TECHNICAL NOTE: ECOLOGY

April 2023

Barns off Blueberry Lane
Knockholt

Report for:
Mr & Mrs Cazaly
1 Singles Cross
Blueberry Lane
Knockholt
Kent
TN14 7NH

INTRODUCTION

AA Environmental Limited (AAe) has been instructed by Mr and Mrs Cazaly to carry out an updated ecological survey of the above site. Although a previous ecological survey has been carried out on the site by AAe in 2021, it was considered best practice to carry out a follow-up survey to update the previous findings and to record any changes that may have occurred during the intervening period. This information will serve to assess the ecological impact of the proposals and identify any ecological constraints and/or mitigation measures that may be required. A series of photographs has been attached for reference.

Due to the sensitivity of some protected/notable species records provided, this report should remain confidential and restricted to approved readers only.

The proposed development relates to the demolition of the two existing former barns and construction of an apart hotel adjacent to Blueberry Lane, with associated hard and soft landscaping. It is anticipated that the existing boundary vegetation will be retained and protected during the works.

METHODOLOGY

Baseline Data

A review of AAe's previous report (dated March 2021) was carried out to obtain baseline data. In addition, as certain baseline data is now readily available on the internet, the Multi-agency website (www.magic.defra.gov.uk) was consulted to determine whether any part of the site or nearby habitats have been statutorily or otherwise designated and a review of Google Earth's satellite imagery (http://www.google.co.uk/intl/en_uk/earth/index.html) was completed to determine past land uses of the site and surrounding land.

Walk-over Site Survey

The recent follow-up survey was completed on Wednesday 15 March 2023. During the survey, particular attention was paid to record the presence of badgers, bats and herpetofauna (amphibians and reptiles) that may be using the site or present in adjacent habitats, in accordance with the following survey methodologies:

[redacted]

[redacted]

Bats

Currently there are 17 species of bat known to breed in the UK. All species and their roosts are protected under Regulation 41 of *The Conservation of Habitats and Species Regulations 2010 (as amended)*. As a signatory to the *Bonn Convention (Agreement on the Conservation of Bats in Europe)* the UK is also required to protect their habitats. This legislation makes it illegal to kill, injure, capture or disturb bats, or to obstruct access to, damage or destroy bat roosts. Under the law, a roost is any structure or place used for shelter or protection.

A visual survey of the site was completed to record any evidence of bats or features that could provide potential roosting opportunities. The survey was carried out following the guidelines provided by the Bat Conservation Trust[1]. A thorough internal and external examination of the existing former barns was carried out, with any potential access points inspected for evidence of bats. All internal roof voids/spaces (where present) were accessed to check for any evidence of bats.

In addition, a careful inspection of each tree on the site was carried out to identify those features that are important for roosting bats. Surveying trees presents particular problems at any time of the year as bats will use a wide variety of roost sites in cavities, splits, cracks, knotholes and under loose bark, many of which are not easily detected from the ground.

Each tree was assessed in accordance with the following criteria:

Negligible – negligible habitat features likely to be used by roosting bats.
Low – a tree of sufficient size and age to contain potential roosting features (PRFs) but with none seen from the ground or features seen with only very limited roosting potential.
Moderate – a 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.
High – a 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.

The surrounding habitat was also surveyed to identify any important features such as mature trees with suitable features for roosting bats and any established lines of vegetation that might provide important flightlines.

Evidence of bats is usually detected by any one or more of the following signs:

the presence of bat droppings, which tend to accumulate under established roost sites or at roost entrances;
the accumulation of large numbers of moth wings, which have been discarded by feeding bats;
areas of staining by urine or from fur rubbing; and
the presence of bats themselves or their corpses.

The visual survey was facilitated by the use of binoculars, ladders, powerful torches (1M candlepower) and a Ridgid Micro CA-350 Inspection Camera endoscope.

[1] Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). The Bat Conservation Trust, London.

Herpetofauna

Amphibians
All amphibian species have some level of protection under the *Wildlife and Countryside Act 1981 (England and Wales) (Amendment) Regulations 2004*. Great crested newts (*Triturus cristatus*) are protected under the *Wildlife and Countryside Act 1981 (as amended)* and *The Conservation of Habitats and Species Regulations 2010 (as amended)*. The intentional or reckless killing, injury or taking, and intentional or reckless disturbance of great crested newts whilst occupying a 'place used for shelter or protection' is prohibited, as is the destruction of these places.

Reptiles
All reptile species are protected at some level under Schedule 5 of the *Wildlife and Countryside Act 1981 (as amended)* and *The Conservation of Habitats and Species Regulations 2010 (as amended)*. The more common species of reptiles, which include slow-worm (*Anguis fragilis*), common or viviparous lizard (*Zootoca vivipara*), adder (*Vipera berus*) and grass snake (*Natrix helvetica*) are protected by the *Wildlife and Countryside Act 1981 (as amended)* by part of *Section 9(1)* and all of *Section 9(5).* This means that they are protected against intentional or reckless killing and injuring (but not 'taking') and against sale and transporting for sale.

An assessment of the site was carried out to determine its suitability for herpetofauna by recording the habitats present. In addition, any natural/artificial refugia present on the site was lifted to check for any sheltering animals or evidence of animals, such as sloughs (shed skins)[2].

Other Wildlife
In accordance with good practice, the site was checked for any evidence of other protected species or species of particular note.

RESULTS

Baseline Data

During the previous ecological survey completed by AAe (2021), no badger setts were recorded on the site, although two setts were recorded on nearby land, located over 50 metres away. In addition, two badger latrines were recorded along the hedgerow adjacent to Blueberry Lane, confirming that badgers are active within the surrounding area. The former barns comprised exposed metal frames, with corrugated metal sides and roofs. No evidence of bats was recorded during a careful internal and external inspection of the former barns, which due to construction type and condition (lacking any roof voids/spaces and/or suitable crevice dwelling opportunities) were assessed to provide **negligible** roosting opportunities for bats. The site did not provide any notable foraging opportunities for bats. In addition, there were no ponds on or adjacent to the site which could provide breeding opportunities for amphibians. The site, being dominated by the former barns and surrounded by sheep grazed pasture did not provide suitable terrestrial habitat for any species of herpetofauna. In addition, despite a careful search of the site, no species of herpetofauna was recorded sheltering under any refugia lifted.

According to the Multi-agency website, there are no ecological statutory designated sites located on, adjacent to, or within 2 km of the site. The nearest statutory ecological designated site is Downe Bank and High Elms Site of Special Scientific Interest (SSSI), further classified as High Elms Country Park Local Nature Reserve (LNR), located 3.6 km to the north-west of the site. There are no Habitats of Principal Importance (HPIs) located on or adjacent to the site. The closest HPIs were two areas of Ancient & Semi-Natural Woodland located approximately 100 m to the north and 120 m to the north-west of the site, further noted as Deciduous Woodland and noted on the National Forest Inventory as Broadleaved Woodland. The site and surrounding land are situated within Network Enhancement Zone 2[3].

[2] Although outside the optimal window when amphibians and reptiles will not be fully active, certain species can still be seen of found sheltering under refugia.
[3] Land within close proximity to the existing habitat components that are unlikely to be suitable for habitat re-creation but where other types of habitat may be created or land management may be enhanced including delivery of suitable Green Infrastructure.

Google Earth Imagery shows that the site has remained largely unchanged since at least 2003, comprising the sheep grazed field, two former barns and associated boundary vegetation.

Site Description (Photographs 1 to 4)

The site is located off Blueberry Lane in Knockholt, centred at National Grid Reference: SU 937508 and covers approximately 0.1 of a hectare. The site was dominated by the existing sheep-grazed field, with two former barns and associated boundary vegetation also present. The site is bordered by Blueberry Lane to the east, a continuation of the sheep grazed field to north and west, fields to the south-west, with a residential property and associated garden to the south/south-east.

The site conditions on the west of the site remained the same as previously recorded, with no significant changes, albeit with much of the side and roof sheets now absent from the former barns, further exposing the metal frames beneath. The site was dominated by the existing sheep grazed field, with plant species recorded typical of modified grassland and included perennial rye-grass (*Lolium perenne*), Yorkshire-fog (*Holcus lanatus*), annual meadow-grass (*Poa annua*), cock's-foot (*Dactylis glomerata*), creeping buttercup (*Ranunculus repens*), yarrow (*Achillea millefolium*) and dandelion (*Taraxacum* agg.). The adjacent boundary vegetation close to the existing former barns comprised a few hazel (*Corylus avellana*) and blackthorn (*Prunus spinosa*) stands and a single semi-mature oak tree (*Quercus sp*.). A cherry laurel (*Prunus laurocerasus*) hedgerow was present in the adjacent garden.

The east of the site comprised a continuation of the sheep grazed field (modified grassland). A native species hedge was recorded on the eastern site boundary, adjacent to Blueberry Lane, with species recorded including blackthorn (*Prunus spinosa*), holly (*Ilex aquifolium*) and field maple (*Acer campestre*), with bramble (*Rubus fruticosus* agg.), bluebell (*Hyacinthoides sp.*), cleavers (*Galium aparine*), herb-Robert (*Geranium robertianum*), lords-and-ladies (*Arum maculatum*) and common dog-violet (*Viola riviniana*) also present on the road verge beneath the hedge.

[redacted]

Bats

No evidence of bats was recorded during the survey. The two barns did not provide any roosting opportunities for bats due to their condition and were assessed to be of **negligible** value. The oak tree, although had no obvious PRFs was assessed to provide **low** roosting opportunities for bats due to its age and size. The site did not provide any notable foraging opportunities for bats. **N.B. No trees require felling to facilitate the proposals and will be retained and protected during the works.**

Herpetofauna

There were no ponds on or adjacent to the site which could provide breeding opportunities for amphibians. The site, being dominated by the former barns surrounded by sheep grazed pasture did not provide suitable terrestrial habitat for any species of herpetofauna. In addition, during a careful search of the site no species of herpetofauna was seen or found sheltering under any refugia lifted during either visit.

Other Wildlife

Apart from a few common species of birds recorded on the site or flying overhead, no other species of note were recorded.

CONCLUSIONS AND RECOMMENDATIONS

The proposed development relates to the demolition of the two existing former barns and construction of an apart hotel adjacent to Blueberry Lane, with associated hard and soft landscaping. It is anticipated that the existing boundary vegetation will be retained and protected during the works. There are no habitats of international, national, county or local importance that would be directly affected by the proposals. The site is of overall low ecological value, with the species recorded described as common or abundant and are found in similar places across much of Britain.

Although there are considered to be no ecological constraints to the proposals, with the site remaining unchanged since the previous survey visit, a series of specific and generic mitigation measures, as detailed in the previous report and reiterated below for ease of reference, should be implemented to reduce any impact the development proposals may have on local wildlife. There is also an opportunity to implement some enhancement measures to increase the nature conservation value of the site in the long term in accordance with Government guidance as set out in National Planning Policy Framework (NPPF) 2021[4].

Although no badger setts have been recorded on the site, as badgers are active in the area, the following standard controls will be implemented during and after works to minimise disturbance to badgers:

- all site personnel will be given a toolbox talk to inform them about the potential presence of badgers and the legal protection they are given (generic toolbox talk has been attached for reference);
- any temporary fencing to be installed should allow badgers unrestricted access throughout the site;
- any deep excavations that are to be left open overnight will include a means of escape for any animals that may fall in, using planks of wood to act as ramps;
- where possible, works will be limited to the hours from dawn to one hour before sunset;
- where possible, the creation of large stock-piles of earth will be avoided as these may prove attractive for badgers to excavate new setts;
- no pipework should remain open with any exposed ends capped-off at the end of the working day to prevent any animals entering pipework. **N.B. Badgers can enter pipework as small as 250 mm in diameter and therefore all pipework should be capped-off in accordance with good practice**; and
- as badgers can excavate new setts, any fresh excavations recorded on the site should be immediately reported and fully investigated.

Although no evidence of bats was recorded with the former barns, which were assessed to provide **negligible** roosting opportunities for bats, all site operatives should be made aware of the legislation protecting bats and in the unlikely event of any bats being encountered, then works should stop immediately and Natural England or AAe contacted so that appropriate advice can be provided.

It should be noted that all species of wild bird and their nests are protected under the *Wildlife and Countryside Act 1981 (as amended)*. Therefore, site clearance works should be timed to avoid the main bird nesting season, which, in general, runs from March to August inclusive. If this is not possible, a check should be carried out prior to any clearance works to ensure there are no active nests present.

In order to protect the established vegetation to be retained, suitable fencing may be required at certain locations to reduce the possibility of any damage that could be caused during the works. To minimise accidental damage, any overhanging branches should be pruned back to suitable live growth points. All works should be undertaken by a suitably qualified and experienced specialist contractor and should conform to current industry best practice, i.e. BS 3998: 2010 '*Tree Work - Recommendations*'. The retention and protection of the established vegetation will help to maintain existing commuting/foraging routes currently utilised by wildlife.

[4] Ministry of Housing, Communities and Local Government (2021). *National Planning Policy Framework*. London.

As part of the proposals, soft landscaping will be carried out. Where any new planting is proposed it should aim to use native species, but where this is not practicable then species of known value for wildlife can be used. In particular, flowering plants will be of benefit to invertebrate species and shrubs and trees may provide nesting opportunities for birds once they become established.

Any new boundary treatment should be designed to promote permeability of the site to minimise fragmentation and allow free movement of wildlife throughout the site, for example by strengthening/enhancing the existing boundary vegetation, planting up a series of new hedgerows and/or installing post and rail fences. These measures will strengthen habitat connectivity and provide additional foraging habitat, cover and nesting opportunities. If close boarded fences are required for security reasons these should be minimised and raised slightly off the ground (c. 150-200 mm) to allow animals to pass underneath.

In addition, a range of enhancement measures could be provided on the site including the provision of new roosting, nesting and sheltering opportunities for a range of species and the creation of new wildlife habitats, such as some of those recommended by the Chartered Institute of Ecology Environment and Management's recently published Biodiversity Net Gain Good Practice Guidance, and listed below:

Nest boxes
Bug hotels
Bat boxes
Log piles
Pollinator nest sites
Planting wildflowers

The effects of lighting on plants and animals are difficult to assess, but it is thought that lighting can adversely affect invertebrates, birds and bats. As the site currently experiences minimal light spillage from the adjacent residential property, in accordance with good practice, any new lighting to be introduced should be designed to minimise light spillage and pollution and not directed onto any bird/bat boxes installed or onto the boundary vegetation, which should remain dark.

Overall the findings of the ecological surveys would indicate that there are no over-riding ecological constraints to the development proposals that would preclude planning permission being granted. A range of standard controls are available and deliverable to ensure that there would be no adverse impact on local wildlife that are using the site with a series of controls to be implemented to avoid contravention of current legislation. In addition, a range of enhancement measures could be included as part of the scheme, and if implemented effectively, would increase the nature conservation value of the site in the long term in accordance with Government guidance.

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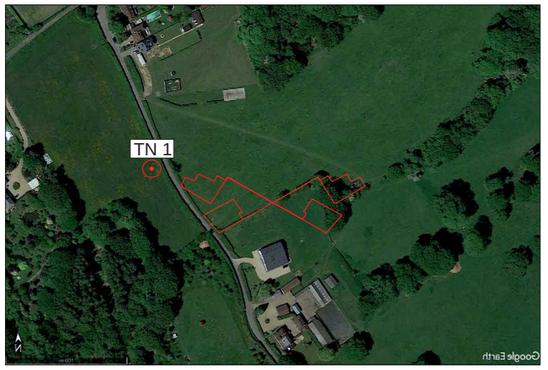
Photosheet

Photograph 1: Showing one of the former barns to be demolished and boundary vegetation.

Photograph 2: Showing one of the former barns to be demolished.



Site Boundary (Indicative)

TN 1 Target Note

Photograph 3: Showing the site facing south and existing access off Blueberry Lane.

Photograph 4: Showing the site, facing east.

Rev.	Details	Drawn / Chkd.	Date

PROJECT

Barns off Blueberry Lane
Knockholt

TITLE

Photograph Record Sheet

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	Drawn: HRS / Chkd.: ARB		