



Glaven Ecology

www.glavenecology.co.uk | Tel: 07532444829 | Email: office@glavenecology.co.uk

Preliminary Roost Assessment

The Pottery House,
Binham, Norfolk



Prepared on behalf of Mr and Mrs Porter

Reference: 2106-GE-NP

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Version	Status	Changes	Date	Author
1.1	Draft	Site visit and desk study results added	28/01/2021	Carolyn Smith BSc (Hons), MCIEEM
1.2	Issued	Reviewed and maps added	29/01/2021	Carolyn Smith BSc (Hons), MCIEEM

1 Summary

- 1.1 Glaven Ecology was commissioned to undertake a Preliminary Roost Assessment (PRA) on The Pottery House, 41 Front Street, Binham, NR21 0AL. The survey work was completed by Carolyn Smith BSc. (Hons) MCIEEM on 28th January 2021.
- 1.2 Planning permission is sought for external and internal alterations to the Grade II listed house, specifically the north wing and north and west extensions, including re-roofing of north and west extensions, removal of one chimney breast and demolition of conservatory.
- 1.3 The building was assessed as having negligible to low potential to support roosting bats, with minimal roosting opportunities under raised tiles. The north wing and western extension (to be affected by the roofing works) both had negligible potential for bats.
- 1.4 There was an old house martin nest on the front of the north wing and a swallow's nest on the main house exterior.
- 1.5 The following recommendations have been made for protected species:

Species	Requirement for Further Surveys and Recommendations
Bats	<p>No further surveys required.</p> <p>It is considered proportionate to allow the works to proceed under a precautionary method of working:</p> <p>Works to the roofs and to remove the chimney should only be started between October and end of April, outside of the main bat activity season. Roof tiles should only be removed by hand.</p> <p>In the unlikely event that a bat is found all work should cease and a suitably qualified ecologist called for advice on how to proceed.</p> <p>Modern breathable felts have been shown to be hazardous to bats as their claws can get caught in the fibres. Therefore, where bats can potentially gain access under the refitted pantiles, it is recommended that the traditional 1F Bitumen felt is used.</p>
Birds	<p>To prevent infringing legislation which protects all nesting birds, it is recommended that any works to the front of the house is carried out outside the breeding bird season (which runs from March to September) or following a nesting bird survey by a suitably experienced ecologist.</p>

- 1.6 Enhancement suggestions to the site include the installation of bat boxes and bird nest boxes.

2 Introduction

2.1 Background

2.2 Glaven Ecology was commissioned to undertake a Preliminary Roost Assessment (PRA) on The Pottery House, 41 Front Street, Binham, NR21 0AL. The survey work was completed by Carolyn Smith BSc. (Hons) MCIEEM on 28th January 2021.

2.3 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.

2.4 Site Location and Description

2.4.1 The site was located at OS Grid Reference TF 9839 3063 (Appendix 1 – Site Location) and consisted of a Grade II brick and flint house with single storey west extension and north wing, set within a garden environment.

2.4.2 The surrounding area was dominated by arable fields. To the northeast there is an area of floodplain grazing marsh associated with a tributary of the River Stiffkey, Binham Beck. To the north of this there is an area of lowland fen and to the east a strip of good quality semi-improved grassland. There are small pockets of broadleaved woodland scattered across the landscape.

2.5 Project Overview

2.5.1 Planning permission is sought for external and internal alterations to the Grade II listed house, specifically the north wing and north and west extensions, including re-roofing of north and west extensions, removal of one chimney breast and demolition of conservatory.

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.

4.2 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 28th 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	<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</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	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 The site sits just south of the boundary for the North Norfolk Coast Area of Outstanding Natural Beauty (AONB). No other 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 Cockthorpe Common, Stiffkey SSSI but does not fall within the categories requiring further consultation with Natural England (i.e. developments outside of existing residential areas.).

5.1.3 Three non-statutory designated sites were identified by the Norfolk County Council data.gov.uk search (Table 3, Appendix 2).

Table 3: Statutory Designated Sites within 2km of development site

County Wildlife Site Name	Site description	Closest point to site
Binham Valley – CWS 1315	An area of low lying marshy grassland either side of a stream, formed in a low lying valley, dominated by tall herbs and rushes. Some small areas of species-rich drier grassland and some areas of neutral grassland.	850m northeast
Binham Sewage Works – CWS 1314	An area of moderately species-rich, rank, marshy grassland, mainly dominated by rushes, which has formed on either side of a stream in a shallow valley.	1600m northeast
Louseybush Meadow – CWS 1313	An area of semi-improved grassland.	900m west

5.1.4 There are no records of a granted European Protected Species Mitigation Licence within 2km of the site showing on MAGIC maps.

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 **high** foraging and commuting opportunities especially over the wetlands and lowland fen to the northeast.

Visual inspection - External

5.2.2 The house is a two-storey brick, stone and flint building built in the late 16th or early 17th Century with additional extensions on the west and north in the 18th Century. The north wing is a single storey brick addition which encompasses the main entrance hallway of the property. There is a pantile roof throughout. Figures 1 and 2.



Figure 1: Eastern aspect.



Figure 2: Western aspect extension.

5.2.3 The roof of the main house was generally in good condition with only a few raised tiles on the eastern aspect.

5.2.4 The ridge tiles throughout were well sealed and no gaps/access points were noted.

5.2.5 There was some lifting of the tiles on the north wing roof, specifically on the western aspect. The eastern aspect was in good condition and the tiles were relatively tightly fitted (Figures 3 and 4).

5.2.6 There was a Velux window in the western aspect, the flashing around the base was well fitted and didn't offer any roosting opportunities.

5.2.7 The western extension roof had some raised tiles at the northern end below the chimney stack (Figure 5).

5.2.8 The chimney stacks had no flashing around their bases. The chimney stack on the western extension (due for removal) was in good condition and there were no gaps or cracks in the brickwork or mortar (Figure 6).

5.2.9 The conservatory was a 20th Century addition and offered no roost potential for bats.



Figure 3: Northern wing – eastern aspect.



Figure 4: Northern wing – western aspect - lifted tiles circled.



Figure 5: Western extension roof - lifted tiles circled.



Figure 6: Chimney stack.

5.2.10 The flint work and brickwork had some signs of weathering but was still well sealed throughout and no suitable roosting cavities or cracks were observed.

5.2.11 The window and door frames throughout were tightly fitted with no gaps between them and the walls.

Visual inspection - internal

5.2.12 The main house roof is not being affected by the works, but to gain an overall picture of the house the internal roof space was inspected (Figures 7 and 8).

5.2.13 The space was a narrow void accessed via a hatch on the landing. It was fully lined (Figure 8) and the lining appeared to be in good condition.

5.2.14 There were a pattern of bricks missing in the northern gable end (visible in Figure 8), probably for ventilation, but no other access points were noted. A large wasps' nest was next to the holes.

5.2.15 The roof space was heavily cobwebbed throughout, especially at the apex and gable end walls. The cobwebs at the apex came down to the floor in places.

5.2.16 The beams were old and worn, but there were no splits or cracks in them.

5.2.17 Both chimney stacks were in good condition as were the gable end walls.



Figure 7: Internal view of main house roof void.



Figure 8: Internal view of main house roof void.

5.2.18 The northern wing was open to the roof space (Figure 9) and there were signs of damp on the boarding. The space was bright and airy, partly due to the large Velux window in the western aspect.

5.2.19 The roof void of the western aspect was small and low and very heavily cobwebbed (Figure 10). The lining was generally in-tact apart from some tearing at the eaves where it was damp and weatherworn. The beams were narrow and without splits or cracks.

5.2.20 The chimney stack and gable end brickwork were in good condition.



Figure 9: Internal view of northern wing.



Figure 10: Western extension roof void.

5.2.21 No signs of bats were found during the visual inspection of the house.

5.2.22 The house, overall, is assessed as having **negligible to low potential** to support roosting bats. The north wing and western extension are of **negligible potential**. The only suitable roosting place would be under raised tiles for single crevice dwelling species, although on the north wing there was little shelter from weather conditions.

5.2.23 Nocturnal surveys at the site in 2020 observed low activity across the site (Glaven Ecology, 2020). The surveys recorded commuting bats travelling east to west across the site, coming to and from the garden area to the west of the house and beyond to out across the road.

5.3 Other Protected species

5.3.1 There was little bird activity around the site during the survey, but there is an old house martin nest on the eastern aspect of the north wing (Figure 11).

5.3.2 There is also a swallow that has been seen to nest (as per comms with owner) on the eastern aspect of the main house.



Figure 11: House martin nest location circled.

5.3.3 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	<p>No impacts on Designated Sites are envisaged given the scale of the development and absence of sites within 2km.</p> <p>No other habitats of ecological significance will be impacted by the proposed works.</p>
Bats	<p>The roof of the north wing and western extension, which are to be affected by the works, have minimal roosting opportunities, under lifted tiles. The roof on the north wing offered little in the way of shelter from prevailing weather conditions.</p> <p>It is considered that the works will have a negligible impact on local bat populations.</p>
Birds	<p>There was an old house martin nest on the front of the north wing, and a swallow's nest on the main house, which the owners are keen to keep intact throughout the works.</p> <p>The works to the front of the house have the potential to cause temporary disturbance to nesting birds.</p> <p>It is considered that the works will have a low impact on local bird populations.</p>

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	<p>No further surveys required.</p> <p>It is considered proportionate to allow the works to proceed under a precautionary method of working:</p> <p>Works to the roofs and to remove the chimney should only be started between October and end of April, outside of the main bat activity season. Roof tiles should only be removed by hand.</p> <p>In the unlikely event that a bat is found all work should cease and a suitably qualified ecologist called for advice on how to proceed.</p> <p>Modern breathable felts have been shown to be hazardous to bats as their claws can get caught in the fibres. Therefore, where bats can potentially gain access under the refitted pantiles, it is recommended that the traditional 1F Bitumen felt is used.</p>
Birds	<p>To prevent infringing legislation which protects all nesting birds, it is recommended that any works to the front of the house is carried out outside the breeding bird season (which runs from March to September) or following a nesting bird survey by a suitably experienced ecologist.</p>

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 Suggested enhancements for the site include:

- One bat box to be installed on a suitable tree in the garden. A [1FF Schwegler bat box](#), or similar, would be suitable. Boxes should be placed in a south-to-south-westerly orientation at a height of 4-6m above ground level, with all lighting angled away to avoid direct illumination of the box. Branches should be cleared to provide an unrestricted flight path to and from the box.
- Bird boxes suitable for blackbirds, wrens and robins could also be installed on suitable trees in the garden. Something similar to the [FSC nest box](#) would be suitable.

9 References

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Appendix 1 – Site Location



(Source Google Earth: 2021)

Appendix 2 – Non-Statutory Sites within 2km



(Image source Google Earth: 2021)