify if bats emerge from that selected area of the building. The data from each of the video recorders was downloaded to a personal computer (Dell Inspiron 2200) and analysed using Sony Picture Package Version 1.8 for DVD Handycam.

Two bat surveyors with the assistance of two infra-red digital video recorders carried out the emergence surveys on each visit.

Constraints

- 2.5 Bats are difficult to locate in large structures, with so many potential roosting areas, finding the exact roosting site can be difficult, especially male/single bat roosting sites.
- 2.6 Bats can have seasonal use of buildings and being so mobile may arrive and start using a site after it has been surveyed, or roost somewhere else during the period it was surveyed.

3 RESULTS

Emergence surveys

- 3.1 Three emergence surveys were carried out on the buildings. Details of weather conditions during the surveys are presented in Table 3.1.

Table 3.1: Weather conditions during emergence surveys.

Date	Sunset	Start/finish	Weather conditions
22/06/12	21:24	21:05/22:35	100% cloud, slight breeze, 16°C at 21:00.
25/06/12	21:22	21:10/22:40	0% cloud, still, dry 23°C at 21:00
10/07/12	21:17	21:00/22:30	50% cloud, slight breeze, 16°C at 20:15, dry.

Bat emergence survey 22nd June 2012

- 3.2 Two surveyors and two infra-red digital video recorders (positions show in Figure 3.1) surveyed the elevations of the building.
- 3.3 No bats were seen to have emerged by either surveyor from the building during the emergence survey. Post survey analysis of the video recorders did not record any bats emerging from the areas surveyed on the building.
- 3.4 Overall bat activity was high in and around the site.
- 3.5 At 21:19 a distant Noctule bat *Nyctalus noctula* was heard but not seen. At 21:22 a Noctule was observed flying over the site by surveyor 2 towards Ampfield Wood in a north-easterly direction.
- 3.6 At 21:20 three Common Pipistrelle *Pipistrellus pipistrellus* were observed by surveyor 1 flying around the building. Two bats departed in a north – westerly direction and one bat departed in a north - easterly direction.
- 3.7 At 21:30 high Common Pipistrelle activity was observed by surveyor 1 foraging around Jermyn’s House. A number of social calls were recorded. One bat was seen to have emerged at the gable end. The bats departed from their roosting area using two distinct flight path routes detailed on Figure 3.1.
- 3.8 High Common Pipistrelle activity was recorded in and around the building from 21:30 to 21:48.
- 3.9 At 22:05 a Common Pipistrelle was heard by Surveyor 2 but this bat was not seen.
- 3.10 No further bat activity was recorded and the survey was terminated at 22:35.

Bat emergence survey 25th June 2012

- 3.11 Two surveyors and two infra-red digital video recorders (positions show in Figure 3.2) surveyed the elevations of the building.
- 3.12 No bats were seen to have emerged by either surveyor from the building during the emergence survey. Post survey analysis of the video recorders did not record any bats emerging from the areas surveyed on the building.
- 3.13 Between 21:21 and 21:58 high Common Pipistrelle activity was recorded by surveyor 2 adjacent to Jermyn's House. A number of social calls were recorded. The bats flew between the two buildings and in a north-easterly direction using two distinct flight path routes detailed on Figure 3.2.
- 3.14 Surveyor 1 recorded a Noctule bat flying in a northerly direction at 21:36.
- 3.15 Surveyor 2 recorded a Soprano Pipistrelle *Pipistrellus pygmaeus* at 21:49. This bat was seen flying back and forth foraging in the car parking area. Feeding buzzes were recorded.
- 3.16 Both surveyors recorded occasional bat passes of Common Pipistrelles passing through and foraging in and around the site from 21:50 through to 22:15
- 3.17 No further bat activity was recorded and the survey was terminated at 22:40.

Bat emergence survey 10th July 2012

- 3.18 Two surveyors and two infra-red digital video recorders (positions show in Figure 3.3) surveyed the elevations of the building.
- 3.19 No bats were seen to have emerged by either surveyor from the building during the emergence survey. Post survey analysis of the video recorders did not record any bats emerging from the areas surveyed on the building.
- 3.20 Between 21:15 and 21:40 high Common Pipistrelle activity was recorded by surveyor 2 adjacent to Jermyn's House. A number of social calls were recorded. The bats all flew between the two buildings and over Jermyn's House departing the site in a north-easterly direction.
- 3.21 Two Noctule bats were observed by Surveyor 2 flying in unison over the site at 21:25.
- 3.22 At 21:57 a *Myotis* bat was recorded flying in a southerly direction through the site. Post survey analysis of the ultrasound recording revealed that this bat was likely to be either a Whiskered bat *Myotis mystacinus* or Brandt's bat *Myotis brandtii*.
- 3.23 Occasional Common Pipistrelle passes were recorded by both surveyors between 21:50 and 22:20. No further bat activity was recorded and the survey was terminated at 22:30.

4 EVALUATION

- 4.1 The surveys were conducted at a time of year when bats are active and the weather conditions suitable, and any bats, if present, should be identifiable.
- 4.2 No bats were identified on the three surveys nights emerging from a roost location in Roberts Bungalow, either on the infra-red digital video recorders, or by the surveyors.
- 4.3 Four species of bats were recorded present in and around the site which included:
- Common Pipistrelle *Pipistrellus pipistrellus*
 - Soprano Pipistrelle *Pipistrellus pygmaeus*
 - Noctule *Nyctalus noctula*
 - *Myotis spp.*
- 4.4 High levels of Common Pipistrelle activity was recorded on all three surveys and bats were observed emerging from the gable end of Jermyn's House. Given the high level of activity recorded on and before sunset, it is likely that Jermyn's House is used as a roost for a large number of bats and, therefore, is likely to be a maternity roost.
- 4.5 Two distinct Common Pipistrelle flight lines were identified as a result of the bats emerging from Jermyn's House. A number of Common Pipistrelle bats flew in a north-westerly direction adjacent to the mature tree belt and a number of Common Pipistrelle bats flew between Jermyn's House and Roberts Bungalow in a north-easterly direction. The proposed works to Roberts Bungalow is highly unlikely to alter these flight paths and impede the Common Pipistrelle roost in Jermyn's House.
- 4.6 Noctule bats were recorded flying high over the site and Whiskered / Brandt's bat was recorded passing through the site. Soprano Pipistrelle bat was recorded foraging on site. These three species are highly unlikely to be affected by the development proposals.
- 4.7 The survey has found no evidence of roosting bats at the site and the proposed re-development of Roberts Bungalow can be carried out as planned, taking into account specific recommendations as detailed in Section five of this report.

5 CONCLUSIONS AND RECCOMENDATIONS

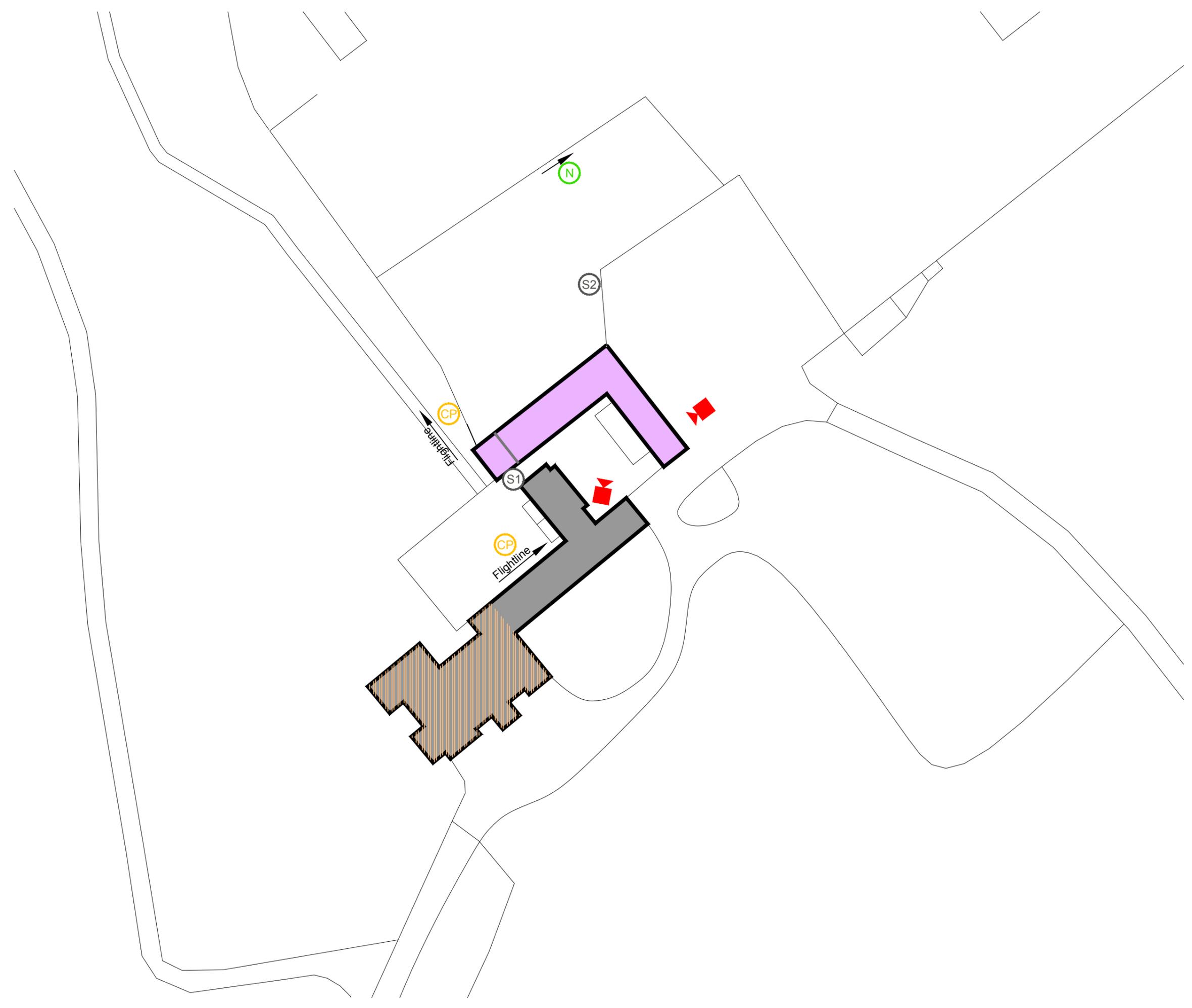
- 5.1 The re-development of Roberts Bungalow is unlikely to impact upon roosting bats or impede the existing Common Pipistrelle flight lines from Jermyn's House. The small number of bat droppings (<10) found internally were old and the building in its current condition is unlikely to afford significant bat roosting potential.
- 5.2 Nonetheless, given that the building is situated adjacent to a maternity roost it is recommended that a detailed method statement is produced and works to the building are conducted at a suitable time of year (October – April) under the guidance of a licensed bat ecologist.
- 5.3 It is recommended that the refurbishment to the building and the roof tiles are removed by hand under the supervision of a licensed bat ecologist, in order to ensure that any bats, if present, are not harmed during the proposed demolition works.
- 5.4 All contractors and those involved with the refurbishment demolition of the buildings should be informed of their legal obligations – in the unlikely event of bats being encountered at any time, work must stop and any bats found left undisturbed. In this instance advice should be sought from either Natural England or a suitably qualified ecologist on how and when to proceed.
- 5.5 The re-development of the building provides an opportunity to increase its value to roosting bats by creating new roosting enhancements for bats that will provide additional roosting environments for the adjacent Common Pipistrelle maternity colony. Bat bricks such as the Schwegler 1FR/2FR bat tube and/or EcoServ bat boxes could be incorporated inconspicuously into the brick work during the repairs. A bat box, such as the Schwegler 1FF, could be erected on the western gable end wall. This is an attractive bat box suitable for a variety of species, such as Common Pipistrelle, Soprano Pipistrelle and Noctule bat.
- 5.6 Further roosting enhancements could be made for bats on the mature trees present on site. Suitable bat boxes for trees include the Schwegler 2F and/or Schwegler 2FN. The licensed bat ecologist would specify the exact locations of trees deemed suitable and this could be incorporated into the method statement.

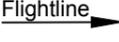
6 REFERENCES

Hundt L. (2012) *Bat surveys: Good practice guidelines 2nd Edition*. Bat Conservation Trust.

RPS (2012) *Daytime Bat Assessment Roberts Bungalow Hilliers Gardens*. RPS Unpublished Report.

FIGURE 3.1



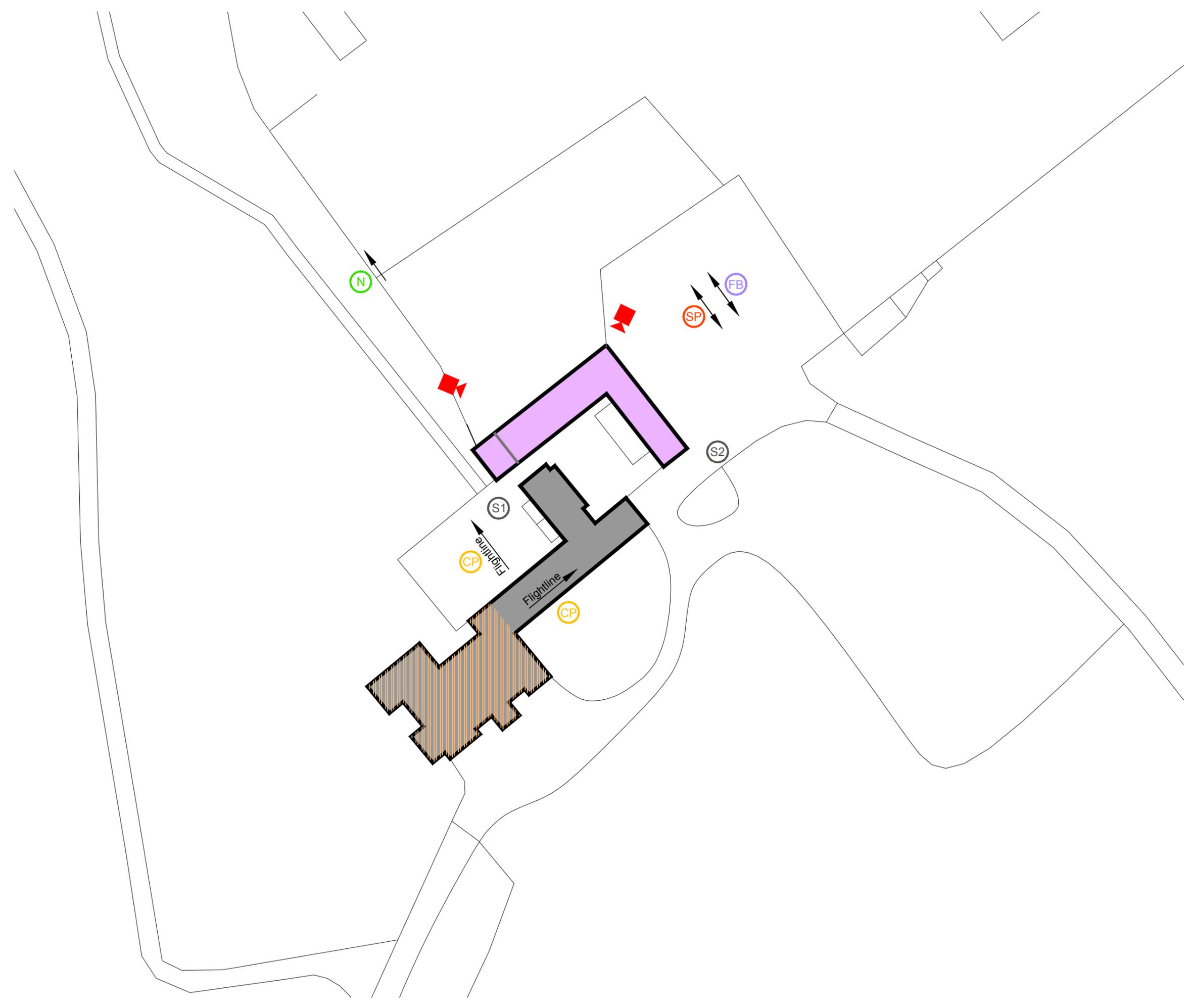
- Legend**
-  Building Surveyed
 -  Surveyor Location
 -  Common Pipistrelle maternity roost
 -  Flight direction
 -  Flying back & forth
 -  Infra red digital recorder
 -  Common Pipistrelle
 -  Flightline
 -  Soprano Pipistrelle
 -  Myotis Sp.
 -  Noctule
 -  Feeding Buzz



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FIGURE 3.2

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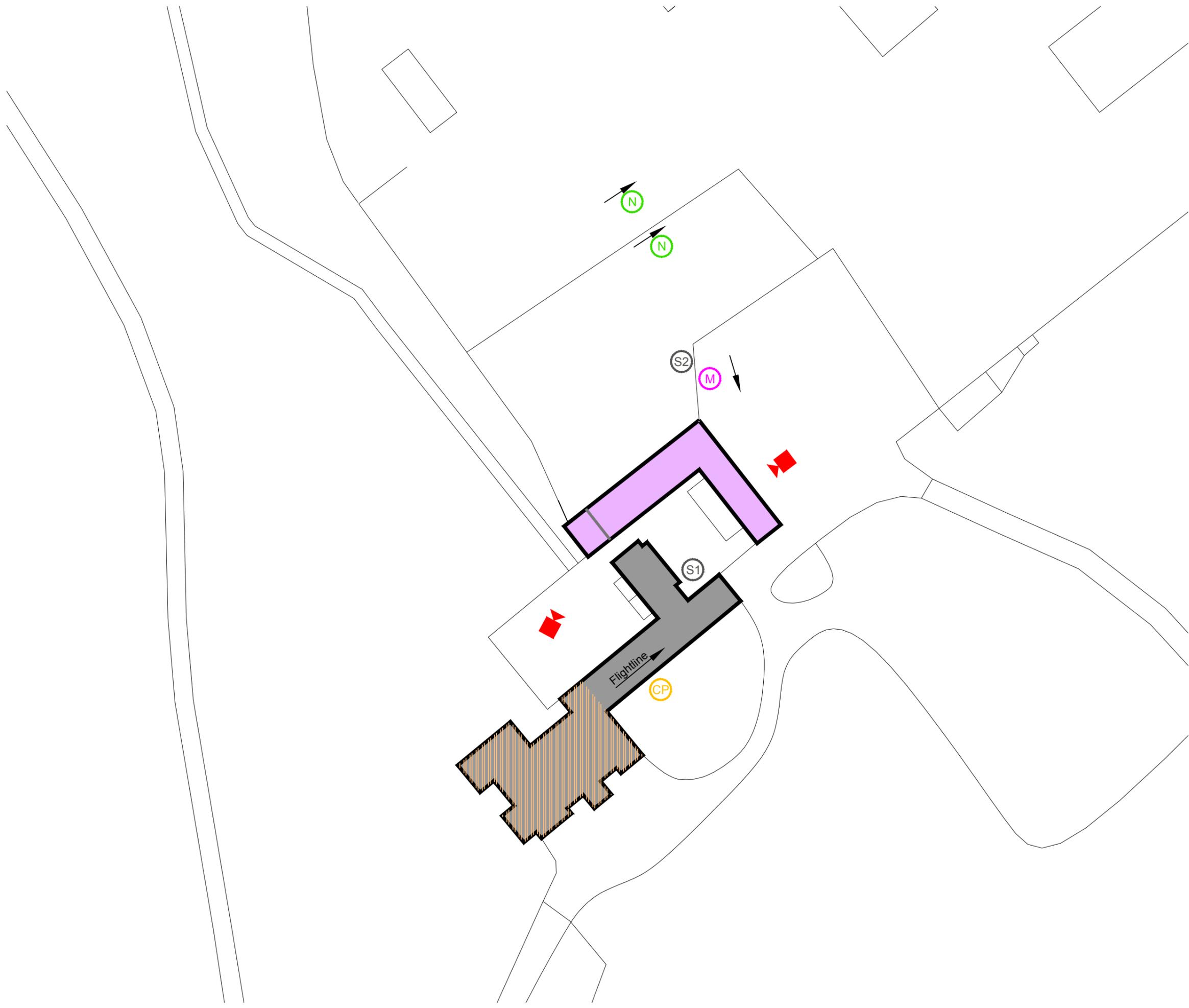


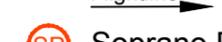
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FIGURE 3.3



- Legend**
-  Building Surveyed
 -  Surveyor Location
 -  Common Pipistrelle maternity roost
 -  Flight direction
 -  Flying back & forth
 -  Infra red digital recorder
 -  Common Pipistrelle
 -  Flightline
 -  Soprano Pipistrelle
 -  Myotis Sp.
 -  Noctule
 -  Feeding Buzz



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■ Figure Number: **3.3** Rev: -