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Preliminary Roost Appraisal

The Old Rectory
Banningham

Prepared for Mrs. S. Woolliams

2108-GE-SW

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Contents

Version	Status	Changes	Date	Author
1.1	Draft	Site visit and desktop results added	29/01/2021	Carolyn Smith BSc (Hons), MCIEEM
1.3	Issued	Reviewed	01/02/2021	Carolyn Smith BSc (Hons), MCIEEM

1 Summary

1.1 Glaven Ecology was commissioned to undertake a Preliminary Roost Assessment (PRA) on a building at The Old Rectory, Banningham, Norfolk, NR11 7DY. The survey work was completed by Carolyn Smith BSc. (Hons) MCIEEM on 29th January 2021. This is an update to an initial survey for a previous planning application undertaken on 15th March 2019.

1.2 It is proposed to convert the existing single-storey building to one residential unit.

1.3 The site sits within the SSSI Impact Risk Zone for Bryant's Heath, Felmingham (4km east). However, it does not fall into the categories requiring further consultation with Natural England.

1.4 The building was assessed as having negligible potential for bats, with minimal roosting opportunities noted.

1.5 Several old swallows' nests were found within one of the small rooms, but the building has not been used by swallows for a number of seasons.

1.6 The following recommendations have been made for protected species:

Species	Requirement for Further Surveys and Recommendations
Bats	No further surveys required. Any external lights associated with the new houses should be of a low light level to minimise impacts on bats that might forage and commute in the vicinity. Warm white lights should be used at <2700k. This reduces the ultraviolet component or that has high attraction effects on insects which can lead to a reduction in prey availability for some light sensitive bat species.
Birds	To prevent infringing legislation which protects all nesting birds, it is recommended that any works to the building are started outside the breeding bird season (which runs from March to September) or following a nesting bird survey by a suitably experienced ecologist.

1.7 Enhancement suggestions include the installation of a bat box and bird boxes.

2 Introduction

2.1 Background

2.1.1 Glaven Ecology was commissioned to undertake a Preliminary Roost Assessment (PRA) on a building at The Old Rectory, Banningham, Norfolk, NR11 7DY. The survey work was completed by Carolyn Smith BSc. (Hons) MCIEEM on 29th January 2021. An initial survey had been undertaken for a previous planning application on 15th March 2019.

2.1.2 The survey and report aim to describe how the house supports birds, bats and any other protected species. It assesses potential impacts on these features as a result of the works and advises on the need for further surveys or mitigation strategies.

2.2 Site Location and Description

2.2.1 The site was located at OS Grid Reference TG 215 294 (Appendix 1 – Site Location) and was a single storey building, adjoining the house known as The Old Rectory. The building was within a small courtyard setting, with a gravel driveway to the north and lawns and gardens to the south and bare ground to the west. The garden setting was surrounded by deciduous broadleaved trees with a stable and horse paddocks to the south.

2.2.2 The surrounding area was predominantly arable with the village of Banningham to the north beyond a church and churchyard. The A140 was approximately 800m to the west of the site.

2.3 Project Overview

2.3.1 It is proposed to convert the existing single-storey building to one residential unit.

3 Legal Protection

3.1.1 The main piece of legislation relating to nature conservation in Great Britain is The Wildlife and Countryside Act 1981 (as amended). This Act is supplemented by provision in The Countryside and Rights of Way (CRoW) Act 2000 and The Natural Environment and Rural Communities Act 2006 (in England and Wales). This act provides varying degrees of protection for the listed species of flora and fauna, including comprehensive protection of wild birds and their nests and eggs.

3.1.2 UK wildlife is also protected under The Conservation (Natural Habitats &c.) Regulations 1994 (which were issued under the European Communities Act 1972), through inclusion on Schedule 2. In 2010, these Regulations, together with subsequent amendments, were consolidated into The Conservation of Habitats and Species Regulations 2010.

3.2 Birds

3.2.1 All birds, their nests and eggs are protected by law under Part 1 of the Wildlife and Countryside Act 1981 (as amended).

3.3 Bats

3.3.1 All bat species are listed under Annex IV (and certain species also under Annex II) of the European Union's Council Directive 92/43/EEC (The Habitats Directive) and are given UK protected status by Schedule 2 of the Conservation of Habitats and Species Regulations 2010. All UK bat species are also protected under The Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended).

3.3.2 This legislation fully protects bats and their breeding sites or resting places, making it an offence to deliberately capture, injure or kill bats, deliberately disturb bats, damage or destroy a bat breeding or resting place.

3.4 Statutory Designated Conservation Sites

3.4.1 National designations such as Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR), are afforded statutory protection. SSSIs are notified and protected under the Wildlife and Countryside Act 1981 as amended. SSSIs are notified based on specific criteria, including the general representativeness and rarity of the site and of the species or habitats supported by it.

4 Survey Methodologies

4.1 Desk Study

4.1.1 Records held on Magic.gov.uk on Designated Sites and granted European Protected Species Licences were reviewed in January 2021 as was the map of Norfolk County Wildlife Sites on data.gov.uk.

4.1.2 A quantification of the value of the building for bats was carried out using the Bat Roost Trigger Index (BRT) (Underhill-Day, 2017). The BRT Index uses a suite of 28 environmental and habitat features recorded during the PRA survey which are known to influence roost selection. This generates a numerical value, from 0 to 1, which is in turn used to assign to a corresponding roost suitability class of either negligible, low, moderate or high potential. This is used as guidance only (Appendix 2).

4.2 Protected Species Survey

4.2.1 The survey was undertaken by Carolyn Smith BSc (Hons) MCIEEM (Natural England Level 1 Licence for bats [reference 2018-34461-CLS]) on 29th January 2021.

Birds

4.2.2 On-site habitats were assessed for their potential to support breeding (nesting) birds. This consisted of a methodical search for actual nesting birds or their signs.

Bats

4.2.3 A Preliminary Roost Assessment was completed on the building. The survey work was completed in accordance with the Bat Conservation Trust's "Bat Surveys for Professional Ecologists" (Collins, 2016). A scoring system was applied to the building using the criteria shown in Table 1.

4.2.4 The building was investigated for evidence of bat use and evaluated for bat roosting potential. The visual search for signs of bats consisted of a slow methodical search both internally and externally for actual roosting bats and their signs:

- Droppings on walls, windowsills and floors can be used to identify species;
- Scratch marks and staining at roosts and exit holes can be used to identify the presence of bats;
- Dense spider webs at a potential roost can often indicate bat absence;
- The presence of butterfly wings may be an indication of bat presence.

Table 1: Assessing the potential suitability of a development site for bats (Collins, 2016)

Suitability	Description of roosting habitats	Description of commuting and foraging habitat
Negligible	Negligible habitat features on site likely to be used by roosting bats	Negligible habitat features onsite 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 A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. 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 situation) or a patch of scrub
Moderate	A structure or tree 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 – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed)	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
High	A structure or tree 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

4.2.5 Table 2 shows the criteria used when assessing the likelihood of a protected species being present within the survey area:

Table 2: Criteria considered when assessing the likelihood of occurrence of protected species

Assessment Category	Criteria
Present	Species are confirmed as present from the current survey or historical confirmed records.
High	Habitat and features of high quality for species/species assemblage. Species known to be present in wider landscape. Good quality surrounding habitat and good connectivity.
Moderate	Habitat and features of moderate quality. The site in combination with surrounding land provides all habitat/ecological conditions required by the species/assemblage. Within known national distribution of species and local records in desk study area. Limiting factors to suitability, including small area of suitable habitat, some severance/poor connectivity with wider landscape, poor to moderate habitat suitability in local area.
Low	Habitats within the survey area poor quality or small in size. Few or no records from data search. Despite above, presence cannot be discounted as within national range, all required features/conditions present on site and in surrounding landscape. Limiting factors could include isolation, poor quality landscape, or disturbance.
Negligible	Very limited poor quality habitats and features. No local records from desk study; site on edge of, or outside, national range. Surrounding habitats considered unlikely to support species/species assemblage.

5 Results

5.1 Desk Study

5.1.1 No Statutory Designated Sites were identified within 2km of the site on MAGIC Maps.

5.1.2 The site sits within the SSSI Impact Risk Zone for Bryant's Heath, Felmingham (4km east). However, it does not fall into the categories requiring further consultation with Natural England: Infrastructure developments and livestock units >500m^2.

5.1.3 No non-statutory designated sites were identified by the search of the Norfolk County Wildlife Sites map on data.gov.uk.

5.1.4 There are no records of a granted European Protected Species Mitigation Licence within 2km of the site showing on MAGIC maps or Licence returns for great crested newts.

5.1.5 There are no extant water bodies within 250m of the site.

5.1.6 The Bat Roost Trigger (BRT) assessment concluded that the building offers negligible roost suitability for bats giving a score of 0.48 (Table 3). The full results of this assessment and the 28 roost selection parameters used in the BRT Index are included in Appendix 2.

Table 3: Bat roost trigger index score and roost suitability class highlighted for the building (Underhill-Day, 2017)

> 0.7	**HIGH**	**Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn.**
0.6 - 0.7	**MODERATE**	**Two separate survey visits. One dusk emergence and a separate dawn re-entry survey.**
0.5 - 0.6	**LOW**	**One survey visit. One dusk emergence or dawn re-entry survey.**
< 0.5	**NEGLIGIBLE**	**No further surveys required. Reasonable precautionary measures applicable.**

5.2 Protected Species - Bats

Foraging and Commuting

5.2.1 The habitats immediately around the site were considered to have **moderate** potential to support foraging and commuting bats. The wider environment offered **moderate** foraging and commuting opportunities.

Visual inspection

5.2.2 The single-storey building was of brick construction with a pantile roof (Figure 1) and surrounded a small courtyard adjacent to the main house.

5.2.3 The roof on the western section had recently been repaired and the tiles were very tightly sealed and in good condition (Figures 2 and 3).

5.2.4 The roof on the southern section had been partially repaired, although they remained in relatively good condition with no lifting of the tiles (Figure 4)

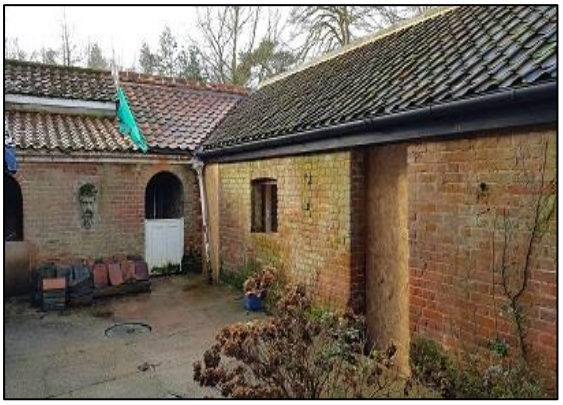

Figure 1: View of courtyard and building.

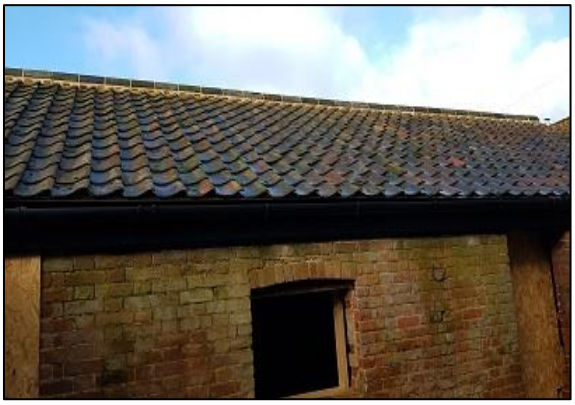

Figure 2: Tightly fitted tiles.

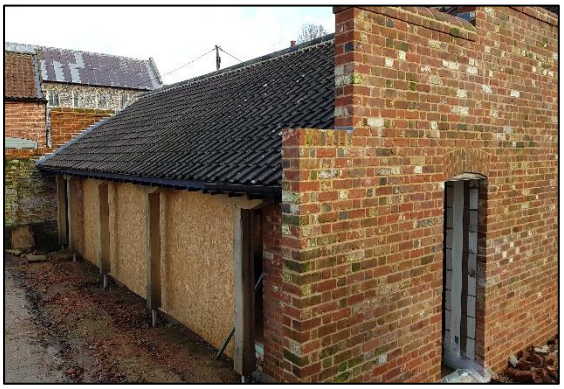

Figure 3: Western aspect of roof.

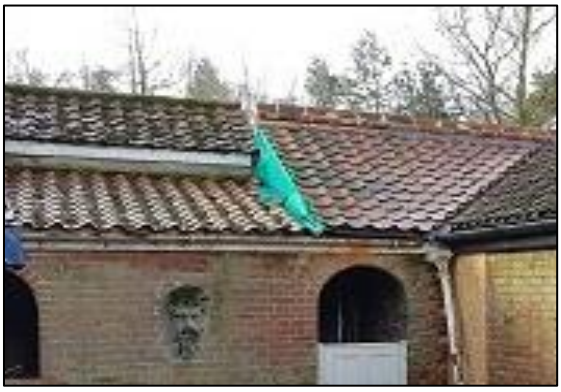

Figure 4: Partially repaired southern building roof.

5.2.5 The brickwork was in good condition, especially the southern wall, and there were no suitable gaps or cracks for roosting bats. The wooden soffit board was in good condition with only slight gaps between it and the wall – these were well cobwebbed.

5.2.6 Internally the building was currently under renovation and the interior of the main southern section was in good condition (Figure 5).

5.2.7 The roof was fully lined and there were no tears of split sin the lining. The beams were modern, machine cut with no roosting opportunities.

5.2.8 The building was open to the south and east (courtyard) via unglazed windows and doorway, giving the space a bright and airy feel.

5.2.9 The internal walls were in a good state of repair with no suitable roosting features for bats.

5.2.10 The small room to the left of the main section which was partially refurbished (Figure 6). It was a small space, dark but draughty and heavily cobwebbed. There was an open doorway to the courtyard.

5.2.11 The room nearest the main house was open to the courtyard via an open doorway. The roof lining was in good condition (Figure 7) although the lack of raised tiles on this part of the building gave no potential access to the lining. This space had not undergone any refurbishment. There was a lot of water ingress evident on the beams and floor.

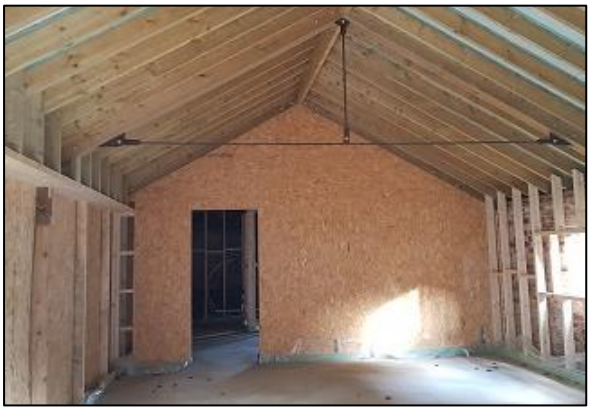

Figure 5: Interior of southern building.

Figure 6: Small space to left of main section.

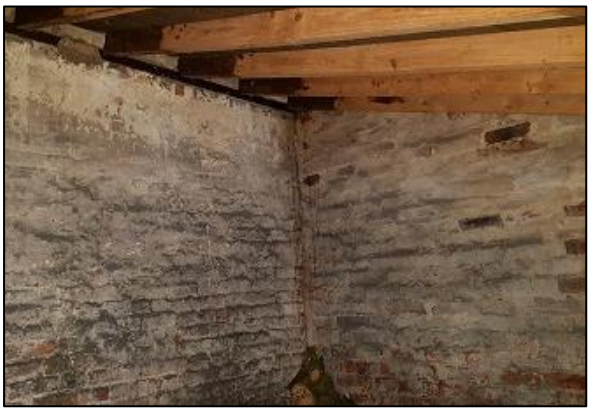

Figure 7: Wood store – not refurbished but in good condition, but water ingress evident.

5.2.12 No signs of bats such as droppings or staining were found during the visual inspection. No actual bats were observed.

5.2.13 The building is assessed as having **negligible potential** to support roosting bats.

5.2.14 The building was very low and all roof tiles were in good condition, especially those on the longest, southern section. The units were generally light and draughty or both and there were minimal roosting opportunities noted.

5.2.15 The building has **negligible potential** to support hibernating bats.

5.3 Protected species - Birds

5.3.1 There were two several old swallow nests in the old woodstore (Figure 8). There were no droppings or feather associated with the nest and it was thought the nests were several seasons old, having not changed since the first site visit in 2019.

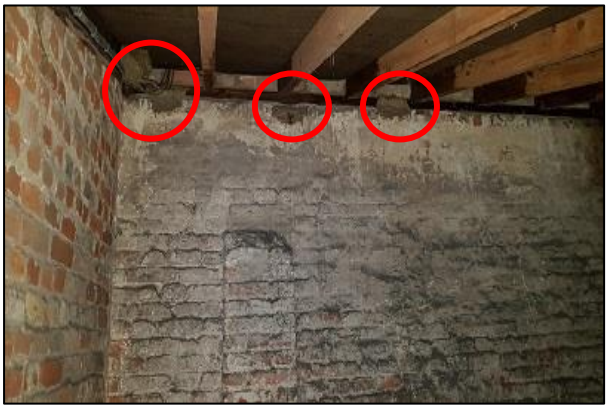

Figure 8: Old swallows' nest on the southern wall of old woodstore.

5.3.2 No evidence of any other protected species was found during the survey.

5.4 Survey Limitations

5.4.1 There were no significant constraints to the surveys.

6 Impact Assessment

6.1.1 Table below summarises the potential impacts of the works:

Table 4: Impact assessment on the ecology of the site

Ecological Factor	Impact Assessment
Designated Sites and Habitats	No impacts on Designated Sites are envisaged given the scale of the development and absence of sites within 2km. No other habitats of ecological significance will be impacted by the proposed works
Bats	The field survey and desk study conclude bats are highly unlikely to be present on site. The development is not considered to have a significant impact upon commuting or foraging bats and there will be no severing of connectivity. The works will have a negligible impact on these species.
Birds	Old nests were found in the old woodstore and if birds decide to return to this site there is a risk of disturbance and abandonment of nests if works are carried out during the bird breeding season. It is considered that the works will have a low impact on local bird populations.

7 Recommendations

7.1.1 As good practice, any trenches or holes created during the works must be backfilled at the end of the day or covered overnight to ensure any wildlife passing through the site, such as hedgehogs, do not get trapped.

7.1.2 The following species-specific recommendations are made for the site:

Table 5: Recommendations for further surveys and mitigation

Species	Requirement for Further Surveys and Recommendations
Bats	No further surveys required. Any external lights associated with the new houses should be of a low light level to minimise impacts on bats that might forage and commute in the vicinity. Warm white lights should be used at <2700k. This reduces the ultraviolet component or that has high attraction effects on insects which can lead to a reduction in prey availability for some light sensitive bat species.
Birds	To prevent infringing legislation which protects all nesting birds, it is recommended that any works to the building are started outside the breeding bird season (which runs from March to September) or following a nesting bird survey by a suitably experienced ecologist.

8 Enhancements

8.1 The Local Planning Authority has a legal duty to consider enhancements on proposed development sites. Furthermore, the National Policy Planning Framework (NPPF) requires planning decisions to aim to promote net gains in biodiversity on development sites.

8.2 The following enhancement is suggested for the site:

- A bat box to be installed on to a suitable tree in the garden at least 3m high. An 'Improved Cavity Bat Box' or similar would be suitable.

- Two swallow next boxes to be installed in the stable area to the east of the site, to encourage swallows to continue to nest there. Something similar to the Eco Swallow Nest would be suitable. Swallows are sociable birds but a minimum distance of 1m between nest cups is recommended. To ensure the swallows have sufficient room in the nest cup and when arriving and leaving there should be at least 6cm free space above the nest cup.

- Two nest boxes suitable for wrens/robins to be sited low down (less than 2m from the ground) in an area well-hidden with vegetation. The Wren and Robin FSC nest box or similar would be suitable.

9 References

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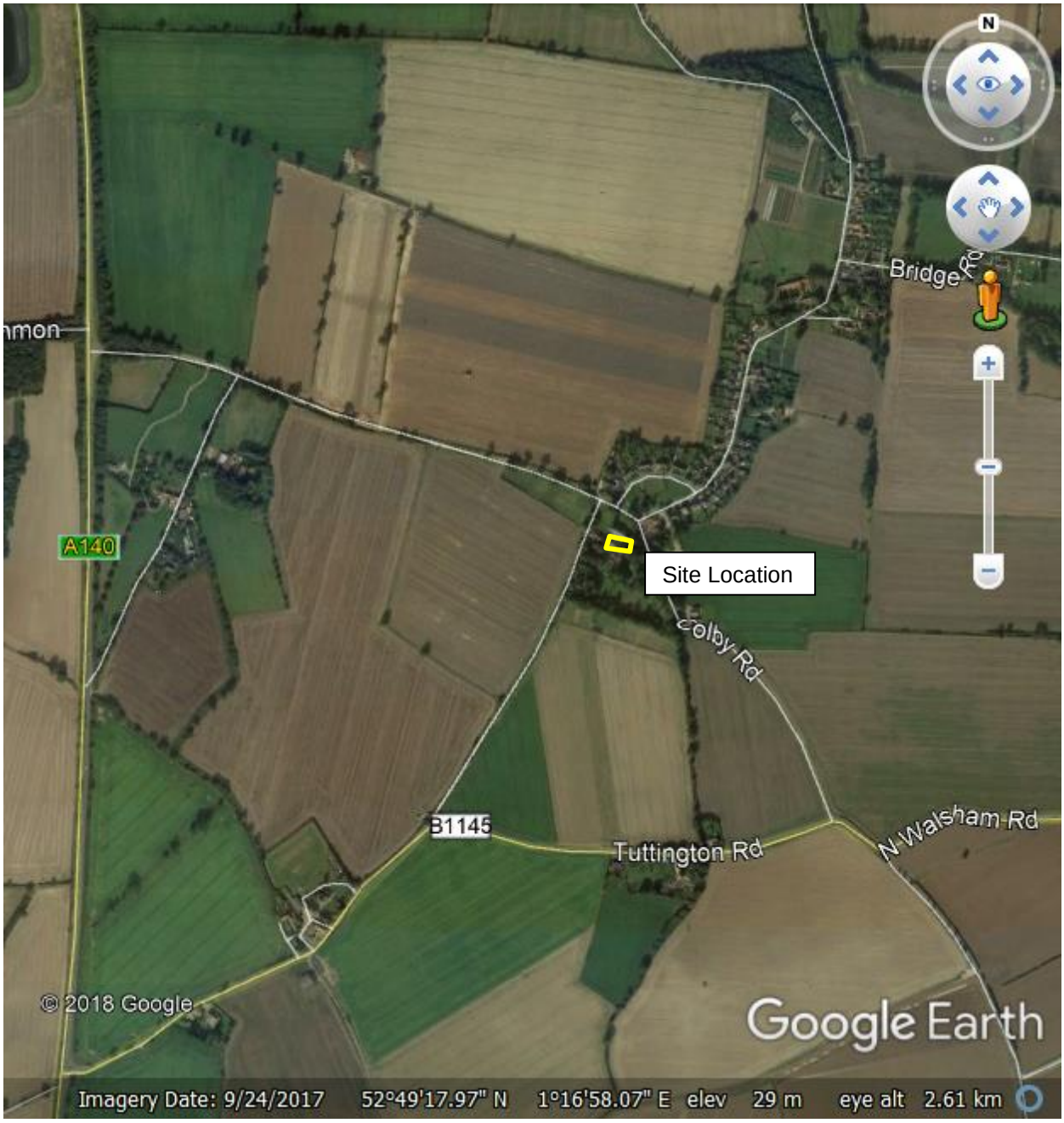
Appendix 1 – Site Location



(Source Google Earth: 2021)

Appendix 2 – Bat Roost Trigger Assessment

Trigger Indices	Category	T1 Score
A) Location, habitat and environmental context		
T1: General location	Rural	1
T2: Foraging opportunities within 250 m	Moderate	0.67
T3: Foraging opportunities within 5 km	Moderate	0.67
T4: Commuting opportunities	Moderate	0.67
T5: Cover in vicinity of structure	Poor	0.33
T6: External lighting in vicinity of structure	Moderate level	0.33
T7: Number and character of nearby buildings	Mixture of old and new	0.67
T8: Structure/building exposure	Moderate	0.67
B) Exterior features and characteristics of building		
T9: Structure/building age	Old	1
T10: Size of Building	Small size	0.33
T11: Main wall construction material	Modern	0.33
T12: Condition of wall/roof pointing/render	Tightly sealed	0.33
T13: Condition of lintel/door frame features	Tightly sealed	0.33
T14: Condition of eaves/soffits/bargeboards	Some gaps or cracks noted	0.67
T15: Condition of weatherboarding/cladding	None present	0.2
T16: Condition of lead flashing	No flashing	0.2
T17: Roofing material	Older style tiling	1
T18: Bat access potential	Numerous gaps or open-sided structure	1
C) Interior features and characteristics of building		
T19: Character of roof void/roof space	Small low void or open roof space	0.33
T20: Character and condition of roof supports	Tightly sealed modern timbers/supports	0.33
T21: Presence and extent of cobwebbing	Numerous cobwebs in roof space	0.33
T22: Presence and condition of roof lining	Potential cavity but very limited access	0.33
T23: Light levels in roof void/space	Intermediate	0.67
T24: Protection from weather/wind	Draughty and exposed	0.33
T25: Temperature regime	Intermediate	0.67
T26: Level of (human, animal) disturbance	High	0.33
T27: Flight Space	Good	1
T28: Flying Access (Horseshoe bats)	N/A	0.33
	TRIGGER INDEX SCORE =	**0.48**
	BAT ROOST SUITABILITY =	**NEGLIGIBLE**