

Huckle
Ecology



Preliminary Roost Assessment

Briefing Note Report

Honeypot Farm, Great Green, Thrandeston IP21 4BP



Ms H. Hepburn, Honeypot Farm, Great Green, Thrandeston, IP21 4BP

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Report prepared by Dr J. Huckle for Huckle Ecology Ltd

Declaration: The information and advice which we have prepared and presented it true and has been developed in accordance with the Chartered Institute of Ecology and Environmental Management Code of Professional Conduct. We confirm that any opinions expressed are our own and my true and bona fide opinions.

Digital Signature:



Dr Jon Huckle CEnv MCIEEM MSc BSc (Hons)

Executive Summary

- Huckle Ecology was commissioned in December 2023 by Ms H. Hepburn to undertake a Preliminary Roost Assessment (PRA) in relation to a planning application at Honeypot Farm, Great Green, Thrandeston, Suffolk. The PRA has been requested to inform a planning application for the installation of 10x no. solar panels on the roof of a barn located within the curtilage of Honeypot Farm.
- A desk study and PRA survey were undertaken in December 2023. The desk study has confirmed that there are no designated sites, or areas of priority habitats, within close proximity to the site that would present material considerations for the planning decision maker. The scope of the works involved is considered unlikely to result in potential adverse effects on protected species (other than bats) or species of principal importance.
- The PRA survey included an external and internal inspection of the barn where the solar panels are proposed to be installed to identify the presence of signs of bats and the potential suitability of the roof structure of the barn to support bat roosting habitat. The survey recorded no evidence of bats within the barn and concluded that the barn roof showed evidence of being restored with modern rafters, a Breathable Roof Membrane and tiles in good condition. Consequently, the roof on the west elevation as evaluated as providing **negligible** potential habitat for roosting bats. Furthermore, the site provides a small area of low value foraging or commuting habitat for bats.
- Mitigation and enhancement measures have been recommended that demonstrate good practice and will deliver a net gain for biodiversity in proportion to the scale and character of the proposed development. These measures include the erection of bat boxes and bird nest boxes.

1 Introduction

Terms of Reference

- 1.1 Huckle Ecology was commissioned by Ms H. Hepburn to undertake a Preliminary Roost Assessment (PRA) in relation to a planning application at Honeypot Farm, Great Green, Thrandeston, Suffolk (the Site).
- 1.2 The planning application is for the installation of 10x no. solar panels on the roof of a barn located within the curtilage of Honeypot Farm. The solar panels would be installed on a west facing roof of a barn located to the south west of the existing residential property; the barn is currently used for storage of garden machinery, logs, tools and miscellaneous materials.
- 1.3 An ecological assessment has been requested by Mid Suffolk District Council for the following reasons:
 - Minor and householder proposal within 100m of pond/moat – great crested newts, water voles and amphibians; and
 - Development affecting any buildings, structures, features or locations where protected species or species of Principal Importance are known to be present.
- 1.4 The Site location is presented below in Figure 1, with the existing site layout showing the location of the barn roof where the proposed solar panels would be installed in Figure 2 below.

- 1.5 The proposed solar panel installation has been scoped by Greenscape Energy Ltd and the specification of the work required detailed within a 'Job Card' that identified that the west facing roof of the barn alone would be the location of the panels, with 10x panels to be installed, with an 8m cable trenched between the barn and the house.

Figure 1 Site Location Plan

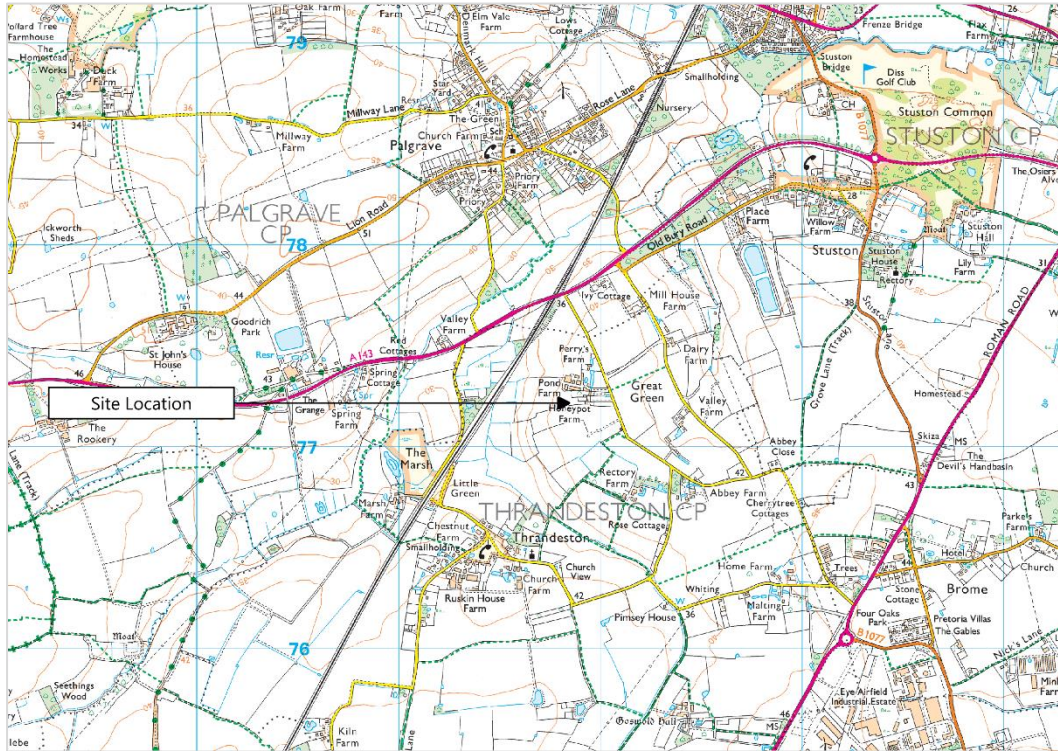
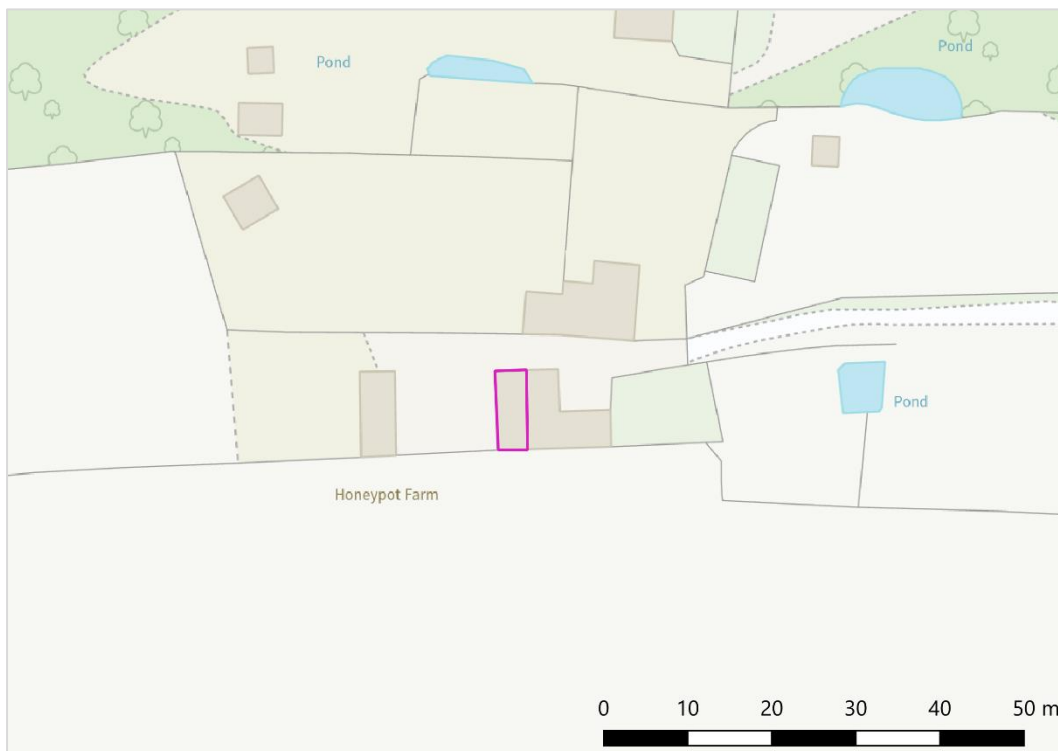


Figure 2 Existing Site Layout showing location of proposed solar panels (Pink rectangle)



Aim of Report

- 1.6 This report provides the findings of a Preliminary Roost Assessment Survey to assess the potential suitability for bats of the barn where the installation of solar panels is proposed. The report will also consider the potential effects on other protected species or species of Principal Importance.
- 1.7 This report does not constitute a more comprehensive Ecological Impact Assessment (EclA) but is considered a proportionate approach where proposed works affect an existing building only and no significant excavations are required.
- 1.8 The proposed installation of solar panels is exempt from requiring mandatory Biodiversity Net Gain (BNG) requirements¹, being a minor householder application.

2 Methodology

Desk Study

- 2.1 A desk study was undertaken to review existing information regarding designated sites, habitats or species that benefit from statutory protection and/or are of nature conservation concern.
- 2.2 The scope of the desk study was to identify features of ecological value that could potentially be affected by the proposed development; for this reason, the scope of the area around the Site to be included within the desk study search has been set at a distance of 1 km which is sufficient to provide an indication of the nature conservation interest in the surrounding area and are considered appropriate for the size of the Site and the nature of the proposed development.
- 2.3 Due to the very small scale of the site, a full data search of records held by Suffolk Biodiversity Information Service (SBIS) was not considered proportionate. Information on statutory sites was obtained from the UK Government internet site MAGIC (<http://www.magic.gov.uk/>) and from the Natural England Open Data Geoportal ([Natural England Open Data Geoportal \(arcgis.com\)](https://naturalengland.gov.uk/open-data-geoportal/)).

Bat Preliminary Roost Assessment

- 2.4 The Bat PRA was undertaken on 18th December 2023, and included an external and internal inspection of the barn where solar panels are proposed.
- 2.5 The PRA survey was undertaken by Dr Jon Huckle, an experienced professional ecologist with over 25 years of postgraduate experience and over 20 years operating as an ecological consultant. He has undertaken numerous bat surveys, including building inspections, bat activity transects, emergence and return roost surveys and has managed ecological input to numerous ecology chapters of Environmental Statements. He has provided evidence as an expert witness on bat ecology at several planning inquiries.
- 2.6 The preliminary roost assessment comprised a detailed inspection of the exterior and interior of the buildings to look for features that bats could use for entry/exit and to search for signs of bats, in accordance with methodological guidance produced by the Bat Conservation Trust (Collins, 2016). The objective of the survey was to determine the actual or potential presence of bats, to identify potential emergence points to focus on during emergence surveys, and to confirm the scope of further surveys

¹ [Biodiversity net gain: exempt developments - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/biodiversity-net-gain-exempt-developments)

that would be required to accompany the planning application, in line with best practice guidance on bat surveys (Collins, 2016).

- 2.7 For each building or tree, the PRA assigns a category to each structure according to its potential for supporting bat roosts using the criteria detailed in the BCT survey guidelines (Collins, 2016) and summarised in Table 1 below.

Table 1 Guidelines for assessing the potential suitability of proposed development sites for bats, taken from Collins 2016.

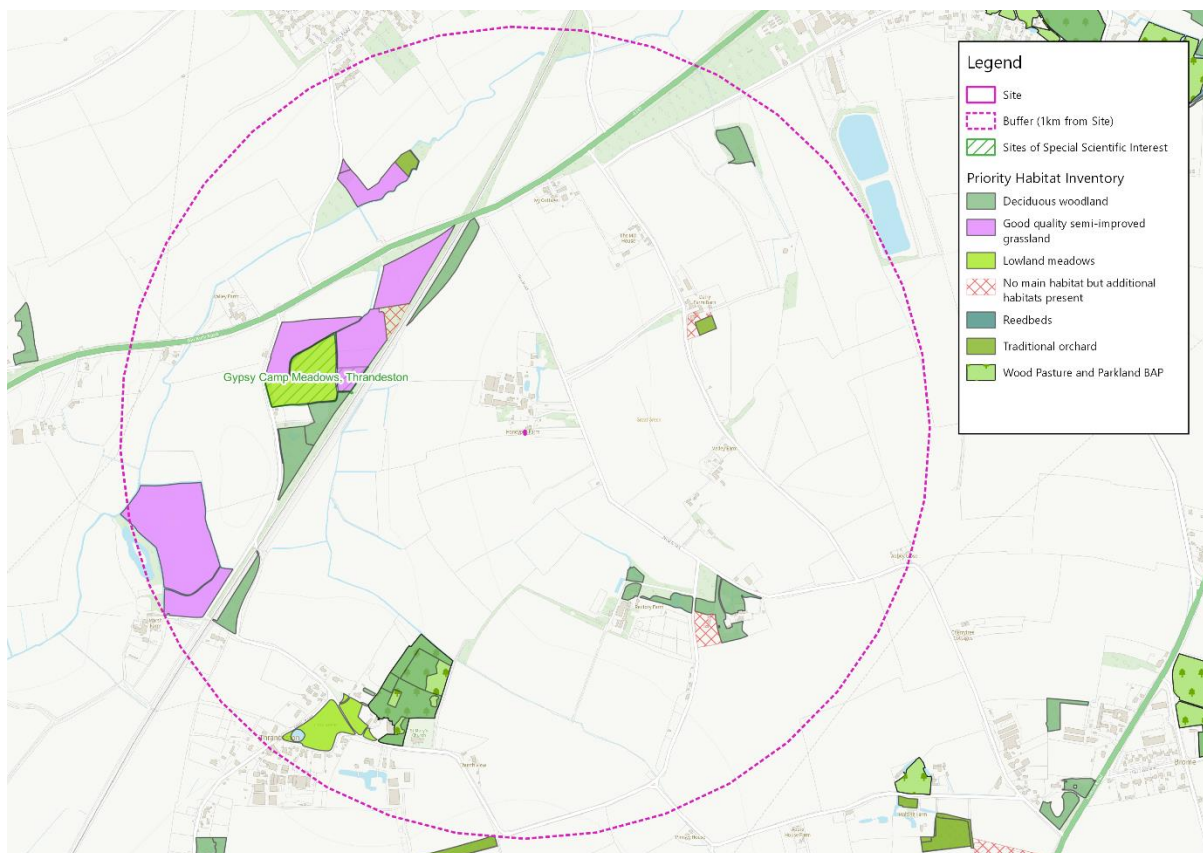
Suitability	Description of roosting habitats	Description of commuting and foraging habitat
Negligible	Negligible habitat features onsite likely to be used by roosting bats.	Negligible habitat features on- site likely to be used by commuting or foraging bats.
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation.)</p> <p>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.</p>	<p>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.</p> <p>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.</p>
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.	<p>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.</p> <p>Site is close to and connected to known roosts.</p>

3 Survey Results

Desk Study

- 3.1 One Statutory Designated Sites (Site of Special Scientific Interest, European Sites, Local Nature Reserves etc) is located within 1km of the application site: Gypsy Camp Meadow Site of Special Scientific Interest (SSSI) which is located approx. 450m WNW of the Site at its closest point and is located to the west of the Norwich – London mainline railway line.
- 3.2 This SSSI is species-rich wet meadow², that consists of a large and a smaller meadow, on poorly drained Suffolk boulder clay. The Site is designated for its vegetation communities, including base-rich marsh to wetter alluvial meadows and grass-dominated water meadows with a system of drainage ditches running through the site.
- 3.3 Due to the nature of the proposed development, the distance of the SSSI from the Site, and the lack of functional connectivity between the site and the SSSI, it is certain that the proposed development would not result in adverse ecological impacts on the designating features of the SSSI
- 3.4 There are no recognised areas of Priority Habitat (as noted on the Priority Habitat Inventory within 400m, of the Site, although there are a range of priority habitats located within 1km of the Site (Figure 3 below). However, it is considered certain that there would be no direct or indirect adverse effects on any areas of Priority Habitat.

Figure 3 Location of Designated Sites and Priority Habitats in relation to 1km search areas around Site



² [1001862 \(naturalengland.org.uk\)](http://1001862.naturalengland.org.uk)

Bat Preliminary Roost Assessment

- 3.5 All bat species in England and Wales, and their resting and breeding places (roosts), are afforded protection under The Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence for anyone to intentionally or recklessly kill or injure a bat or disturb a roosting bat. It is also an offence to damage, destroy or obstruct

Preliminary Roost Assessment – 18th December 2023

- 3.6 The building inspection was undertaken in December 2023 to provide an evaluation of the current potential suitability of the barn that is the subject of the planning application to support bat roosting habitat. The proposed development will involve the installation of 10x solar panels on the west facing roof elevation of the barn, with the panels secured to existing roof timbers located beneath existing clay pan tiles.
- 3.7 The survey was undertaken in bright, clear conditions although after low levels of rain in the preceding three days; these were optimal conditions for a building inspection although rain can wash recent signs of bats off exposed surfaces. The survey was undertaken in December, which is outside the active season for bats when bats are generally in hibernation and inactive, although may occasionally emerge on mild nights to feed.
- 3.8 The building inspection was able to access both the exterior and interior of the barn, and was able to inspect all areas of the roof where the panels are proposed.

Barn – General Location

- 3.9 The Barn was located 6-8m south west of the main residential dwelling (Honeypot Farm) separated by a gravel driveway and area of hard standing. To the west and east of the building associated with the barn and farmhouse, there were areas of gardens, mainly laid to lawn with various scattered trees and shrubs.
- 3.10 The main section of the barn had a north-south orientation with a single storey extension extending to the east. The proposed solar panels will be installed on the west-facing elevation of the roof only, and consequently the south-eastern extension is not considered further in this report.

External Inspection

- 3.11 The barn comprised a two storey, L-shaped, traditional Suffolk barn with timber weatherboard walls, painted black. The barn appeared to have been subject to relatively recent restoration or repair, with most walls of the barn comprised of new weatherboards in excellent condition and lacking potential cavities that would provide access for bats.
- 3.12 The barn had a double door on the east elevation and a single stable door on the north elevation that provided access to an internal store room, which included a wooden staircase leading to a mezzanine floor, which included a hatch door to the north elevation. The storage room was home to two semi-feral farm cats.
- 3.13 The north elevation comprised a gable wall with timber weather boards to the apex and timber barge boards along the edge of the roof: all timbers were in excellent condition and lacked warped wood which could provide potential roost features for bats.
- 3.14 The west elevation supported a timber weatherboard wall (in excellent condition) with no windows beneath a clay pan tile roof. The roof tiles were traditional clay pan tiles, which were in good condition,

being securely attached to the underlying battens and with no missing, damaged, or lifted individual tiles. A small proportion of the tiles had small gaps which were probably associated with the use of non-matching tile patterns.

- 3.15 The south elevation was a gable end wall comprised of timber weather boards, and a small, glazed window providing internal illumination.
- 3.16 The east elevation supported the double barn doors and a section of weather board wall. The roof was tile with clay as found on the west elevation.
- 3.17 The side elevations (east and west) both had relatively new soffits with a PVC gutter beneath the roof tiles, and with timber fascia boards at each gable end wall. The roof ridge comprised clay ridge tiles with intact mortar along the entire length and not potential cavities within the ridge line itself.
- 3.18 Externally it was concluded that the barn was in excellent condition, and that there were no obvious cavities or other bat Potential Roost Features (PRFs) associated with the roof, walls, or boarded sections of the building.

Internal Inspection

- 3.19 The interior of the main section of the barn was light and airy. The roof of the barn appeared to have been recently (within the last 10-20 years) re-roofed with an intact lining comprised of Breathable Roofing Membrane (BRM) present throughout. The roof structure was inspected from the mezzanine floor at the northern end of the barn. The roof timbers were of machine-sawn modern timbers with purlins and trusses of a similar age. The roof timbers and lining were considered to be in excellent condition and lacked potential cavities and apertures likely to provide PRFs for bats.
- 3.20 At the height of the tops of the walls, there were four period hammer-beams , with supporting braces which were considered to provide potential roosting spaces within small cavities within the beam joints and in mortice slots on the underside of cross beams. However, it is important to note that the areas of the barn where PRFs were noted were located beneath the roof where the solar panels will be fitted and would not be affected by the installation process.
- 3.21 The internal area was used for storage and was freely accessible and was thoroughly inspected using a torch and close focusing binoculars where necessary. All internal surfaces were inspected for the signs of bats including the presence of live or dead bats, bat droppings and urine staining, or evidence of feeding. No signs of bats were found in any section of the garage.
- 3.22 Internally, it was considered that the roof itself provided few potential roosting features for bats although bats could potentially use the exposed beams for perching and/or utilise potential cavities associated with the potential period timber beams present (hammer beams and associated horizontal longitudinal plate beams). Consequently, the interior of the barn was evaluated as providing Low potential suitability to support bat roosting habitat.

Evaluation of Barn

- 3.23 Following the external and internal inspection of the barn, it was concluded that although there were potential roost features located within the interior of the barn, that the external structure of the barn was in excellent condition and lacked potential roost features, reflecting the restored character of the barn walls and roof.
- 3.24 As the proposed works to install solar panels will involve works to one elevation only and would involve a very short duration (2-3 days) and affect a very small area of the barn roof (limited tile removal to allow attachment to the rafters supporting the tiles), which had very limited potential suitability to support roosting bats, it is concluded that the roof section of the building where the works are proposed is considered to be of **Negligible** suitability as bat roosting habitat using the criteria detailed in Table

1. The risk of potential effects on bats is considered to be reduced even further if the works are scheduled for a time of year when bats are less active and/or in hibernation as the rood is not considered to be suitable for bat hibernation.

Foraging and Commuting Habitat

- 3.25 The adjacent garden provides Low to Moderate value foraging and commuting habitat (Collins, 2016), with areas of grassland and gravelled areas with hedgerows and individual trees along the site boundary providing limited foraging opportunities and commuting flightlines.
- 3.26 It should be noted that the farmhouse, a Listed building, and the presence of pond habitats and mature trees within the landholding of Honeypot Farm and neighbouring properties were of Moderate value for bats, providing potential roosting habitat as well as foraging and commuting habitat.

Conclusion of Bat PRA

- 3.27 The external and internal inspection of the barn has concluded that the west elevation of the barn where the solar panels are to be installed provides **Negligible** suitability as bat roosting habitat and that the Site as a whole provide Low value foraging and commuting habitat for bats.

Evidence of Breeding Birds

- 3.28 There was evidence that the interior of the barn was used by roosting birds, most likely to be pigeons, and a single nest was noted adjacent to the south gable wall. However, the roof section where the solar panels will be installed was not considered suitable to support breeding birds and it is considered unlikely that there would be significant adverse effects on breeding birds from the proposed installation.

Site Photographs

Photo 1 View of East and North Elevations of Barn showing double barn door and north gable wall.



Photo 2 View of north west corner showing good condition weather board and barge boards.



Photo 3 View of west elevation showing northern end of roof and timber clad wall



Photo 4 View of west elevation of barn showing south end of roof and timber clad wall



Photo 5 Internal view of south gable wall of barn showing both new and old timber construction



Photo 6 View of roof showing modern rafters and purlins and lining made of BRM.



Photo 7 Interior of north gable end from mezzanine floor



Photo 8 View of close up of roof structure showing modern rafters and BRM lining



Photo 9 View of partition wall with mezzanine floor above



Photo 10 View along rood showing modern roof structure with period hammer beam at bottom of photo



4 Conclusions and Recommendations

- 4.1 The proposed application comprises the installation of solar panels on the west-facing elevation of a barn at Honeypot Farm.
- 4.2 A desk study has confirmed that there are no designated sites, or areas of priority habitats, within close proximity to the site that would present material considerations for the planning decision maker.
- 4.3 The proposed development will involve a minimal construction period and zone of influence, and will not involve specific ground works likely to affect potential habitat likely to support protected species or species of principal importance, including great crested newts, water voles or hedgehogs.
- 4.4 The proposed development is not considered likely to result in potential effects on bats; the roof of the barn was considered to provide negligible potential habitat for roosting bats and the site provides a small area of low-moderate value foraging or commuting habitat for bats.
- 4.5 It is not considered that the proposed solar panels will significantly affect local bat populations, as there is an abundance of alternative foraging sites within the surrounding area that would remain unaffected. No additional lighting is proposed as part of the application and the barn is sufficiently far from any potential roost habitats in nearby buildings or trees, such that the risk of affecting off-site potential roost sites is negligible.
- 4.6 Regardless of the non-significant nature of the potential impacts on bats outlined above, measures designed to minimise the potential effects of the scheme on bats and provide potential habitat enhancements for local bat populations are outlined below.

Mitigation of Potential Effects on Bats

- To further reduce the risk of effects on bats, it is recommended that the installation of bats be undertaken outside the main period of bat activity (April – September).

Biodiversity enhancements Benefiting Local Bat and Bird Populations

- 4.7 The following biodiversity enhancements are recommended to deliver a net gain for biodiversity in proportion to the scale and character of the proposed development:
 - Erection of two bat boxes to provide potential roosting habitat in semi-mature trees located within the existing land holding or on the walls of the existing barn. The bat boxes should be of standard woodcrete construction³ such as the 'Schwegler 2F' or equivalent to maximise the durability of the bat boxes while minimising maintenance requirements. It is recommended that at least two boxes are installed, facing different directions (e.g., east, south and west) to provide a greater diversity of roosting opportunities.
 - Erection of three bird nest boxes, mounted on the proposed cart lodge and on suitable trees within the applicants' garden; nest boxes should either have a small 28mm or 32mm hole or open fronted for species such as European robin. The boxes should be of woodcrete construction to maximise their durability, for example the Schwegler 1B Nest box⁴ or equivalent⁵.

³ [Woodcrete & WoodStone Bat Boxes | NHBS Practical Conservation Equipment](#)

⁴ [1B Schwegler Nest Box | NHBS Practical Conservation Equipment](#)

⁵ [Vivara Pro Seville 32mm WoodStone Nest Box | NHBS Practical Conservation Equipment](#)

- 4.8 Incorporation of these measures is considered to provide appropriate mitigation measures for any potential adverse effects associated with the proposed development and would also provide significant enhancements to biodiversity across the development site. With the successful implementation of these measures it is considered certain that there would be no likely significant adverse effects on local bat populations and the increase in bat roosting habitat will result in a proportionate gain for biodiversity,
- 4.9 In accordance with Chartered Institute of Ecology and Environmental Management (CIEEM) guidance on the Life Span of Ecological Surveys and Reports (CIEEM, April 2019), it is advised that baseline survey results remain valid for approx. 12-18 months subject to their being no major change in the management of the site or the likelihood of ecological important species moving in to the site.

5 References

- CIEEM. (April 2019). *Advice Note: On the Lifespan of Ecological Reports and Surveys*. Winchester: CIEEM.
- Collins, J. (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. London: The Bat Conservation Trust.