

**Preliminary Bat Survey &
Assessment**

**Derelict Farm Cottages
Hatfield Golf & Country Club
Hertfordshire**

October 2009



ELMAW Consulting
Consultant Ecologists &
Wildlife Biologists

Preliminary Bat Survey & Assessment

Derelict Farm Cottages Hatfield Golf & Country Club Essenden Hertfordshire

Undertaken on behalf of:

**Barker Parry
Town Planning
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October 2009

Report produced by:



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Special Note

Whilst every effort has been taken to ensure this report accurately identifies potential ecological constraints to development or the likely presence or absence of species and the spatial and temporal use of the site by such species, it must only be viewed as a snap shot in time and should therefore not be viewed as definitive. Because of external influencing factors such as weather, season, access etc. affecting survey results, no liability can be assumed for omissions or changes that may or may not occur after the production of this report. The author of this report must be consulted as to the current applicability of the results if there are any seasonal delays in the use of this report.

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1.0 Introduction

1.1 Non Technical Summary

- 1.1.1 It is proposed to demolish two derelict farm cottages adjacent to the club house of the Hatfield Golf & Country Club in Essendon, Hertfordshire. The two farm cottages are in an advanced stage of dereliction and have been vacant since the 1980s.
- 1.1.2 To ensure the proposals do not adversely affect protected species (in this case bats), and to allow the local planning authority to make an informed decision in respect of protected species, ELMAW Consulting, Consultant Ecologists and Wildlife Biologists have been commissioned by Barker Parry Town Planning Consultants, to carry out a preliminary bat survey and assessment of the two cottages. Consequently Keith Seaman, Principal Wildlife Biologist with ELMAW Consulting carried out the survey and assessment on the 16th October 2009.
- 1.1.3 The survey and assessment, which was constrained by the lack of access into the two properties because of grave concerns over health and safety, concluded that bats are a material consideration in the demolition of the two cottages. Bats' places of shelter are protected from disturbance under both UK and European legislation and evidence of roosting brown long-eared bats (*Plecotus auritus*) has been found in the loft of one of the cottages. As such, demolition of at least one of the two cottages will result in the destruction of bats' place of shelter and possibly the disturbance of bats themselves. This may impact, not only on the bat roost itself but on the local bat
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population, particularly in the absence of appropriate alternative roosts, mitigation and compensation.

- 1.1.4 The impact on the bat population of the loss of this roost will need to be qualified and quantified and (if necessary), appropriate mitigation prescribed to maintain the favourable conservation status of the bat population. The subsequent mitigation measures (if necessary) are likely to be a condition of planning consent. In order to qualify and quantify the impact, further specific bat surveys, during the spring and early summer months, are a requirement.
- 1.1.5 It is impossible to say with any real certainty from this preliminary survey and without further more detailed surveys in the spring and early summer, what type of roost is present and how important the roost may be to the local bat population. However, the cold, damp and very draughty conditions found in both cottages' lofts would suggest that an important maternity roost is unlikely. Maternity roosts are generally found in very stable and warm/hot environments such as human occupied centrally heated dwellings, lofts which are insulated and roofs which are lined and insulated.
- 1.1.6 For certain, at the very least, some minor evidence of brown long-eared bats roosting has been found in one of the lofts (the most northerly cottage) and the demolition of this cottage will result in the destruction of this roost. A derogation of the Habitats Regulations and a European Protected Species (EPS) licence will be required. This licence can only be obtained once further surveys have been completed, the roost type and its importance qualified and appropriate mitigation and compensatory measures have been formulated and agreed by the local

planning authority and Natural England (the Statutory Organisation for Nature Conservation).

1.2 Site Description

- 1.2.1 The two cottages form a detached block of two dwellings which have been empty since the 1980s and appear in an advanced stage of dereliction. The cottages appear to be of brick construction faced with plaster/cement rendering with an unlined slate roof. There are two chimneys and some barge boards are present. The density of overgrown hedgerows around the cottages prevents a full survey of the buildings' architectural features which are pertinent to bats and the potential for roosting.



Plate 1: View from the north of the cottages



Plate2: The only side of the cottages which is fully viewable.

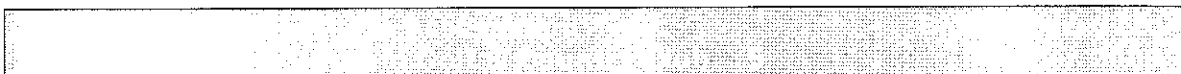
- 1.2.2 The two cottages are located inside a very overgrown and in places, impenetrable garden with outgrown hedgerows around their entirety.
- 1.2.3 Surrounding the cottages and garden is a formal and semi-formal golf course with both newly planted and retained mature trees and parcels of woodland copses. In the northern and eastern parts of the golf course, extensive areas of open water can be found. Immediately south of the cottages the club house is located which appears to be part of a redeveloped and converted vernacular barn.

1.3 Proposed Works

- 1.3.1 It is proposed to demolish the two derelict cottages and build a new building elsewhere within the golf course, but not on the existing footprint.

1.4 Aims of the Study

- 1.4.1 As instructed by Baker Parry Town Planners, the aim of this study was to carry out an initial survey of the cottages to ascertain whether there is any evidence of bats roosting in the buildings and to assess the probability for roosting based on architectural features, current environmental conditions of the cottages and the presence of potential bat roosting features. The aims of the study also included an assessment as to whether further species specific surveys are necessary to conclude with a high degree of certainty a positive or negative result.



2.0 Methodology

2.1 Background

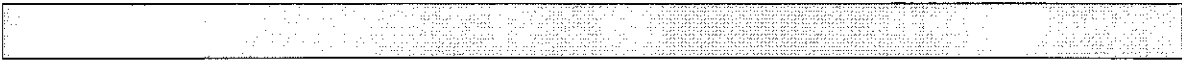
- 2.1.1 ELMAW Consulting has been commissioned by Baker Parker Town Planners to carry out a preliminary bat assessment and survey of the two derelict farm cottages at Hatfield Golf and Country Club in Essesdon, Hertfordshire. To achieve the study aims, the following methodologies were adopted.

2.2 Desk Study

- 2.2.1 To provide contextual background to this study and to inform the roosting probability assessment, a biological data search to locate all known records of bats within a two kilometre radius of the site, has been requested of the Hertfordshire Biological Records Centre.

2.3 Field Surveys

- 2.3.1 The bat survey and assessment was undertaken by Mr Keith Seaman, Principal Wildlife Biologist with ELMAW Consulting and Natural England scientific bat surveyors licence holder (Licence number 20091223).
- 2.3.2 The specified and adopted methodology for this survey has been carried out in accordance with the guidelines published by Natural England and the Bat Conservation Trust (*Bat Workers' Manual 3rd Edition*, 2004, English Nature and *Bat Surveys Good Practice Guidelines*, The Bat Conservation Trust, 2007).
- 2.3.3 Based on a set of 'roosting probability criteria', the two farm cottages have been evaluated as to whether they
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have a negligible, very low, low, medium or high probability of roosting. This set of criteria is subjective, but based on the experience of the surveyor. The following chart details the criteria used for this assessment and have been used as a guide to influence and inform the survey results and what, if any, further detailed activity surveys are necessary.

Negligible probability	No potential roosting features and/or bat habitat in close proximity to the site.
Very low probability	Very low number of potential roosting features, with no indicative signs of usage, and/or located in very poor bat habitat, with no discernable feeding, foraging or commuting habitat.
Low probability	A low number of potential roosting features, but not likely to support an important roost such as a maternity or hibernacula. Location in poor or isolated bat foraging habitat such as a highly urbanized/industrial environment, not connected to linear commuting features, but with isolated lone trees or patches of scrub.
Moderate probability	Several potential roosting features. Habitat suitable for foraging and feeding bats, but may be limited in extent or connectivity to linear features such as lines of trees, scrub or linked back gardens.
High probability	Numerous potential roosting features. Buildings or structures typically used by roosting bats. Close proximity and/or connectivity of high quality bat feeding habitat such as woodland, open or running water, grazed pasture, rural hedgerows and marsh/wetlands. Close to known roosting or bat activity.

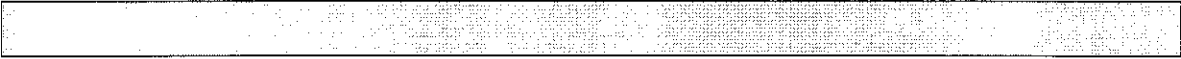
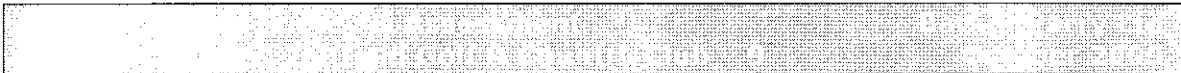
2.3.4 If the buildings support no potential roosting features or have a negligible or very low probability value, then a precautionary approach to any building works would be recommended. This may involve undertaking the work outside the bat activity period (November to February), or the careful hand removal of the roof and its support, and may involve the direct supervision of a Natural England licensed bat ecologist. If the buildings support a low,

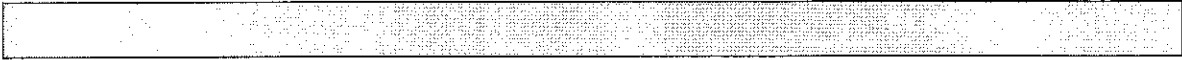


medium or high probability value then, in accordance with best practice guidelines, two or three activity surveys will be required to supplement the physical inspection survey. A combination of evening emergence and dawn re-entry surveys would be undertaken during March to September with the optimum time between June and August.

- 2.3.5 As to the justification and necessity of further activity surveys, it should be noted the local planning authority cannot process and grant planning consent if they are unable to determine whether protected species are a material consideration. Under Planning Policy Statement 9: Biodiversity and Geological Conservation, local planning authorities are obliged to take account of the following Government's instructions; *'that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision¹.*

¹ Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System (ODPM 06/2005, Defra 01/2005)

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- 2.3.6 Following the assessment of probability, a survey for bats and their roosts involved a detailed physical inspection of the two cottages, although constrained by access limitations and health and safety considerations.
- 2.3.7 This physical inspection involved a detailed search for indicative signs of bat usage; bat droppings (scattered or accumulations) on all surfaces, walls and window sills, both exterior and interior and within any roof voids or attics (where access permitted), fur or urine staining on surfaces, timbers joists, recesses or cavity openings, feeding remains below walls, ridge boards, windows and joists, and cavities and recesses within timbers, mortar, masonry with clean and smoothed openings (which would be dust, dirt and cobweb free).
- 2.3.8 The search concentrated on all external architectural features typically used by bats, where present, such as roof, ridge and hip tiles, lead flashings, barge boards, soffits, gable ends, eaves, window frames and wood cladding. If present, internal architectural features searched included, but not limited to, under the ridge board and around timber trusses, struts and purlins and brickwork.
- 2.3.9 At the time of the survey, environmental conditions were recorded and considered, both outside and inside the farm buildings. Weather conditions and temperature outside were recorded and the temperature, humidity and general environmental conditions internally considered (particularly pertaining to the suitability or unsuitability for bats).
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Equipment used included:

- ☐ 1,000.000 candle power Clulite lamp
- ☐ Small high powered torch with assorted mirrors on extended handles
- ☐ Thermometer
- ☐ Panasonic Lumix camera
- ☐ Vscope Flexible Fiber-Scope
- ☐ Extendable ladder



3.0 Results

3.1 Desk Study

- 3.1.1 The results of the biological data search revealed 13 bat records from the 2km radius search area. Due to the sensitivity of records, only four figure grid references were stated for these bat records. Of these records, one was of an unidentified bat (dated 2001), six were of unidentified species of pipistrelle bat (dating between 1991 and 2001), one was of a common pipistrelle (*Pipistrellus pipistrellus*), dated 2001, four were of brown long-eared bats, dating between 1997 and 2000, and one was of a Natterer's bat (*Myotis nattereri*), dated 2000.
- 3.1.2 Of the records listed above, none of the records were from the site itself and all were from approximately one kilometre away.
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3.2 Field Survey

- 3.2.1 The site assessment found one building comprising of two dwellings in an advanced stage of dilapidation. The roof is tiled with slate and importantly unlined with neither felt nor sarking. A number of tiles are missing and dislodged. Although viewing of the cottage from outside was severely constrained by overgrown vegetation, trees and outgrown hedgerows, below the eaves there appeared to be fascia and barge boards. The viewable fascia and barge boards did not appear to support suitable bat roosting potential as they were either completely sealed to the walls therefore lacking gaps which may provide bat access behind the boards or such potential gaps were covered in cobwebs and dirt.
- 3.2.2 All windows and doors are either devoid of glass or doors have been removed; the loft hatches are also missing which then provides a very cold and draughty environment right through the entire cottages and loft areas.
- 3.2.3 The ridge tiles appeared in relatively good condition with no obvious missing or dislodged mortar which may provide bat access below the ridge tiles and into the lofts; viewing of the entire ridge was very constrained.
- 3.2.4 Access into the lofts was not possible because of the dangerous condition of the ceiling and loft floor. However, a view of the lofts was possible off a ladder through the inspection hatch. The roof attic areas comprised of a slate tiled and unlined roof with soft wood timber frames and joists. From the viewing point it was clear that some tiles were missing, the attic appeared draughty, cold and damp in places. Roosting potential appeared to be constrained to the ridge beam as none of the timbers supported
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cavities or recesses, typical of relatively new softwood flush-nailed timber joists.

3.2.5 The loft floors were covered in insulation and a small accumulation of bats droppings was seen close to the inspection hatch in the most northerly cottage. Approximately 6-8 droppings were seen and all appeared very fresh; on close inspection the droppings appeared to be no older than a few days old. The droppings appeared to be those of brown long-eared bats and were likely deposited by a single bat over one or two days perhaps.

3.2.6 Access restrictions precluded a search over the remainder of the loft floors and therefore we are unable to conclude whether this was the only evidence of roosting bats.

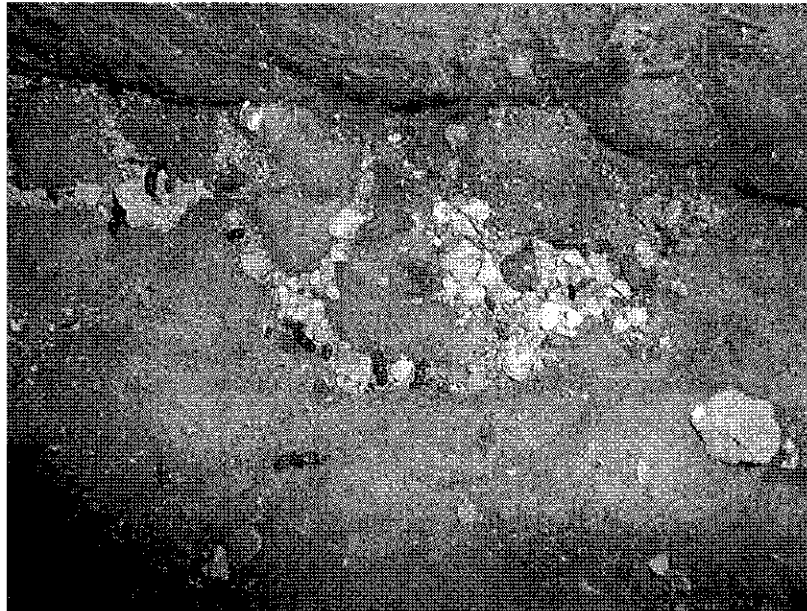


Plate 3: Bat droppings on the floor of the northern cottage loft



4.0 Assessment

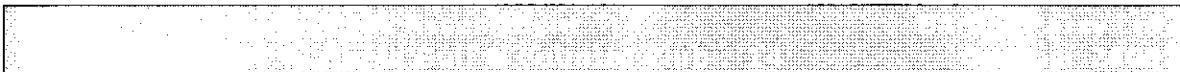
4.1 *Constraints on Study Information*

4.1.1 As mentioned above, access to both the interior and exterior of the two cottages was constrained by vegetation and the dangerous condition of the two buildings. Therefore, the findings and conclusions reached by this survey and assessment are based on limited access and viewability.

4.1.2 This survey and assessment is a preliminary study and its conclusions should be viewed as such; no conclusions in respect to bats other than that which is reported is inferred in this report.

4.2 *Potential Impacts*

4.2.1 Due to the presence of brown long-eared bat droppings in the loft of one of the cottages, the demolition of this cottage will result in the destruction of the roost and may also disturb bats themselves. If bats are also roosting in the other cottage its demolition is likely also to have to same impact.



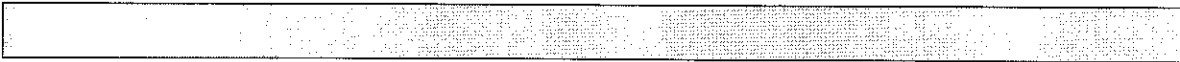
5.0 Recommendations and Mitigation

5.1 Further Surveys

- 5.1.1 Due to the presence of roosting bats, (likely to be brown long-eared bats) in the loft, it is necessary to carry out demographic studies to qualify and quantify the roost type and its conservation status. Whilst the environmental conditions found within the cottages provide sub-optimal roosting conditions therefore restricting their value to bats, evidence of roosting bats has been found. Therefore, in accordance with the requirements of Natural England, activity surveys for bats are recommended to be carried out during the spring and early summer.
- 5.1.2 Because of the restricted nature of the outside of the cottages and very restricted viewing of the roof and its eaves, emergence surveys are unlikely to prove satisfactory. Therefore, remote sensing recording within the loft spaces is recommended using a remote sensor device such as Anabat.

5.2 Requirements for Habitat Regulations (EPS) Licenses

- 5.2.1 Until the roost type and its conservation status can be evaluated through further studies and full planning permission has been granted, a EPS cannot be applied for. However, irrespective as to the roost type and its conservation value, if the two cottages are to be demolished this will result in the destruction of an existing roost and therefore a derogation of the Habitat Regulations will be necessary and a EPS licence obtained.
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5.2.2 To facilitate the granting of the EPS licence, Natural England expect full planning consent, all planning conditions pertaining to bats, if any, discharged, and a Method Statement of Mitigation to support a licence application which, following the activity surveys, demonstrates the development would not be detrimental to the favorable conservation status of the bat population.





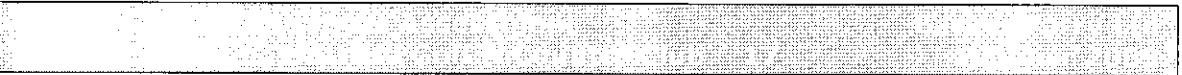
6.0 References

Bat Conservation Trust. (2007) *Bat Surveys Good Practice Guidelines*, Bat Conservation Trust, London.

Altringham, J.D. (2003). *British Bats*. HarperCollins Publishers. London.

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Joint Nature Conservation Committee. (2004), *Bat Workers' Manual*, JNCC, Peterborough.



7.0 Appendix 1: General Bat Ecology

7.1 UK Bat Ecology

- 7.1.1 A total of 16 species of bat are resident in the UK, however many have localised or scattered distributions, and only the Pipistrelle is regarded as reasonably common and widespread, despite a 70% decline in population since the 1980's (JNCC, 2001).
- 7.1.2 All species of UK bats hibernate, usually in trees or underground roosts such as ice-houses or in caves, between November and April, although during mild winters many species become active and will forage and feed on warmer winter nights and may move between different hibernation roosts. Bats are generally 'active' between May and September, and during this period they return to traditional summer roost sites. Bats use a number of different roosting places throughout the spring, summer and autumn, with colonies separating and moving between a number of summer roosts during their active season. Different species of bat use a variety of different structures for roosting including houses, old barns, cavities and crevices in mature trees, bridges, caves and icehouses.
- 7.1.3 In addition to suitable roosts, bats also require suitable foraging and feeding habitats, which would include rivers, lakes and ponds, woodlands and mature single trees. Linear habitat features such as hedgerows, rivers and tree-belts are also important as they provide connectivity of habitat for bats commuting between foraging areas and roosts.
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