



HYBRID ECOLOGY LTD

joined up thinking

Preliminary Roost Assessment:

Gods House Farm, Harts Lane, Ardleigh, Colchester, Essex
CO7 7QQ,

On behalf of:

Eco-Planning UK

Prepared by:

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Summary

Hybrid Ecology Ltd. was instructed by Eco-Planning UK to carry out a Preliminary Roost Assessment (PRA) at Gods House Farm, Harts Lane, Ardleigh, Essex (central grid reference TM 03997 30629). The survey was carried out by licensed bat surveyor Gemma Holmes (BSc, ACIEEM) and Ollie Coyne on 19th May 2023. The survey was required to support a planning application for conversions/alterations of three farm buildings.

In accordance with the Bat Conservation Trust's Good Practice Guidelines (BCT, 2016), the survey involved external and internal inspections of three buildings to identify evidence of or potential for roosting bats. Bats are legally protected from killing, injury, disturbance, roost obstruction and roost destruction. Surveys are required to establish bat roosts and identify mitigation required to enable development to proceed lawfully. This report provides the results of the survey and makes recommendations for further survey/mitigation and enhancement as appropriate in the context of the proposal.

Findings and recommendations

Building 1: Storage Barn

This is an original barn with internal stables. The pitched roof is covered with slate tiles and is lined. The walls are covered with weatherboards. There are various gaps, notably around the eastern gable, and various crevice gaps under tiles and warped weatherboards throughout. These gaps could reasonably provide roosting opportunities.

Bat roost suitability: Low. In accordance with best practice (Bat Conservation Trust, 2016) one survey (carried out at dusk or dawn) is initially required between mid-May and August inclusive. If bats are seen emerging, three surveys will be required to understand species, number, access points and conservation status of the roost. A team of 2 surveyors should be employed, using professional grade bat detectors and night-vision aids to gather sufficient data.

Building 2: Old Milking Parlour

This is a disused building with timber frame, blockwork walls and a pitched asbestos roof. Fascias are timber and all appear to be well-sealed. There are no gaps around the block work and no ingress opportunities around the asbestos roof.

Bat roost suitability: Negligible. Further surveys are not required.

Building 3: Old Calving Building

This is a large storage building with blockwork walls and asymmetric asbestos roof. Cavity walls are present to the north and west. It is open to the south and there are open windows to the east, therefore internal conditions are cold and draughty. There is a modern stable block adjoining the western aspect.

Bat roost suitability: Negligible. Further surveys are not required.

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1.0 Introduction

Personnel

- 1.1 This report has been prepared by Gemma Holmes; Consultant Ecologist at Hybrid Ecology Ltd. Gemma is a qualified ecologist with 16 years' experience in professional survey work and is an Associate member of the Chartered Institute of Ecology and Environmental Management. Gemma holds a level 2 licence to survey for bats in England (Licence number 2016-27305-CLS-CLS).

Purpose/context

- 1.1 Hybrid Ecology Ltd. was instructed by Eco-Planning UK to undertake a Preliminary Roost Assessment at Gods House Farm. A plan showing the buildings surveyed is included in Figure 1 and a Location Plan is in Figure 2. We understand three buildings will be subject to conversion works/alterations and this requires planning permission.
- 1.1 Bats (all species) are legally protected under the Conservation of Habitats and Species Regulations (2019, EU Exit) and Wildlife and Countryside Act (1981, as amended) from killing, injury, disturbance, roost destruction and roost obstruction. Building work can result in the destruction of/disturbance to bat roosts and trigger offences under the above legislation, in the absence of appropriate controls.
- 1.4 Several UK bat species are also listed on Section 41 of the Natural Environment and Rural Communities Act (2006) as Priority Species, meaning Local Planning Authorities have a duty to "conserve and protect" in their decision making, including the determination of planning applications.
- 1.1 The purpose of the survey was:
- a) to identify bat roost field signs and potential access points on the subject buildings such that further surveys can be advised or bats can be confidently scoped out as appropriate;
 - b) To identify any requirement for further bat surveys as appropriate;
 - c) to provide mitigation recommendations to ensure that the development will be carried out in accordance with wildlife legislation;
 - d) to identify any scope for enhancement measures.

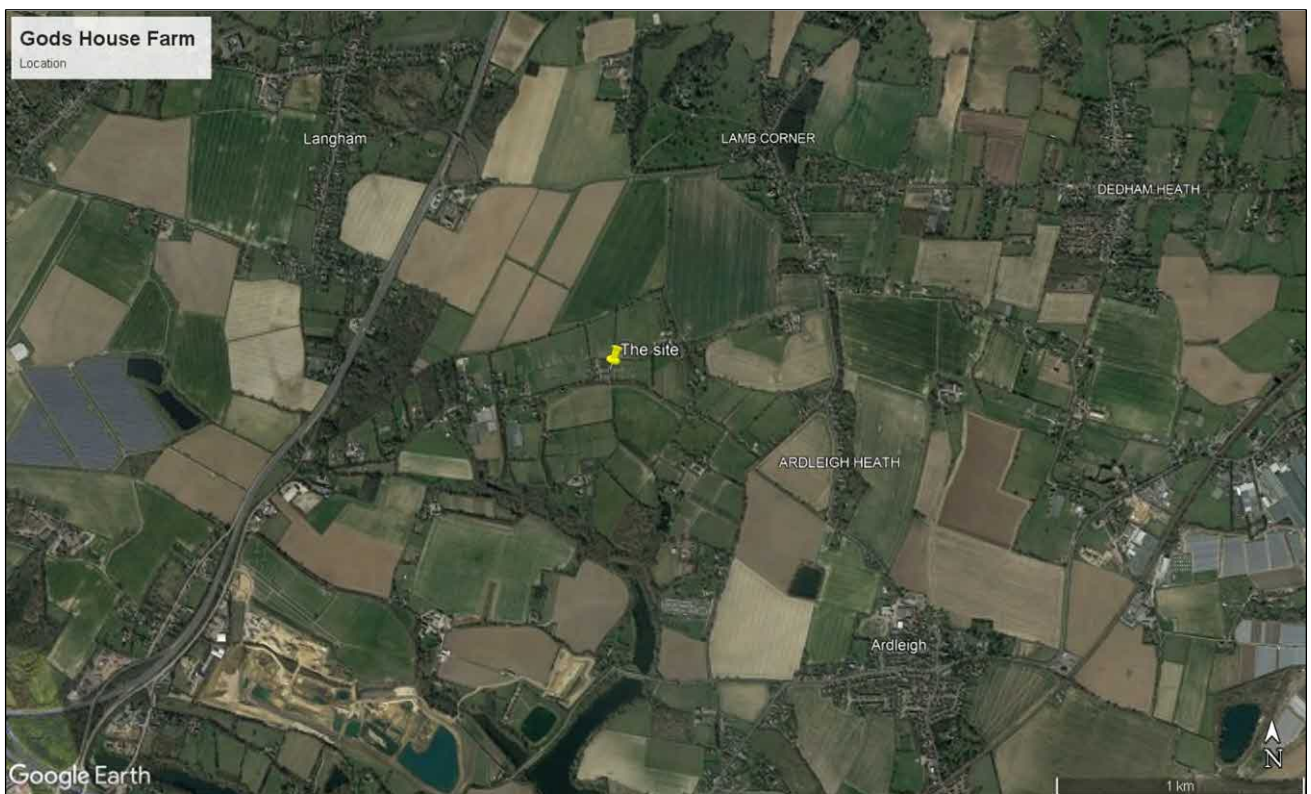
Limitations

- 1.6 There were no limitations to the survey that would materially impact the findings and/or recommendations.
- 1.6 This report is valid for 18 months, beyond which conditions may have changed to warrant an updated survey. Beyond this point, this report should not be accepted in support of a planning application.

Figure 1. Buildings surveyed



Figure 2. Location



2.0 Planning Policy and Legislation

National Planning Policy Framework (2019) Conserving and Enhancing the Natural Environment

Note the following text has been taken directly from the National Planning Policy Framework.

Paragraph 170 (d)

- 1.4 Planning policies and decisions should contribute to and enhance the natural and local environment by minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Paragraph 175 (d)

- 1.4 Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

Legislation

Please refer to wildlife legislation here - [Environmental management : Wildlife and habitat conservation - detailed information - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/environmental-management-wildlife-and-habitat-conservation-detailed-information). The text below is a summary only and is not an interpretation of any law.

- 1.4 In the UK, all bat species and their roosts are legally protected, by both domestic and international legislation. This means you may be committing a criminal offence if you:
- Deliberately take, injure or kill a wild bat
 - Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
 - Damage or destroy a place used by bats for breeding or resting (roosts) (even if bats are not occupying the roost at the time)
 - Intentionally or recklessly obstruct access to a bat roost
- 2.4 A European Protected Species (EPS) licence can be issued by Natural England for scientific and research purposes (including survey work). An EPS licence can also be issued by Natural England for the disturbance of an EPS in relation to a development. Licences can only be granted if there is no satisfactory alternative or if the action authorised will not be detrimental to the maintenance of the population of the species at a Favourable Conservation Status in their natural range and can only be obtained once planning permission has been granted.

2.0 Methodology

Desktop study

- 3.1 The immediate landscape was assessed via aerial mapping (Google Earth Pro, 2020) for any significant bat-roosting and foraging habitats (woodland, water etc.) connecting to the site.
- 3.1 Multi-agency Geographical Information for the Countryside (MAGIC) was used to identify any European Protected Species licensing relevant to the site location, usually within 2km.

Field survey: Preliminary Roost Assessment (buildings)

- 3.1 The site was visited on 19th May 2023, during which the three buildings identified in Figure 1 were subject to internal and external inspections. In accordance with BCT, 2016, a systematic search was made to identify potential or actual bat access points and roosting places (typical access features include gaps beneath ridge tiles, loose/slipped/missing roofing tiles, gaps between soffit boxes and external walls, lifted lead flashing and gaps behind weatherboarding). The search included the ground, particularly beneath potential access points, where accessible. A systematic search was also made to identify potential bat access points and roosting places and to locate evidence of bats, including droppings and feeding remains. Accessible/ground-level crevices were inspected with a Clu-lite torch. A Rigid CA-350 endoscope was used to investigate cavity walls in Building 3.
- 3.4 The buildings were assigned a “bat roost suitability” based on features/evidence found, in accordance with Table 1.

Table 1. Bat roost suitability of structures (BCT, 2016)

Suitability	Description of roosting habitats
Negligible	Negligible habitat features likely to be used by roosting bats
Low	A structure with one or more potential roost features (PRF) that could be used by individual bats opportunistically, but 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 structure of sufficient size and age to contain PRFs but with none seen from the ground/using ladders or features seen with only very limited roosting potential.
Moderate	A structure 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 (for roost type only).
High	A structure 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.

4.0 Results

Desktop study

- 3.4 Please refer to Figure 2. The site is situated on a livery yard to the north-west of Ardleigh near Colchester in Essex. The landscape is dominated by grazing land. There are linear tree/hedgerow corridors along Harts Lane that bats could reasonably commute/forage along. There are several small woodlands approximately 400 metres to the south and west that bats may also be attracted to for roosting and foraging opportunities.
- 3.4 Overall, the landscape shows “moderate” potential for bats, defined by BCT as – “Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees, scrub and linked back gardens. Habitat that could be used by bats for foraging such as trees, scrub, grassland or water.”

European protected species mitigation licenses

- 3.4 MAGIC identifies two EPS licences within 2km that have been granted in respect of bat roosts, one 1.2km to the north-west along Wick Road. The second is 1.7km to the south. The details of the closest licence granted (taken from the MAGIC website) are below:

Site Check Report Report generated on Tue May 30 2023
You selected the location: Centroid Grid Ref: TM02793109
The following features have been found in your search area:

Granted European Protected Species Applications (England)

Case reference of granted application	2017-28060-EPS-MIT
Species group to which licence relates	Bat
Species on the licence	BLE
Site county of licence	Essex
Licence Start Date	01/10/2017
Licence End Date	30/10/2022
Does licence impact on a breeding site	Y
Does licence allow damage of breeding site	Y
Does licence allow damage of a resting place	N
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	N
Does licence impact on a hibernation site	Unknown

5.0 Results: Preliminary Roost Assessment

Photographs are provided in Figure 3.

Building 1: Storage Barn

3.1 The storage barn is a small traditional building aligned east/west with a timber frame, pitched slate roof and weatherboarded walls. There are three internal stables which are in use. The following potential bat access points/roosting opportunities were noted:

- Several gaps/crevices on the eastern aspect between weatherboards and fascias
- Internal opportunities between traditional timbers
- Gaps beneath warped weatherboards on all aspects

3.1 The above features could reasonably support bat roosts/allow access into a roost – particularly for crevice dwelling species. No evidence of a larger/maternity roost was found. This building is likely to be suitable for small numbers of common, crevice dwelling species only.

This building has low roost suitability.

Building 2: Old Milking Parlour

3.1 The Old Milking Parlour has a timber frame, blockwork walls and a pitched asbestos roof aligned north/south. There are large internal stables that are disused. An active blue tit nest was identified on the southern gable. Internal conditions are generally unsuitable for bats, the roof temperature will fluctuate too much to be a suitable roosting position. Externally, all cladding and pointing is well-sealed. No bat evidence was identified.

This building has negligible roost suitability.

Building 3: Old Calving Building

3.4 The calving building is now used for storage, it has a steel frame, blockwork walls and an asymmetric asbestos roof. A modern stable block adjoins the western aspect. The building is open to the south and there are windows to the east. There are cavity walls to the north and west. In the larger barn, an active wren nest and bumble bee nest were identified in cavity walls to the north. No bat droppings were identified within or around blockwork gaps despite a thorough inspection with an endoscope.

3.1 The modern stable block has tightly fit timber tongue and groove walls and overhang to the west. There are no opportunities for roosting bats.

This building has negligible roost suitability.

Figure 3. Photographs



a) Building 1: Various crevices/ingress opportunities on eastern aspect circled.



b) Building 1: Southern aspect



c) Building 2: Southern/western aspect. Fascias/walls are well-sealed.



d) Building 2: Internal, roof/ridge board unsuitable for roosting bats.



e) Building 3: Northern aspect, internal. The gap circled was inspected with an endoscope.



f) Building 3: Northern aspect and adjoining modern stable block.



g) Building 3: Eastern aspect



h) Bumble bee in cavity wall on northern aspect.

2.0 Conclusions

- 6.1 Hybrid Ecology Ltd visited the site on 19th May 2023 to carry out a Preliminary Roost Assessment and establish whether a proposal involving conversions/alterations on three farm buildings could impact bat roosts.
- 6.1 During the site visit, several possible access points/crevices were noted around Building 1, notably on the eastern aspect that could reasonably support bats. Building 1 has “low” roost suitability, bat presence could not be ruled out during a daytime inspection alone.
- 6.1 Work to Building 1 could reasonably impact bats, resulting in disturbance, killing or injury. Where there is a reasonable likelihood of protected species being present and affected, Local Planning Authorities need to understand the impacts and any required mitigation in their decision making. To understand if any roosts exist, further survey is needed so that mitigation can be designed reflecting the species and status of the roost. In accordance with best practice guidelines, one dusk survey on Building 1 is initially required. Three surveys will be needed if bats are encountered during the first survey. The purpose of the dusk survey is to identify if/where bats are accessing the property, species and number. The survey will be carried out between May and August inclusive, in reliably warm settled conditions (overnight temperatures 10 degrees or above). The survey will require surveyors stationed around the building to identify any bats exiting/re-entering. To sufficiently cover the building, a team of 2 surveyors are recommended, using professional grade detectors and either thermal or Infra-red cameras as night vision aids.
- 6.4 Where impacts to roosts are unavoidable, a licence will be required from Natural England to permit works. This will be applied for once planning permission has been granted.
- 6.1 Building 2 and Building 3 have negligible roost suitability and currently require no further survey. In the unlikely event that bats are encountered during works to Building 2 or Building 3, work must cease and an ecologist must be immediately contacted.
- 2.4 The finished development should include compensatory roost provision, the scope of which will be determined following the dusk survey. Integrated bat roost features could be included on buildings or externally mounted boxes could be installed on trees. Artificial bat roost features are included in Appendix 1.
- 2.4 In principle, we consider the proposal will be achievable assuming all bat mitigation can be implemented.

References

- BCT, 2018. Bats and Artificial Lighting <https://www.bats.org.uk/news/2018/09/new-guidance-on-bats-and-lighting>
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- Mitchell-Jones, A.J (2004) Bat Mitigation Guidelines, English Nature, Peterborough
- Natural Environment and Rural Communities Act (NERC Act), 2006, as amended. Available at: <http://www.legislation.gov.uk/ukpga/2006/16/contents>

Appendix 1. Artificial bat roosts for buildings and trees



a) Gap beneath ridge tile of slate roof



b) Gap beneath ridge tile of reclaimed clay pantile roof



c) Made by Tudor Roof Tiles (www.tudorrooftiles.co.uk) this 'top tunnel' tile provides a tunnel to an entrance hole in the undertiles, allowing bats to crawl into a roost or along the ridge beam where a cavity has been created



d) Integrated Eco Bat Box for buildings – [Integrated Eco Bat Box | NHBS Practical Conservation Equipment](#)



e) Beaumaris woodstone bat box for gable ends

SINGLE CREVICE BAT BOX

TWO CREVICE BAT BOX



£36

£48

Individually Handmade - Specifications are in CM and approximate.

External: 43 high x 21.5 wide x 6.8 deep.

Internal: 41 x 16.5 x 1.8 crevices @ 1.

Made with small groups of crevice dwelling bat species in mind, such as pipistrelles. Approx.

4.75kg

Individually Handmade - Specifications are in CM and approximate.

External: 43 high x 21.5 wide x 6.8 deep.

Internal: 41 x 16.5 x 1.8 crevices @ 2.

Made with small groups of crevice dwelling bat species in mind, such as pipistrelles. Approx.

6.75kg

f) Bat boxes for trees [Home | Greenwood's Ecohabitats \(greenwoodsecohabitats.co.uk\)](#)